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**pysnow**  
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Python library for the ServiceNow REST API



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pysnow.Client — Creates a new client

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**class** pysnow.**Client** (*instance=None, host=None, user=None, password=None, raise\_on\_empty=True, request\_params=None, use\_ssl=True, session=None*)  
Creates a client ready to handle requests

**Parameters**

- **instance** – instance name, used to construct host
- **host** – host can be passed as an alternative to instance
- **user** – username
- **password** – password
- **raise\_on\_empty** – whether or not to raise an exception on 404 (no matching records)
- **request\_params** – request params to send with requests
- **use\_ssl** – Enable or disable SSL
- **session** – a requests session object

**query** (*table, \*\*kwargs*)  
Query (GET) request wrapper.

**Parameters**

- **table** – table to perform query on
- **kwargs** – Keyword arguments passed along to *Request*

**Returns** *Request* object

**insert** (*table, payload, \*\*kwargs*)  
Insert (POST) request wrapper

**Parameters**

- **table** – table to insert on
- **payload** – update payload (dict)

- **kwargs** – Keyword arguments passed along to *Request*

**Returns** New record content



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## `pysnow.OAuthClient` — Creates a new client with OAuth extras

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```
class pysnow.OAuthClient (client_id=None, client_secret=None, token_updater=None, *args,
                        **kwargs)
```

Pysnow *Client* with extras for oauth session and token handling.

This API exposes two extra public methods:

- **generate\_token(user, pass)**
  - This method takes user and password credentials to generate a new OAuth token that can be stored outside the context of pysnow, e.g. in a session or database.
- **set\_token(token)**
  - Takes an OAuth token (dict) and internally creates a new pysnow-compatible session, enabling `pysnow.OAuthClient` to create requests.

### Parameters

- **client\_id** – `client_id` from ServiceNow
- **client\_secret** – `client_secret` from ServiceNow
- **token\_updater** – callback function called when a token has been refreshed
- **instance** – instance name, used to construct host
- **host** – host can be passed as an alternative to instance
- **raise\_on\_empty** – whether or not to raise an exception on 404 (no matching records)
- **request\_params** – request params to send with requests
- **use\_ssl** – Enable or disable SSL

```
set_token (token)
```

Validates token and creates a pysnow compatible session

**Parameters** `token` – dict containing the information required to create an OAuth2Session

**generate\_token** (*user, password*)

Takes user and password credentials and generates a new token

**Parameters**

- **user** – user
- **password** – password

**Returns** dictionary containing token data

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`pysnow.QueryBuilder` — Creates a new `QueryBuilder` object

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**class** `pysnow.QueryBuilder`

Query builder - used for building complex queries

**AND** ()

And operator

**OR** ()

OR operator

**NQ** ()

NQ (new query) operator

**field** (*field*)

Sets the field to operate on

**Parameters** **field** – field (str) to operate on

**Returns** self

**starts\_with** (*value*)

Query records with the given field starting with the value specified

**ends\_with** (*value*)

Query records with the given field ending with the value specified

**contains** (*value*)

Query records with the given field containing the value specified

**not\_contains** (*value*)

Query records with the given field not containing the value specified

**is\_empty** ()

Query records with the given field empty

**equals** (*data*)

Query records with the given field equalling either: - the value passed (str) - any of the values passed (list)

**not\_equals** (*value*)

Query records with the given field not equalling: - the value specified - any of the values specified (list)

**greater\_than** (*value*)

Query records with the given field greater than the value specified

**less\_than** (*value*)

Query records with the given field less than the value specified

**between** (*start, end*)

Query records in a start and end range

**Parameters**

- **start** – int or datetime object
- **end** – int or datetime object

**Raise**

**QueryTypeError** if start or end arguments is of an invalid type

**Returns** self

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`pysnow.Request` — Creates a new request object

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**class** `pysnow.Request` (*method, table, \*\*kwargs*)

Takes arguments used to perform a HTTP request

**Parameters**

- **method** – HTTP request method
- **table** – table to operate on

**last\_response**

Return `last_response` after making sure an inner `requests.request` has been performed

**Raise**

**NoRequestExecuted** If no request has been executed

**Returns** last response

**count**

Returns the number of records the query would yield

**status\_code**

Return `last_response.status_code` after making sure an inner `requests.request` has been performed

**Returns** `status_code` of `last_response`

**get\_all** (*fields=[], limit=None, order\_by=[], offset=None*)

DEPRECATED - see `get_multiple()`

**get\_multiple** (*fields=[], limit=None, order\_by=[], offset=None*)

Wrapper method that takes whatever was returned by the `_all_inner()` generators and chains it in one result

The response can be sorted by passing a list of fields to `order_by`.

Example: `get_multiple(order_by=['category', '-created_on'])` would sort the `category` field in ascending order, with a secondary sort by `created_on` in descending order.

**Parameters**

- **fields** – List of fields to return in the result

- **limit** – Limits the number of records returned
- **order\_by** – Sort response based on certain fields
- **offset** – A number of records to skip before returning records (for pagination)

**Returns** Iterable chain object

**get\_one** (*fields=[]*)

Convenience function for queries returning only one result. Validates response before returning.

**Parameters** **fields** – List of fields to return in the result

**Raise**

**MultipleResults** if more than one match is found

**Returns** Record content

**insert** (*payload*)

Inserts a new record with the payload passed as an argument

**Parameters** **payload** – The record to create (dict)

**Returns** Created record

**delete** ()

Deletes the queried record and returns response content after response validation

**Raise**

**NoResults** if query returned no results

**NotImplementedError** if query returned more than one result (currently not supported)

**Returns** Delete response content (Generally always {'Success': True})

**update** (*payload*)

Updates the queried record with `payload` and returns the updated record after validating the response

**Parameters** **payload** – Payload to update the record with

**Raise**

**NoResults** if query returned no results

**MultipleResults** if query returned more than one result (currently not supported)

**Returns** The updated record

**clone** (*reset\_fields=[]*)

Clones the queried record

**Parameters** **reset\_fields** – Fields to reset

**Raise**

**NoResults** if query returned no results

**MultipleResults** if query returned more than one result (currently not supported)

**UnexpectedResponse** informs the user about what likely went wrong

**Returns** The cloned record

**attach** (*file*)

Attaches the queried record with `file` and returns the response after validating the response

**Parameters** `file` – File to attach to the record

**Raise**

**NoResults** if query returned no results

**MultipleResults** if query returned more than one result (currently not supported)

**Returns** The attachment record metadata

**exception** `pysnow.exceptions.UnexpectedResponse` (*code\_expected*, *code\_actual*, *http\_method*,  
*error\_summary*, *error\_details*)

Informs the user about what went wrong when interfacing with the API

**Parameters**

- **code\_expected** – Expected HTTP status code
- **code\_actual** – Actual HTTP status code
- **http\_method** – HTTP method used
- **error\_summary** – Summary of what went wrong
- **error\_details** – Details about the error





## CHAPTER 5

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### Usage

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Go [here](#) for usage examples.



## CHAPTER 6

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### Installation

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```
$ pip install pysnow
```



# CHAPTER 7

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## Compatibility

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Python 2 and 3. Tested: Python 2.6+ and Python 3.3+



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