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# provserver-api Documentation

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provstore-api is a python API client for [ProvStore](#).



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## Installation

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Install by running:

```
pip install provstore-api
```





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### Contribute

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- Issue Tracker: [GitHub issues](#).
- Source Code: [GitHub](#).



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## API Documentation

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### 3.1 provstore package

#### 3.1.1 provstore.api module

**class** `provstore.api.Api` (*username=None, api\_key=None, base\_url=None*)

Bases: `object`

Main ProvStore API client object

Most functions are not used directly but are instead accessed by functions of the Document, BundleManager and Bundle objects.

**To create a new Api object:**

```
>>> from provstore.api import Api
>>> api = Api(username="provstore username", api_key="api key")
```

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**Note:** The username and api\_key parameters can also be omitted in which case the client will look for **PROVSTORE\_USERNAME** and **PROVSTORE\_API\_KEY** environment variables.

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**FORMAT\_MAP** = {'json': 'application/json'}

**add\_bundle** (*document\_id, prov\_bundle, identifier*)

**delete\_document** (*document\_id*)

**document**

**get\_bundle** (*document\_id, bundle\_id, prov\_format=<class 'prov.model.ProvDocument'>*)

**get\_bundles** (*document\_id*)

**get\_document\_meta** (*document\_id*)

**get\_document\_prov** (*document\_id, prov\_format=<class 'prov.model.ProvDocument'>*)

**headers**

**post\_document** (*prov\_document, prov\_format, name, public=False*)

**exception** `provstore.api.NotFoundException`

Bases: `exceptions.Exception`

### 3.1.2 provstore.bundle module

**class** `provstore.bundle.Bundle` (*api, document, bundle*)

Bases: `object`

**created\_at**

**Returns** When the bundle was added

**Return type** `datetime.datetime`

**identifier**

**Returns** Identifier of the document, used as index on `provstore.bundle_manager.BundleManager`

**Return type** `str`

**prov**

**Returns** This bundle's provenance

**Return type** `prov.model.ProvDocument`

### 3.1.3 provstore.bundle\_manager module

**class** `provstore.bundle_manager.BundleManager` (*api, document*)

Bases: `object`

A document's bundle manager.

This is an iterable and will iterate through all of a document's bundles.

**Example getting and adding bundles:**

```
>>> api = Api()
>>> api.document.create(prov_document, name="name")
>>> api.bundles
A BundleManager object for this document
>>> api.bundles['ex:bundle']
A Bundle with the identifier given (if exists)
>>> api.bundles['ex:new_bundle'] = prov_bundle
Saves a new bundle with the identifier specified
```

**refresh()**

Reload list of bundles from the store

**Returns** `self`

### 3.1.4 provstore.document module

**exception** `provstore.document.AbstractDocumentException`

Bases: `provstore.document.DocumentException`

**class** `provstore.document.Document` (*api*)

Bases: `object`

ProvStore Document model.

**Note:** This class should not be instantiated manually but should be accessed via `provstore.api.Api.document()` like so:

```
>>> from provstore.api import Api
>>> api = Api()
>>> api.document
<provstore.document.Document at ...>
```

#### abstract

True if this document doesn't reference a ProvStore document yet

**add\_bundle** (*prov\_bundle*, *identifier*)

Verbose method of adding a bundle.

Can also be done as:

```
>>> api = Api()
>>> document = api.document.get(148)
>>> document.bundles['identifier'] = prov_bundle
```

#### Parameters

- **prov\_bundle** (*prov.model.ProvDocument* or *str*) – The bundle to be added
- **identifier** (*str*) – URI or QName for this bundle

#### bundles

**Returns** This document's bundle manager

**Return type** `provstore.bundle_manager.BundleManager`

**create** (*prov\_document*, *prov\_format=None*, *refresh=False*, *\*\*props*)

Create a document on ProvStore.

#### Parameters

- **prov\_document** (*prov.model.ProvDocument* or *str*) – The document to be stored
- **prov\_format** (*str* or *None*) – The format of the document provided
- **refresh** (*bool*) – Whether or not to load back the document after saving
- **props** (*dict*) – Properties for this document [**name** (required), **public** = *False*]

**Returns** This document itself but with a reference to the newly stored document

**Return type** `provstore.document.Document`

**Raises** **ImmutableDocumentException** – If this instance already refers to another document

#### created\_at

**Returns** When the document was created

**Return type** `datetime.datetime`

#### delete()

Remove the document and all of its bundles from ProvStore.

**Warning:** Cannot be undone.

**get** (*document\_id*)

Associate this model with a document on ProvStore.

**Example::**

```
>>> api = Api()
>>> api.document.get(148)
https://provenance.ecs.soton.ac.uk/store/api/v0/documents/148
>>> api.id
148
>>> api.name
ex:bundles1-sep
```

**Parameters** *document\_id* – The document ID on ProvStore**Returns** *self***id**Unique ID of the document as defined by ProvStore. Used in *get()* and *set()***name**

Name of document as seen on ProvStore

**owner**

Username of document creator

**prov**Provenance stored for this document as *prov.model.ProvDocument***public**

Is this document visible to anyone?

**read** (*document\_id=None*)

Load the document contents and metadata from the server.

**The following are equivalent::**

```
>>> api = Api()
>>> api.set(148).read()
>>> api.get(148)
```

**Parameters** *document\_id* – (optional) Set the document ID if this is an abstract document.**Returns** *self***read\_meta** (*document\_id=None*)

Load metadata associated with the document

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**Note:** This method is called automatically if needed when a property is first accessed. You will not normally have to use this method manually.

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**Parameters** *document\_id* – (optional) set the document id if this is an *abstract()* document

**Returns** self

**read\_prov** (*document\_id=None*)

Load the provenance of this document

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**Note:** This method is called automatically if needed when the `prov()` property is accessed. Manual use of this method is unusual.

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**Parameters** **document\_id** – (optional) set the document id if this is an `abstract()` document

**Returns** :py:class:`prov.model.ProvDocument`

**refresh** ()

Update information about the document from ProvStore.

**Returns** self

**save** (*prov\_document, prov\_format=None, refresh=False, \*\*props*)

Create a document on ProvStore.

**Parameters**

- **prov\_document** (`prov.model.ProvDocument` or `str`) – The document to be stored
- **prov\_format** (`str` or `None`) – The format of the document provided
- **refresh** (`bool`) – Whether or not to load back the document after saving
- **props** (`dict`) – Properties for this document [**name** (required), **public** = `False`]

**Returns** This document itself but with a reference to the newly stored document

**Return type** `provstore.document.Document`

**Raises** `ImmutableDocumentException` – If this instance already refers to another document

**set** (*document\_id*)

Associate this document with a ProvStore document without making any calls to the API. :param int document\_id: ID of the document on ProvStore :return: self

**url**

URL of document on ProvStore

**Example**

```
>>> stored_document.url
'https://provenance.ecs.soton.ac.uk/store/documents/148'
```

**views**

Number of views this document has received on ProvStore

**exception** `provstore.document.DocumentException`

Bases: `exceptions.Exception`

**exception** `provstore.document.EmptyDocumentException`

Bases: `provstore.document.DocumentException`

**exception** `provstore.document.ImmutableDocumentException`  
Bases: `provstore.document.DocumentException`



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