
pydocusign Documentation

Release 0.9

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1	Project status	3
2	Resources	5
3	Contents	7
3.1	Install	7
3.2	Demo	8
3.3	Testing	14
3.4	About pydocuSign	14
3.5	Contributing	18
4	Indices and tables	21

pydocusign is a Python client for [DocuSign](#) signature SAAS platform.

Project status

pydocusign has just been created to provide Python bindings for DocuSign's API. The project is not mature yet, but authors already use it! It means that, while API and implementation may change (improve!) a bit, authors do care of the changes.

Also, help is welcome! Feel free to report issues, request features or refactoring!

Resources

- Documentation: <https://pydocusign.readthedocs.org>
- PyPI page: <http://pypi.python.org/pypi/pydocusign>
- Bugtracker: <https://github.com/novapost/pydocusign/issues>
- Changelog: <https://pydocusign.readthedocs.org/en/latest/about/changelog.html>
- Roadmap: <https://github.com/novapost/pydocusign/milestones>
- Code repository: <https://github.com/novapost/pydocusign>
- Continuous integration: <https://travis-ci.org/novapost/pydocusign>

3.1 Install

pydocsign is open-source software, published under BSD license. See [License](#) for details.

If you want to install a development environment, you should go to [Contributing](#) documentation.

3.1.1 Prerequisites

- Python ¹ 2.7. Other versions may be ok but are not part of the test suite at the moment.

3.1.2 As a library

In most cases, you will use *pydocsign* as a dependency of another project. In such a case, you should add *pydocsign* in your main project's requirements. Typically in `setup.py`:

```
from setuptools import setup

setup(
    install_requires=[
        'pydocsign',
        #...
    ]
    # ...
)
```

Then when you install your main project with your favorite package manager (like `pip` ²), *pydocsign* will automatically be installed.

3.1.3 Standalone

You can install *pydocsign* with your favorite Python package manager. As an example with `pip` ²:

```
pip install pydocsign
```

¹ <https://www.python.org>

² <https://pypi.python.org/pypi/pip/>

3.1.4 Check

Check *pydocusign* has been installed:

```
python -c "import pydocusign;print(pydocusign.__version__)"
```

You should get *pydocusign*'s version.

References

3.2 Demo

Here is sample code to illustrate *pydocusign* usage.

To run the demo code, you need a development environment. See *Contributing*.

3.2.1 Embedded signing

```
#!/usr/bin/env python
# coding=utf-8
"""Sample script that demonstrates 'pydocusign' usage for embedded signing.
```

```
See also http://iodocs.docusign.com/APIWalkthrough/embeddedSigning
```

```
"""
from __future__ import print_function
import os
import sha
import uuid

import pydocusign
from pydocusign.test import fixtures_dir

def prompt(environ_key, description, default):
    try:
        return os.environ[environ_key]
    except KeyError:
        value = raw_input('{description} (default: "{default}"): '.format(
            default=default, description=description))
        if not value:
            return default
        else:
            return value

# Get configuration from environment or prompt the user...
root_url = prompt(
    'PYDOCUSIGN_TEST_ROOT_URL',
    'DocuSign API URL',
    'https://demo.docusign.net/restapi/v2')
username = prompt(
    'PYDOCUSIGN_TEST_USERNAME',
    'DocuSign API username',
    '')
```

```

password = prompt(
    'PYDOCUSIGN_TEST_PASSWORD',
    'DocuSign API password',
    '')
integrator_key = prompt(
    'PYDOCUSIGN_TEST_INTEGRATOR_KEY',
    'DocuSign API integrator key',
    '')
callback_url = prompt(
    'PYDOCUSIGN_TEST_CALLBACK_URL',
    'Envelope callback URL',
    '')
signer_return_url = prompt(
    'PYDOCUSIGN_TEST_SIGNER_RETURN_URL',
    'Signer return URL',
    '')

# Create a client.
client = pydocusign.DocuSignClient(
    root_url=root_url,
    username=username,
    password=password,
    integrator_key=integrator_key,
)

# Login. Updates API URLs in client.
print("1. GET /login_information")
login_information = client.login_information()
print("    Received data: {data}".format(data=login_information))

# Prepare list of signers. Ordering matters.
signers = [
    pydocusign.Signer(
        email='jean.francais@example.com',
        name=u'Jean Français',
        recipientId=1,
        clientId=str(uuid.uuid4()), # Something unique in your database.
        tabs=[
            pydocusign.SignHereTab(
                documentId=1,
                pageNumber=1,
                xPosition=100,
                yPosition=100,
            ),
        ],
        emailSubject='Voici un sujet',
        emailBody='Voici un message',
        supportedLanguage='fr',
    ),
    pydocusign.Signer(
        email='paul.english@example.com',
        name=u'Paul English',
        recipientId=2,
        clientId=str(uuid.uuid4()), # Something unique in your database.
        tabs=[], # No tabs means user places tabs himself in DocuSign UI.
    ),
]

```

```
        emailSubject='Here is a subject',
        emailBody='Here is a message',
        supportedLanguage='en',
    ),
]

# Create envelope with embedded signing.
print("2. POST {account}/envelopes")
event_notification = pydocusign.EventNotification(
    url=callback_url,
)
input_document_path = os.path.join(fixture_dir(), 'test.pdf')
with open(input_document_path, 'rb') as pdf_file:
    envelope = pydocusign.Envelope(
        documents=[
            pydocusign.Document(
                name='document.pdf',
                documentId=1,
                data=pdf_file,
            ),
        ],
        emailSubject='This is the subject',
        emailBlurb='This is the body',
        eventNotification=event_notification,
        status=pydocusign.Envelope.STATUS_SENT,
        recipients=signers,
    )
    client.create_envelope_from_document(envelope)
print("    Received envelopeId {id}".format(id=envelope.envelopeId))

# Update recipient list of envelope: fetch envelope's 'UserId' from DocuSign.
print("3. GET {account}/envelopes/{envelopeId}/recipients")
envelope.get_recipients()
print("    Received UserId for recipient 0: {0}".format(
    envelope.recipients[0].userId))
print("    Received UserId for recipient 1: {0}".format(
    envelope.recipients[1].userId))

# Retrieve embedded signing for first recipient.
print("4. Get DocuSign Recipient View")
signing_url = envelope.post_recipient_view(
    routingOrder=1,
    returnUrl=signer_return_url)
print("    Received signing URL for recipient 0: {0}".format(signing_url))
signing_url = envelope.post_recipient_view(
    routingOrder=2,
    returnUrl=signer_return_url)
print("    Received signing URL for recipient 1: {0}".format(signing_url))

# Download signature documents.
print("5. List signature documents.")
document_list = envelope.get_document_list()
print("    Received document list: {0}".format(document_list))
print("6. Download document from DocuSign.")
```

```
document = envelope.get_document(document_list[0]['documentId'])
document_sha = sha.new(document.read()).hexdigest()
print("    Document SHA1: {0}".format(document_sha))
document.close()
print("7. Download signature certificate from DocuSign.")
document = envelope.get_certificate()
document_sha = sha.new(document.read()).hexdigest()
print("    Certificate SHA1: {0}".format(document_sha))
document.close()
```

You can run this code with:

```
python demo/embeddedsigning.py
```

Note: The demo can use the same environment variables as tests. See *Contributing*. If you do not set environment variables, you will be prompted for some configuration.

3.2.2 Creating envelope using template

```
#!/usr/bin/env python
# coding=utf-8
"""Sample script that demonstrates 'pydocusign' usage for template signing.

See also http://iodocs.docusign.com/APIWalkthrough/requestSignatureFromTemplate

"""
from __future__ import print_function
import os
import sha
import uuid

import pydocusign

def prompt(environ_key, description, default):
    try:
        return os.environ[environ_key]
    except KeyError:
        value = raw_input('{description} (default: "{default}")': '.format(
            default=default, description=description))
        if not value:
            return default
        else:
            return value

# Get configuration from environment or prompt the user...
root_url = prompt(
    'PYDOCUSIGN_TEST_ROOT_URL',
    'DocuSign API URL',
    'https://demo.docusign.net/restapi/v2')
username = prompt(
    'PYDOCUSIGN_TEST_USERNAME',
    'DocuSign API username',
    '')
password = prompt(
```

```
'PYDOCUSIGN_TEST_PASSWORD',
'DocuSign API password',
'')
integrator_key = prompt(
    'PYDOCUSIGN_TEST_INTEGRATOR_KEY',
    'DocuSign API integrator key',
    '')
template_id = prompt(
    'PYDOCUSIGN_TEST_TEMPLATE_ID',
    'DocuSign Template ID',
    '')
callback_url = prompt(
    'PYDOCUSIGN_TEST_CALLBACK_URL',
    'Envelope callback URL',
    '')
signer_return_url = prompt(
    'PYDOCUSIGN_TEST_SIGNER_RETURN_URL',
    'Signer return URL',
    '')

# Create a client.
client = pydocusign.DocuSignClient(
    root_url=root_url,
    username=username,
    password=password,
    integrator_key=integrator_key,
)

# Login. Updates API URLs in client.
print("1. GET /login_information")
login_information = client.login_information()
print("    Received data: {data}".format(data=login_information))

# Get the template definition
print("2. GET {account}/templates/{templateId}")
template_definition = client.get_template(template_id)
assert template_definition['recipients']['signers'][0][
    'roleName'] == 'employee'
assert template_definition['recipients']['signers'][0][
    'routingOrder'] == '1'
assert template_definition['recipients']['signers'][1][
    'roleName'] == 'employer'
assert template_definition['recipients']['signers'][1][
    'routingOrder'] == '1' # Same routingOrder, important for testing

# Prepare list of roles. Ordering matters
roles = [
    pydocusign.Role(
        email='jean.francais@example.com',
        name=u'Jean Français',
        roleName='employer',
        clientUserId=str(uuid.uuid4()), # Something unique in your database.
    ),
    pydocusign.Role(
```



```

        email='paul.english@example.com',
        name=u'Paul English',
        roleName='employee',
        clientId=clientId, # Something unique in your database.
    ),
]

# Create envelope with embedded signing.
print("3. POST {account}/envelopes")
event_notification = pydocusign.EventNotification(
    url=callback_url,
)
envelope = pydocusign.Envelope(
    emailSubject='This is the subject',
    emailBlurb='This is the body',
    eventNotification=event_notification,
    status=pydocusign.Envelope.STATUS_SENT,
    templateId=template_id,
    templateRoles=roles,
)
client.create_envelope_from_template(envelope)
print("    Received envelopeId {id}".format(id=envelope.envelopeId))

# Update recipient list of envelope: fetch envelope's ``UserId`` from DocuSign.
print("4. GET {account}/envelopes/{envelopeId}/recipients")
envelope.get_recipients()
print("    Received UserId for recipient 0: {0}".format(
    envelope.templateRoles[0].userId))
print("    Received UserId for recipient 1: {0}".format(
    envelope.templateRoles[1].userId))

# Retrieve template signing for first recipient.
print("5. Get DocuSign Recipient View")
signing_url = envelope.post_recipient_view(
    routingOrder=1,
    returnUrl=signer_return_url)
print("    Received signing URL for recipient 0: {0}".format(signing_url))
signing_url = envelope.post_recipient_view(
    routingOrder=2,
    returnUrl=signer_return_url)
print("    Received signing URL for recipient 1: {0}".format(signing_url))

# Download signature documents.
print("6. List signature documents.")
document_list = envelope.get_document_list()
print("    Received document list: {0}".format(document_list))
print("7. Download document from DocuSign.")
document = envelope.get_document(document_list[0]['documentId'])
document_sha = sha.new(document.read()).hexdigest()
print("    Document SHA1: {0}".format(document_sha))
document.close()
print("8. Download signature certificate from DocuSign.")
document = envelope.get_certificate()
document_sha = sha.new(document.read()).hexdigest()

```

```
print("    Certificate SHA1: {}".format(document_sha))
document.close()
```

You can run this code with:

```
python demo/templatesigning.py
```

Note: The demo can use the same environment variables as tests. See [Contributing](#). If you do not set environment variables, you will be prompted for some configuration.

3.3 Testing

pydocusign provides some tools to help you test your applications:

- `post_notification_callback()`
- `generate_notification_callback_body()`

3.3.1 `post_notification_callback`

Note: Uses third-party [diecutter](#)³ online file generation service. See `generate_notification_callback_body()` for details.

3.3.2 `generate_notification_callback_body`

Note: This function uses third-party [diecutter](#)¹ online file generation service. This allows *pydocusign* to use templates without having template engines (Jinja2) as dependencies, since this callback notification feature is for test purpose only. At runtime, *pydocusign* does not require Jinja2.

Available templates are the ones in `pydocusign/templates` folder of *pydocusign*'s code repository⁴.

References

3.4 About pydocusign

This section is about the *pydocusign* project itself.

3.4.1 Vision

pydocusign is a Python client for [DocuSign](#)⁵ signature SAAS platform.

³ <http://diecutter.io>

⁴ <https://github.com/novapost/pydocusign/>

⁵ <https://www.docusign.com>

As *pydocusign* author, I basically needed Python bindings for DocuSign API, but I did not find one either on <https://pypi.python.org/pypi/?%3Aaction=search&term=docusign> or <https://www.docusign.com/developer-center/quick-start/api-explorer/helper-library>. So initiating a new one looked like a fair start. I published it under BSD so that it can be used, improved and maintained by a community.

So, **feel free to report issues, request features or refactoring!** See *Contributing* for details.

Notes & references

3.4.2 Alternatives and related projects

This document presents other projects that provide similar or complementary functionalities. It focuses on differences or relationships with *pydocusign*.

DocuSign's helper libraries

There are other libraries related to DocuSign ⁶ service. Check <https://www.docusign.com/developer-center/quick-start/api-explorer/helper-library>

django-docusign

django-docusign ⁷ integrates *pydocusign* in *Django*. It is built on top of *django-anysign* ⁸ generic API.

References

3.4.3 License

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⁶ <https://www.docusign.com/>

⁷ <https://github.com/novapost/django-docusign/>

⁸ <https://github.com/novapost/django-anysign/>

3.4.4 Authors & contributors

Maintainer: the PeopleDoc ⁹ team: <https://github.com/novapost/>

Developers: <https://github.com/novapost/pydocusign/graphs/contributors>

Notes & references

3.4.5 Changelog

This document describes changes between each past release. For information about future releases, check [milestones](#) ¹⁰ and *Vision*.

0.9 (2014-11-26)

New feature around envelope creation.

- Feature #29 - `pydocusign.DocuSignClient` can create envelope using template. Added method `create_envelope_from_template()`. Check the `templatesigning.py` demo in documentation. When running tests or demo, you need an additional `PYDOCUSIGN_TEST_TEMPLATE_ID` environment variable, which is the UUID of a DocuSign template having 2 signers with routing order set to “1”.

0.8 (2014-11-13)

Feature around internationalization.

- Feature #26 - `pydocusign.Signer` model accepts new optional arguments: `emailSubject`, `emailBody` and `supportedLanguage`. They are used to setup DocuSign’s `emailNotification` for recipient, which makes it possible to change default language shown in DocuSign user interface for each recipient.

0.7.2 (2014-10-22)

Bugfixes.

- Bug #23 - Using pseudo-constants of `pydocusign.Envelope` and `pydocusign.Recipient` instead of raw strings in `DocuSignCallbackParser`. As a consequence, parser’s `recipient_events`, `envelope_events` and `events` properties also use values from pseudo-constants. They use CamelCase (they used to be all lowercase).
- Bug #22 - Fixed `DeclineReason` in notification callback template.

0.7.1 (2014-10-17)

Improved retro-compatibility of release 0.7.

- Bug #20 - Restored pseudo-constants in `Envelope` model. They were removed in version 0.7, but it appeared they are useful, and probably the simplest way to access them, since `pydocusign.Envelope` is part of the main API, whereas `pydocusign.models` is not.

Also:

⁹ <http://www.people-doc.com>

¹⁰ <https://github.com/novapost/pydocusign/milestones>

- added keys/values to Envelope's pseudo-constants.
- registered pseudo-constants in Recipient model.

0.7 (2014-10-16)

Testing tools around notification callbacks.

- Features #14 and #16 - `pydocusign.test` provides utilities to test notification callbacks: generate body content for notification requests, post fake notification requests to a custom URL.
 - Added pseudo-constants in `pydocusign.models`, so that you can use them instead of strings. As an example, you'd better use `pydocusign.models.ENVELOPE_STATUS_SENT` instead of "Sent".
- Removed `STATUS_SENT` and `STATUS_DRAFT` from Envelope model.

0.6 (2014-10-08)

Improvements around event notifications.

- Feature #15 - On envelope creation, register callback URL for recipient events.
- Feature #17 - `pydocusign.DocuSignCallbackParser` can extract data from DocuSign's event notification callbacks.

0.5 (2014-09-26)

Minor feature around document download.

- Feature #12: `DocuSignClient.get_envelope_document()` returns a file-like object with a `close()` method.

0.4 (2014-09-17)

Feature: download envelope's documents.

- Feature #10 - Introduced methods for client and envelope instances to get the list of envelope's documents, and download documents.

0.3 (2014-09-12)

Minor API simplification.

- Feature #7 - Since most methods of `DocuSignClient` require `account_url` attribute, they can initialize it automatically with a call to `login_information()`.
- Bug #6 - Added "URL" and "license" fields to Python package metadata (were missing).

0.2 (2014-09-05)

Integrate more DocuSign features.

- Feature #1 - Envelopes can be created with `eventNotification` argument, which allows to setup API callbacks on signature updates.
- Feature #3 - Added support for "approve tabs", which allow signer to sign a document without adding visible text/graphic to the document.

- Feature #5 - DocuSignClient.login_information raises DocuSignException and emits logs on error.

0.1 (2014-07-30)

Initial release.

- Introduced DocuSignClient client and models. Initial features around embedded signing workflow:
 - login
 - create envelope
 - get envelope’s recipients (read envelope)
 - post recipient view (get embedded signing URL)

Notes & references

3.5 Contributing

This document provides guidelines for people who want to contribute to the *pydocusign* project.

3.5.1 Create tickets

Please use [pydocusign bugtracker](#) ¹¹ **before** starting some work:

- check if the bug or feature request has already been filed. It may have been answered too!
- else create a new ticket.
- if you plan to contribute, tell us, so that we are given an opportunity to give feedback as soon as possible.
- Then, in your commit messages, reference the ticket with some `refs #TICKET-ID` syntax.

3.5.2 Use topic branches

- Work in branches.
- Prefix your branch with the ticket ID corresponding to the issue. As an example, if you are working on ticket #23 which is about contribute documentation, name your branch like `23-contribute-doc`.
- If you work in a development branch and want to refresh it with changes from master, please [rebase](#) ¹² or [merge-based rebase](#) ¹³, i.e. do not merge master.

3.5.3 Fork, clone

Clone *pydocusign* repository (adapt to use your own fork):

```
git clone git@github.com:novapost/pydocusign.git
cd pydocusign/
```

¹¹ <https://github.com/novapost/pydocusign/issues>

¹² <http://git-scm.com/book/en/Git-Branching-Rebasing>

¹³ <http://tech.novapost.fr/psycho-rebasing-en.html>

3.5.4 Usual actions

The *Makefile* is the reference card for usual actions in development environment:

- Install development toolkit with `pip`¹⁴: `make develop`.
- Run tests with `tox`¹⁵: `make test`.
- Build documentation: `make documentation`. It builds `Sphinx`¹⁶ documentation in `var/docs/html/index.html`.
- Release *pydocusign* project with `zest.releaser`¹⁷: `make release`.
- Cleanup local repository: `make clean`, `make distclean` and `make maintainer-clean`.

See also `make help`.

3.5.5 Create an account on DocuSign platform

In order to run the tests or to use *pydocusign* features, you will need an account on DocuSign platform. For testing purpose, a developer account is fine: see <https://demo.docusign.net/>.

3.5.6 Use private credentials to run the tests

The test suite contains several integration tests, so it requires valid DocuSign account credentials. The test suite reads environment variables to get the setup. Here is an example to run the tests:

```
PYDOCUSIGN_TEST_ROOT_URL='https://demo.docusign.net/restapi/v2' \
PYDOCUSIGN_TEST_USERNAME='your-username' \
PYDOCUSIGN_TEST_PASSWORD='your-password' \
PYDOCUSIGN_TEST_INTEGRATOR_KEY='your-integrator-key' \
PYDOCUSIGN_TEST_TEMPLATE_ID='UUID-of-your-docusign-template' \
PYDOCUSIGN_TEST_SIGNER_RETURN_URL='http://example.com/signer-return/' \
PYDOCUSIGN_TEST_CALLBACK_URL='http://example.com/callback/' \
make test
```

Notes & references

¹⁴ <https://pypi.python.org/pypi/pip/>

¹⁵ <https://pypi.python.org/pypi/tox/>

¹⁶ <https://pypi.python.org/pypi/Sphinx/>

¹⁷ <https://pypi.python.org/pypi/zest.releaser/>

Indices and tables

- *genindex*
- *modindex*
- *search*