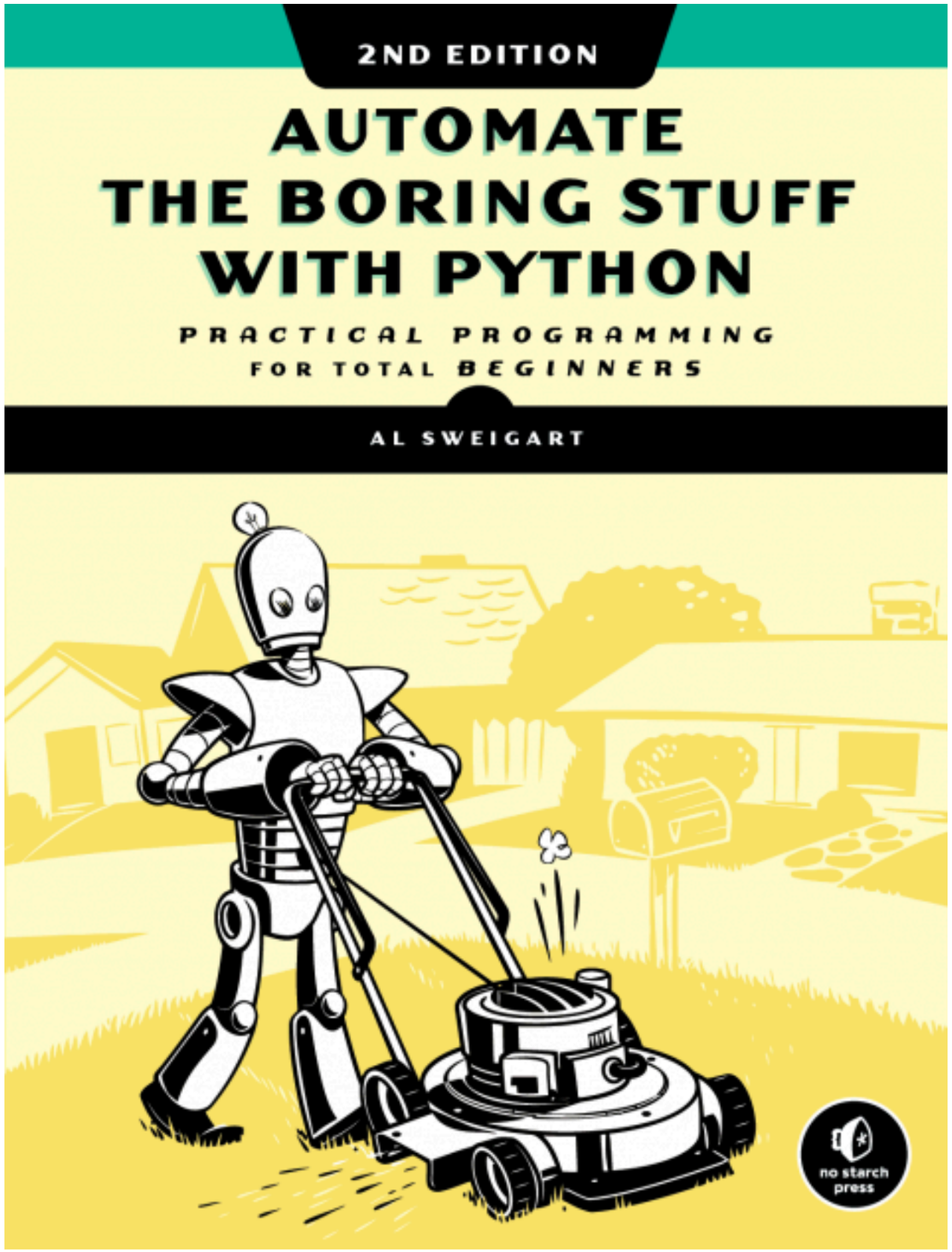
สยามชำนาญกิจ
SIAM CHAMNAN KIT

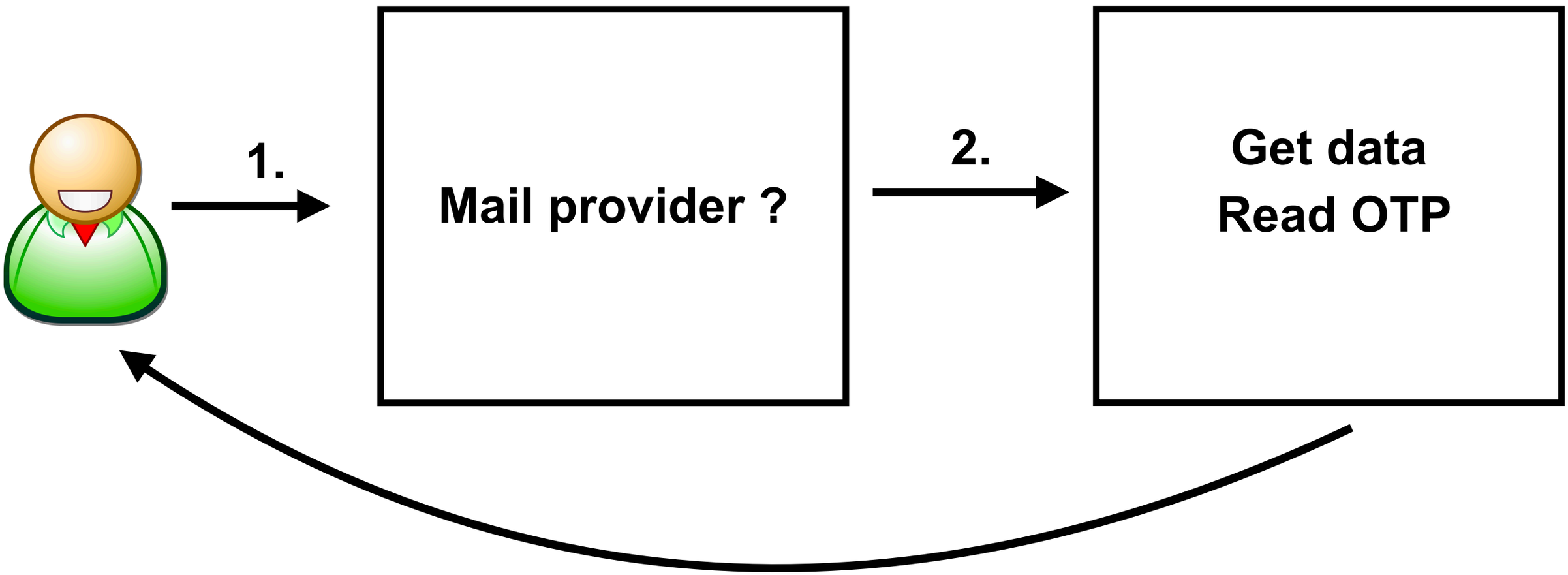
Workshop with tasks



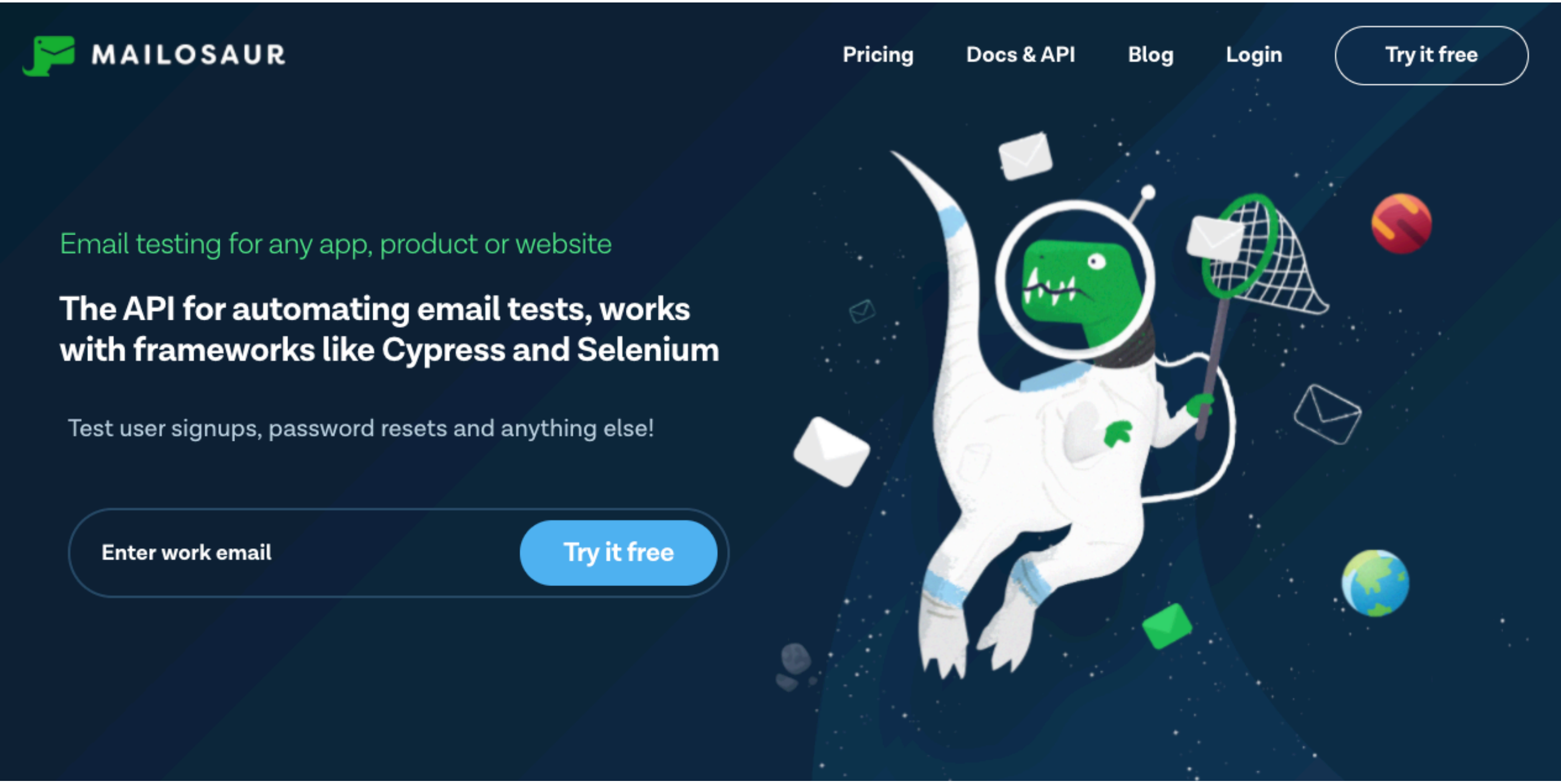
Tasks with Python and Robot Framework

Check OTP from e-mail

Use case

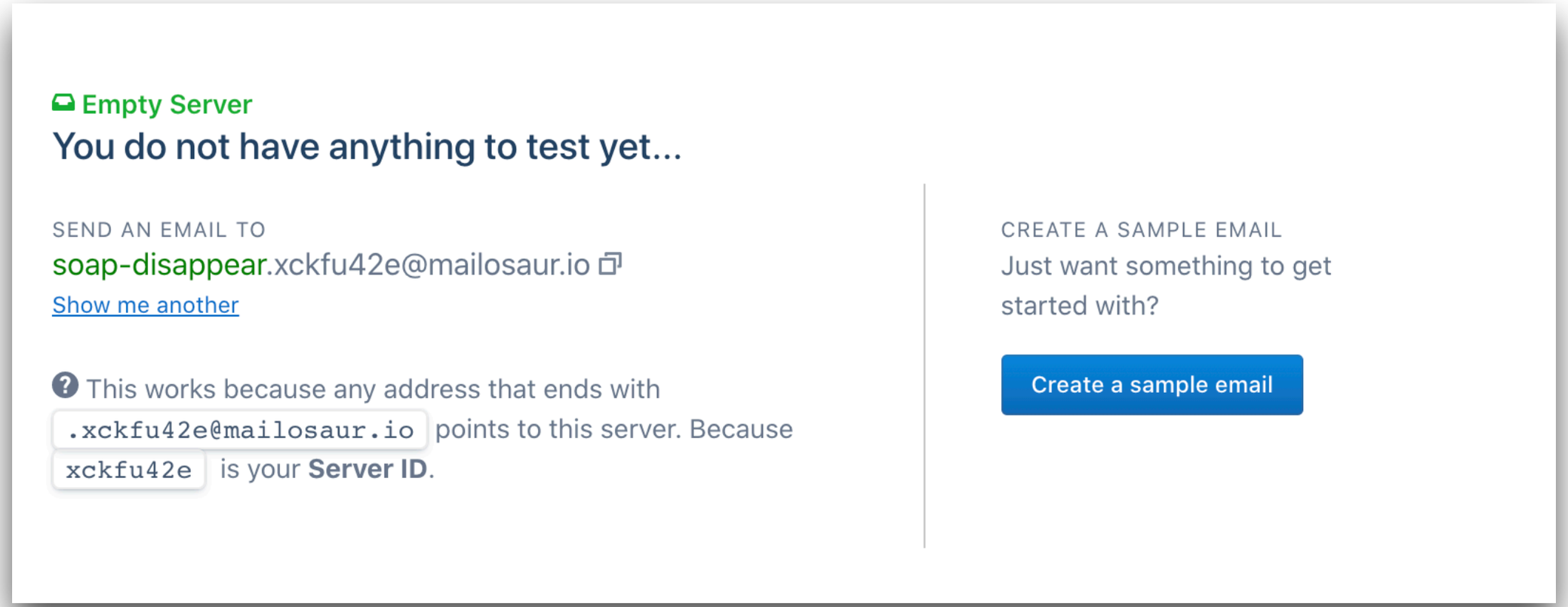


Working with email



https://mailosaur.com/

Working with email



https://mailosaur.com/

Mailosaur library

$pip install mailosaur

https://mailosaur.com/docs/email-testing/

check_email.py

```python
from mailosaur import MailosaurClient
from mailosaur.models import SearchCriteria

API_KEY = ''
SERVER_ID = ''

def read_email(email):
    client = MailosaurClient(API_KEY)
    criteria = SearchCriteria()
    criteria.sent_to = email + "." + SERVER_ID  +"@mailosaur.io"
    message = client.messages.get(SERVER_ID, criteria)
    return message.text.body
```

https://mailosaur.com/docs/email-testing/python/

RPA framework library

$pip install rpaframework

https://rpaframework.org/

check_gmail.py

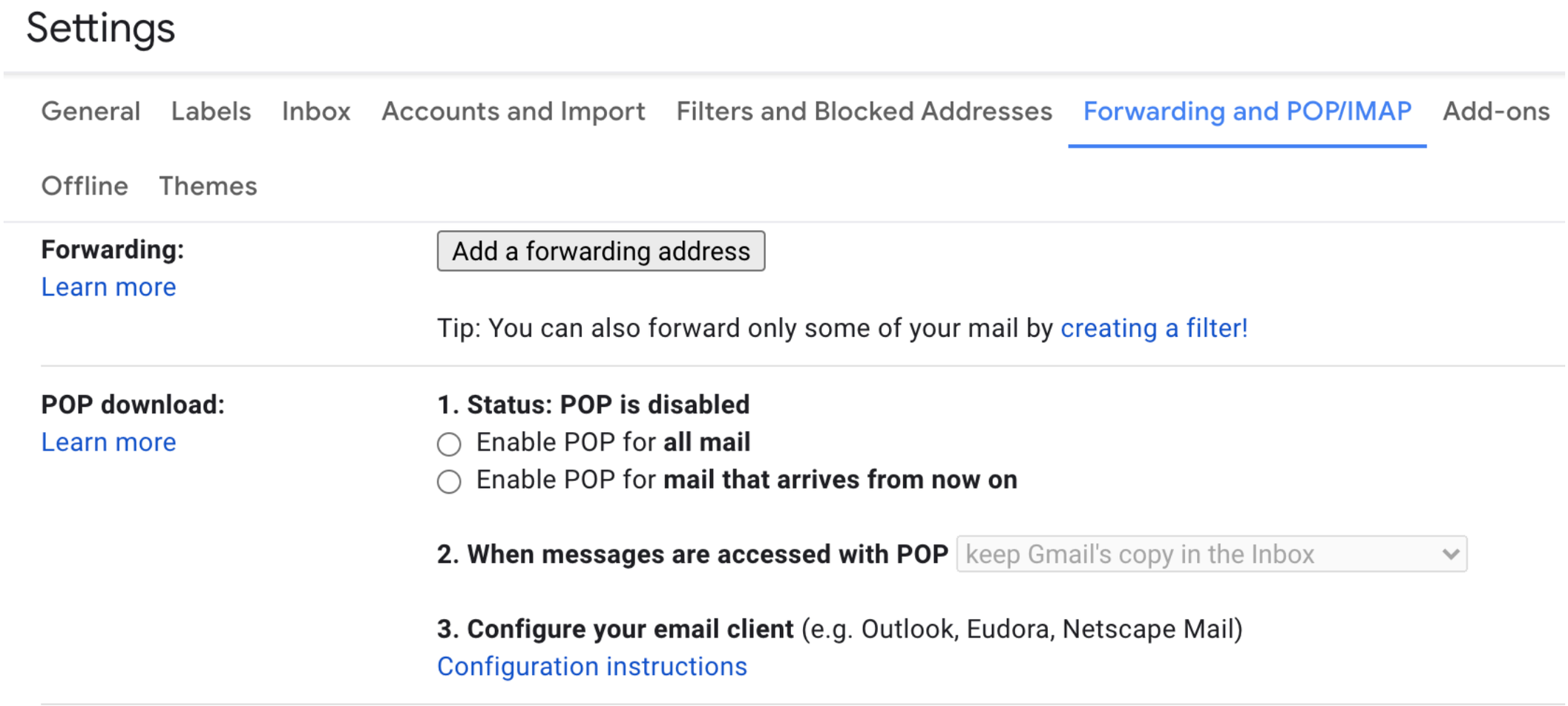
```python
from RPA.Email.ImapSmtp import ImapSmtp

gmail_account = "<your gmail>"
gmail_password = "<your password>"
sender = gmail_account

mail = ImapSmtp(smtp_server="smtp.gmail.com", smtp_port=587)
mail.authorize(account=gmail_account, password=gmail_password)
mail.send_message(
    sender=gmail_account,
    recipients=gmail_account,
    subject="Message from RPA Python",
    body="RPA Python message body",
)

messages = mail.list_messages("SUBJECT RPA")
print(messages[0]['Body'].decode("utf-8"))
```

Config gmail

Enable IMAP
Allow less secure access

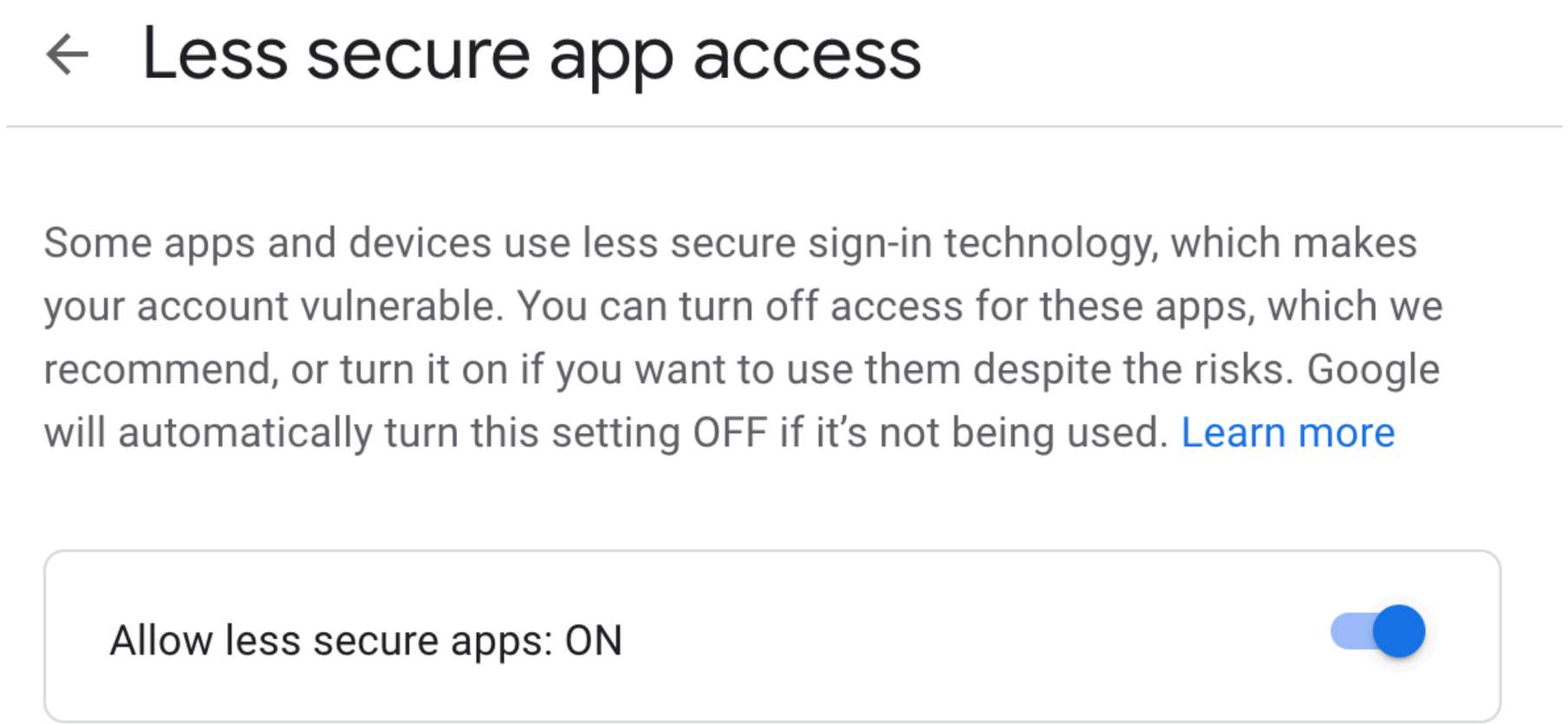
Enable IMAP

Settings -> POP/IMAP



Allow less secure access

https://myaccount.google.com/u/2/lesssecureapps



Working with Excel file

RPA framework library

$pip install rpaframework

Using Excel.Files

https://rpaframework.org/libraries/excel_files/index.html

Read data from Excel file

```
from RPA.Excel.Files import Files

def read_excel_worksheet(path, worksheet):
    lib = Files()
    lib.open_workbook(path)
    try:
        return lib.read_worksheet(worksheet)
    finally:
        lib.close_workbook()

if __name__ == '__main__':
    data1 = read_excel_worksheet('sample.xlsx', 'Sheet1')
    print(data1)
    data2 = read_excel_worksheet('sample.xlsx', 'Sheet2')
    print(data2)
```

Using pandas, xlrd, openlyxl

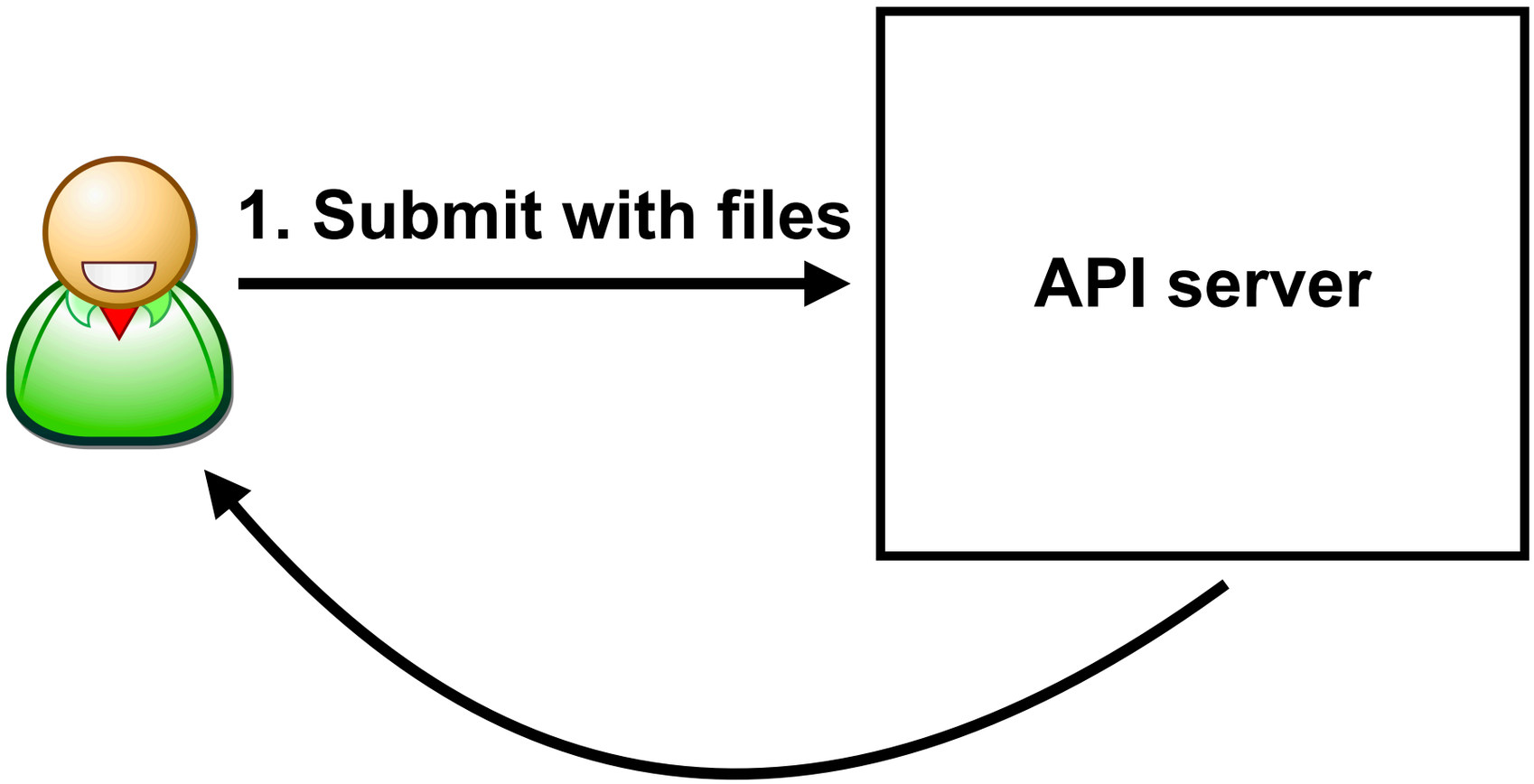
$pip install pandas
$pip install xlrd openpyxl

Read data from Excel file

```python
import pandas as pd

# Read File
sample1 = pd.read_excel("sample.xlsx", sheet_name="Sheet1")
print(sample1)

sample2 = pd.read_excel("sample.xlsx", sheet_name="Sheet2")
print(sample2)
```

API testing
Upload file with multipart/ request

Use case



Working with RequestsLibrary

$pip install robotframework-requests

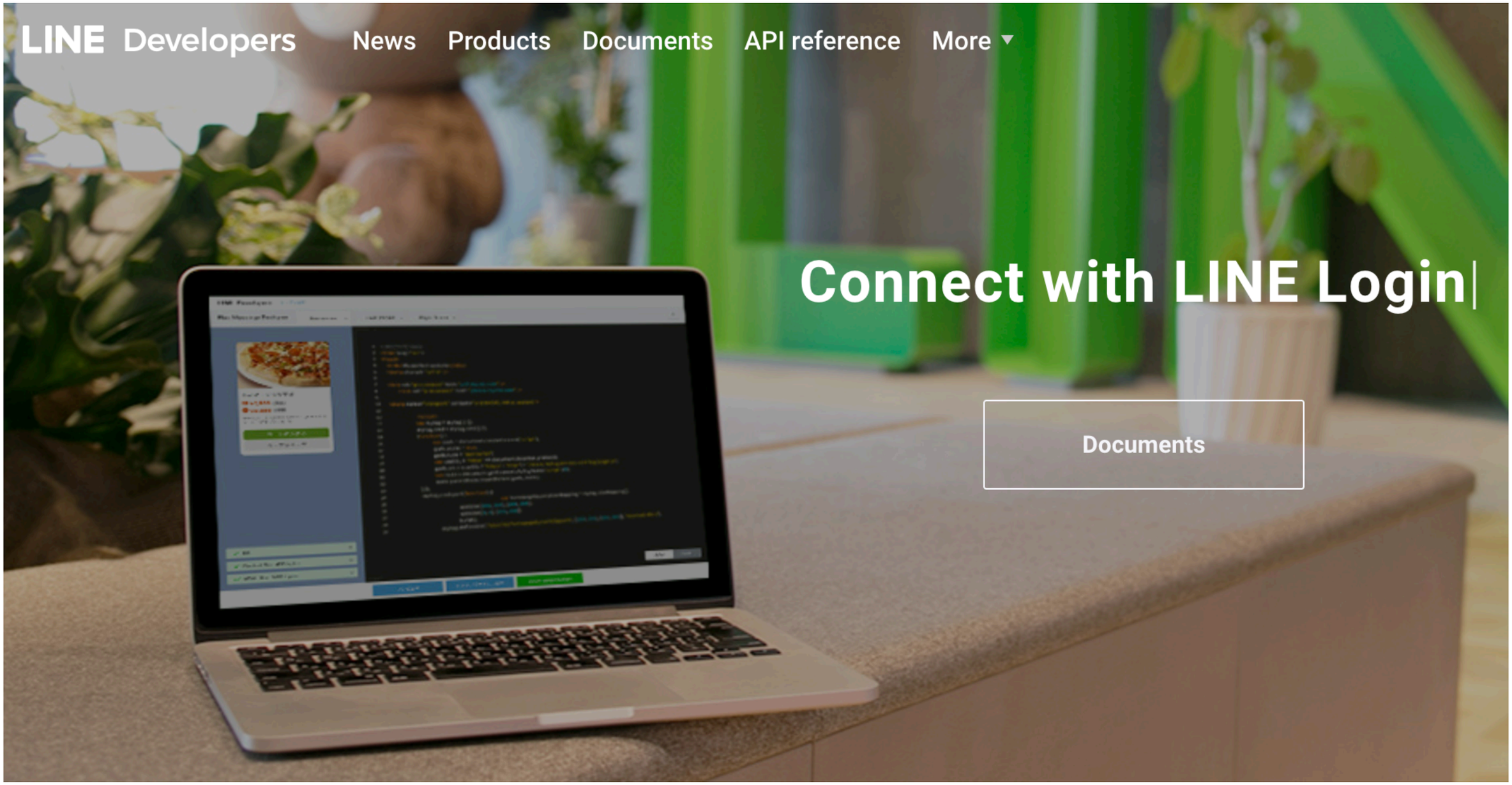
https://github.com/MarketSquare/robotframework-requests#readme

Upload file to server

```
*** Settings ***
Library   RequestsLibrary
Library   OperatingSystem
Library   Collections

*** Test Cases ***
Post Request With File
    Create Session    httpbin    http://httpbin.org    debug=2
max_retries=10
    ${file_data}=    Get Binary File    ${CURDIR}${/}data.json
    ${files}=    Create Dictionary    file    ${file_data}
    ${resp}=    Post Request    httpbin    /post    files=${files}
    Log To Console    ${resp.json()}
    ${file}=    To Json    ${resp.json()['files']['file']}
    Dictionary Should Contain Key    ${file}    data1
    Dictionary Should Contain Key    ${file}    data2
```

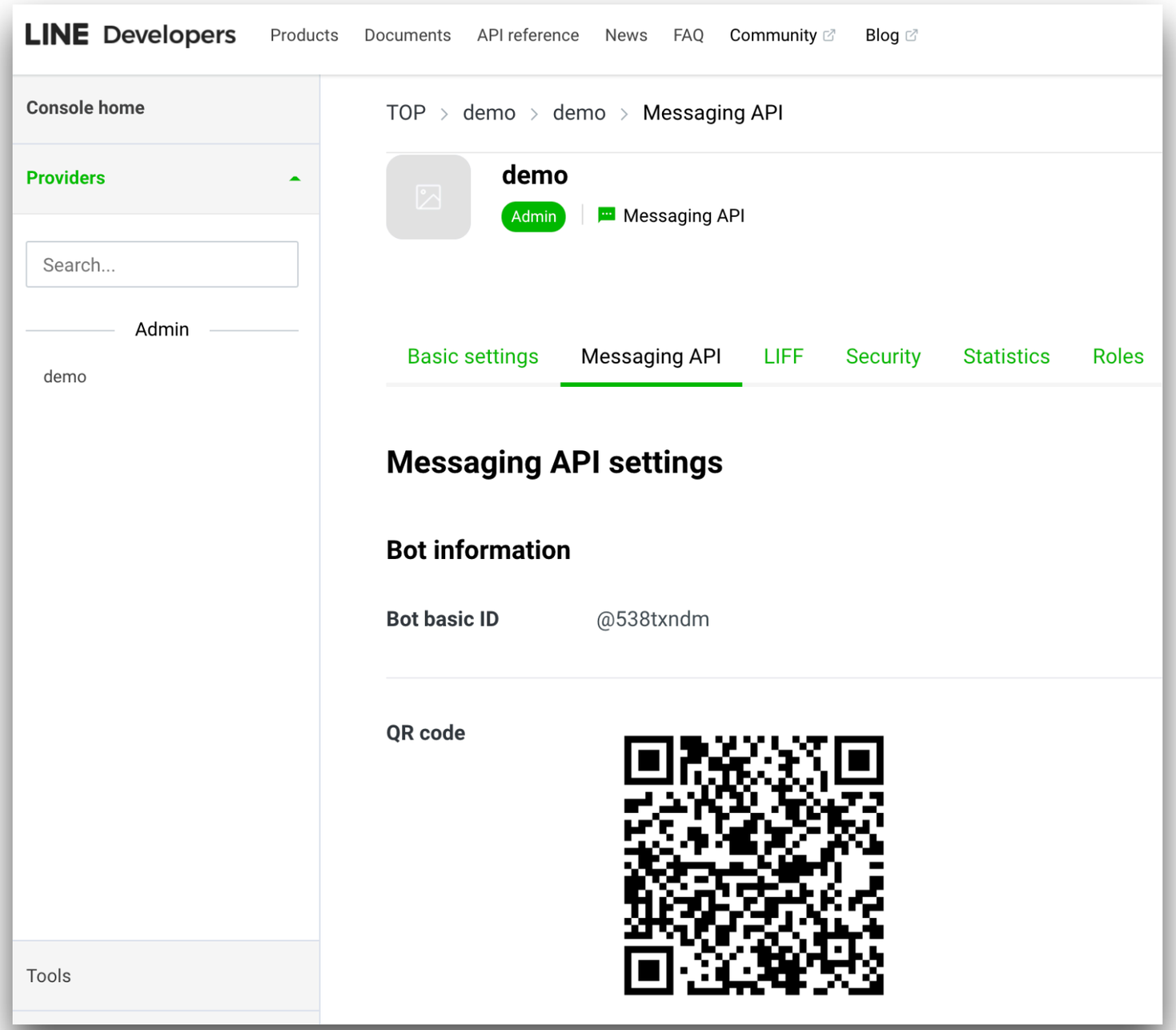
Read data from LINE <chatbot>

Create LINE Developers



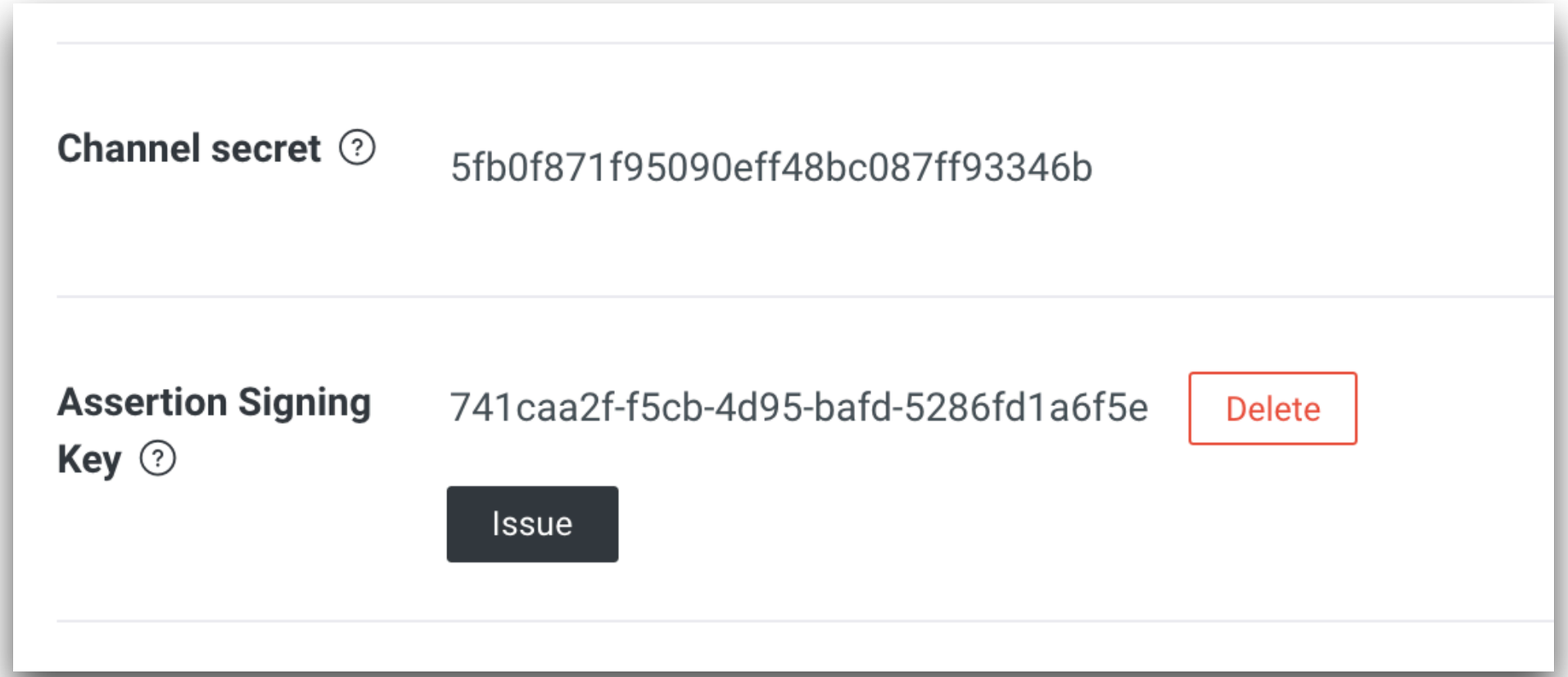
https://developers.line.biz/console/

Create providers and channel



https://developers.line.biz/console/

Generate channel secret



https://developers.line.biz/console/

Working with LINE Bot SDK

$pip install line-bot-sdk

https://github.com/line/line-bot-sdk-python

Sample server

$pip installl Flask

https://pypi.org/project/Flask/

Sample server

Config channel secret and access token

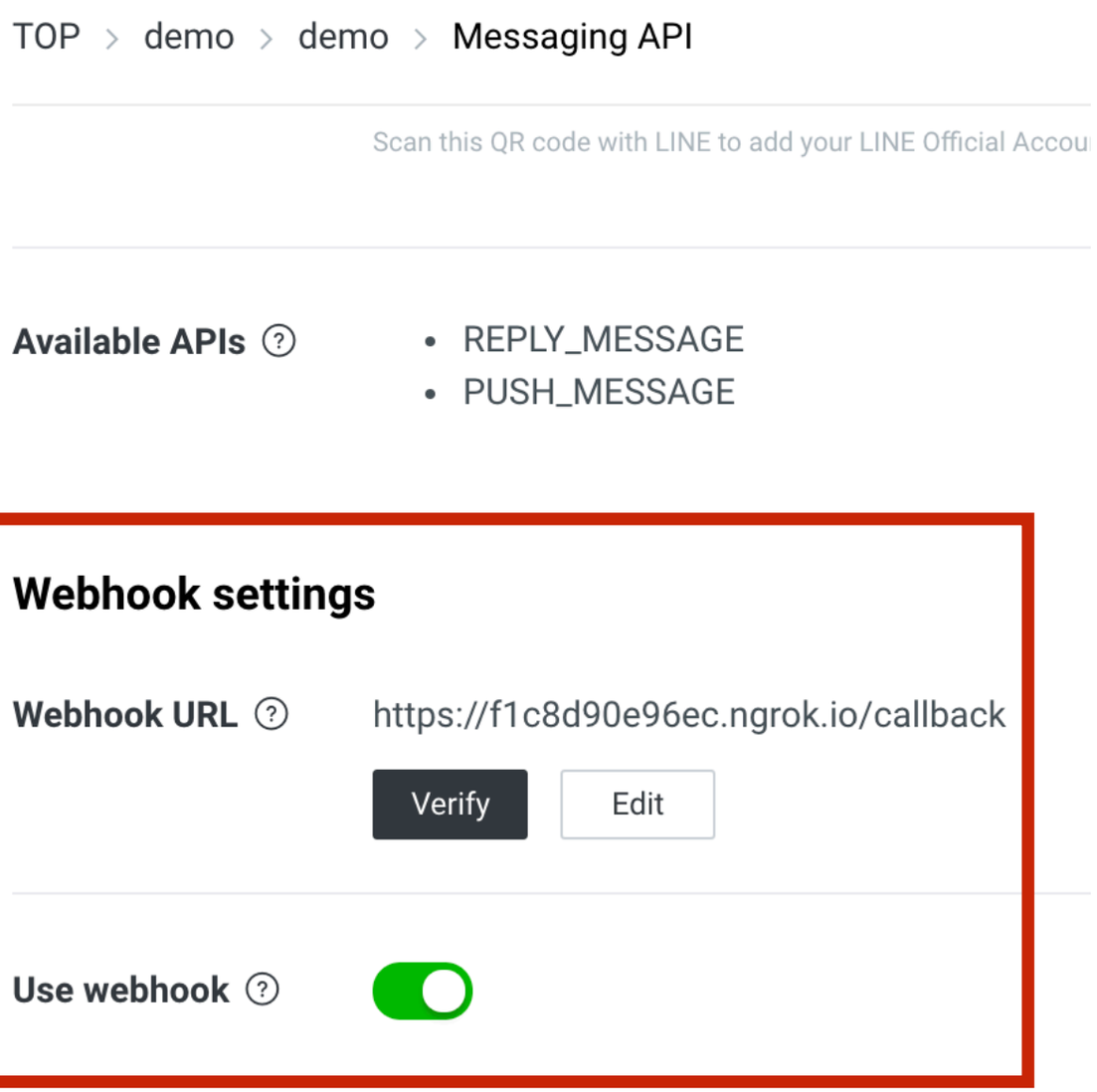
```
# get channel_secret and channel_access_token from your environment
variable
channel_secret = os.getenv('LINE_CHANNEL_SECRET', None)
channel_access_token = os.getenv('LINE_CHANNEL_ACCESS_TOKEN', None)
if channel_secret is None:
    print('Specify LINE_CHANNEL_SECRET as environment variable.')
    sys.exit(1)
if channel_access_token is None:
    print('Specify LINE_CHANNEL_ACCESS_TOKEN as environment variable.')
    sys.exit(1)
```

Sample server

Create callback for webhook

```
@app.route("/callback", methods=['POST'])
def callback():
    signature = request.headers['X-Line-Signature']

    # get request body as text
    body = request.get_data(as_text=True)
    app.logger.info("Request body: " + body)

    # parse webhook body
    events = parser.parse(body, signature)

    # if event is MessageEvent and message is TextMessage, then echo text
    for event in events:
        if not isinstance(event, MessageEvent):
            continue
        if not isinstance(event.message, TextMessage):
            continue

            print('>>>', event.message.text)

    return 'OK'
```

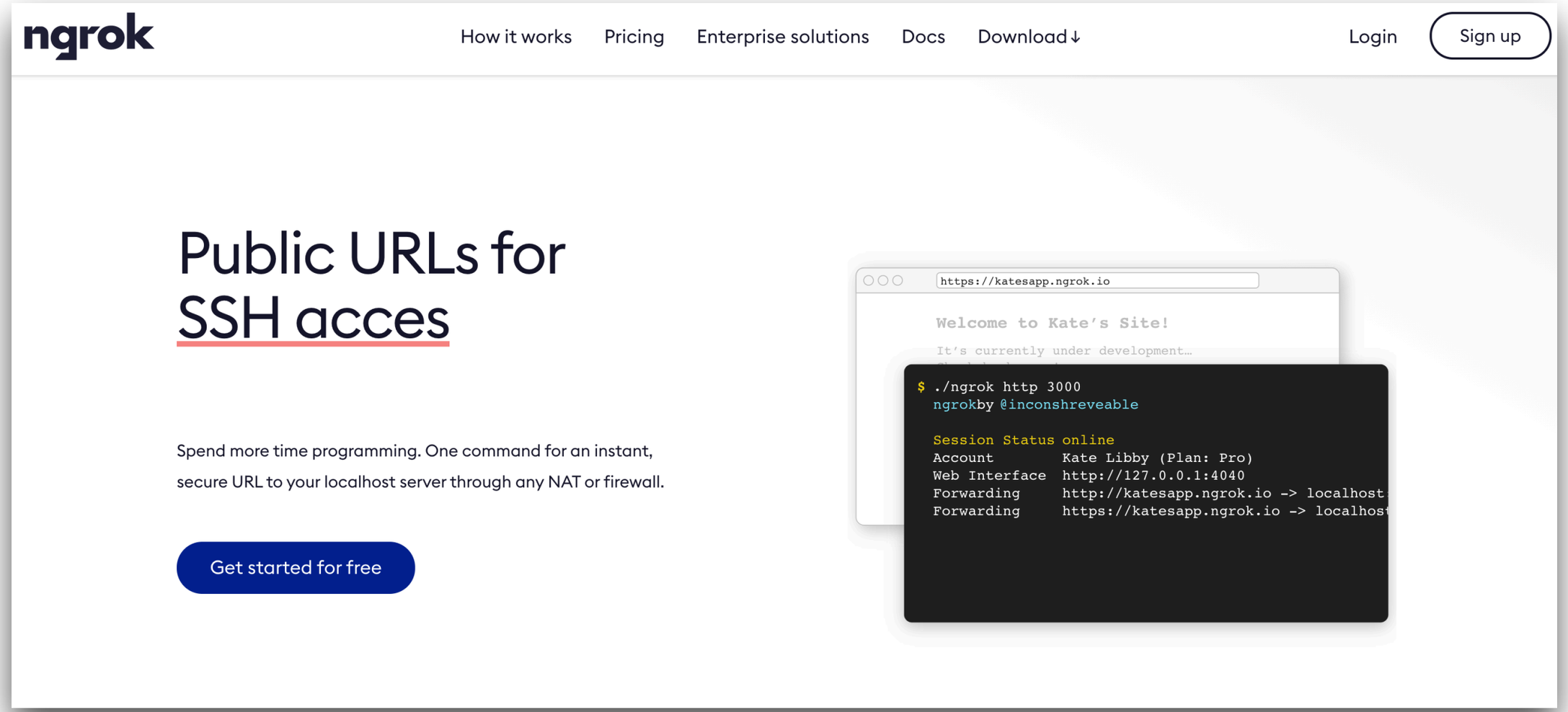
Config webhook in Message API



https://developers.line.biz/console/

Publish localhost to public server

Using ngrok



https://ngrok.com/

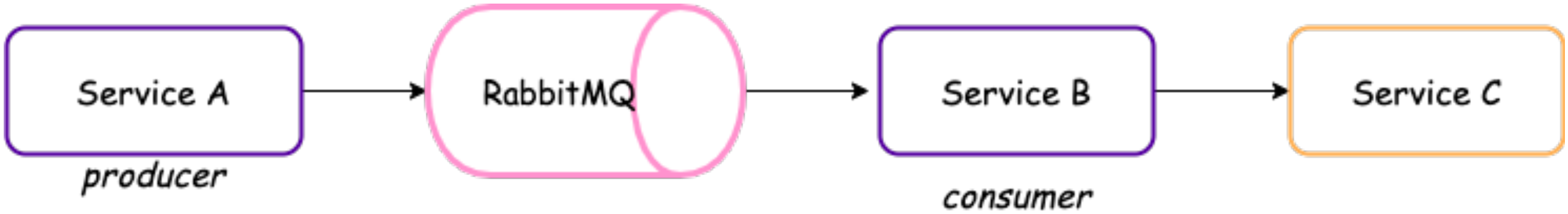
Sample server

$ngrok http 8080

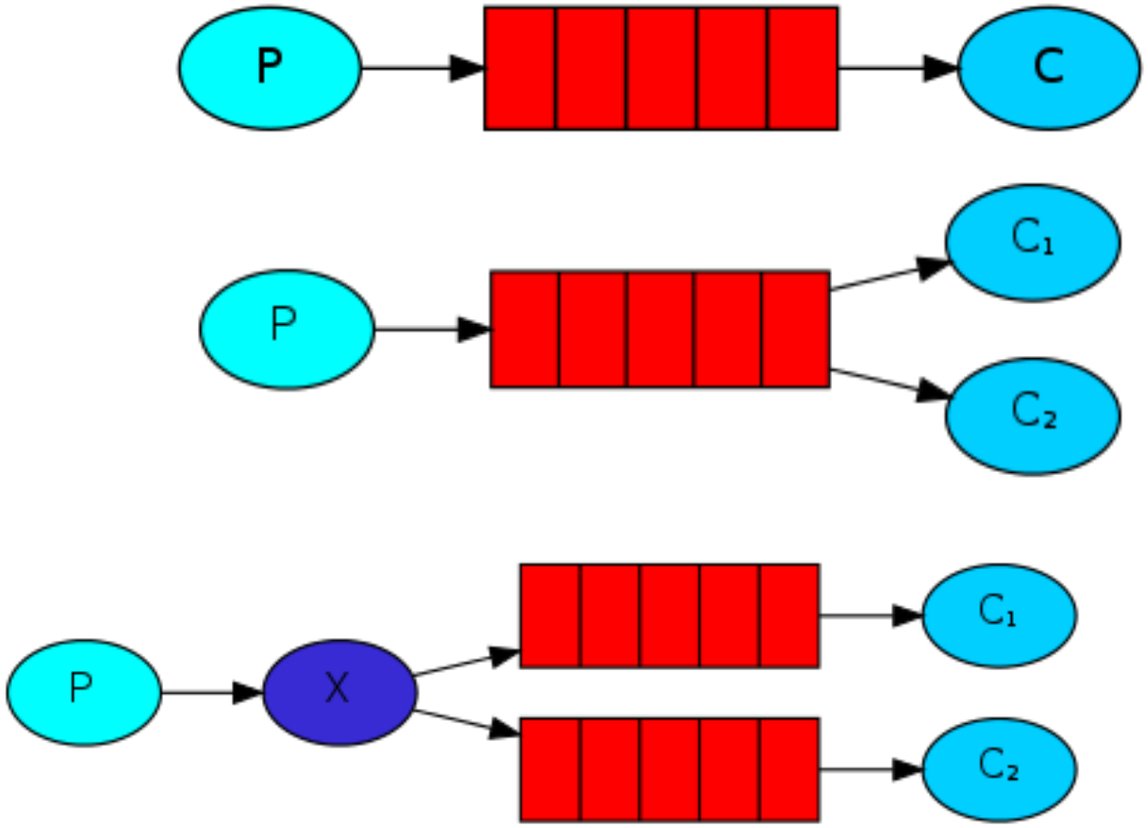
```
Region                        United States (us)

Web Interface                 http://127.0.0.1:4040

Forwarding                    http://f1c8d90e96ec.ngrok.io -> http://localhost:8000

Forwarding                    https://f1c8d90e96ec.ngrok.io -> http://localhost:8000
ngrok by @inconshreveable                                    (Ctrl+C to quit)
```

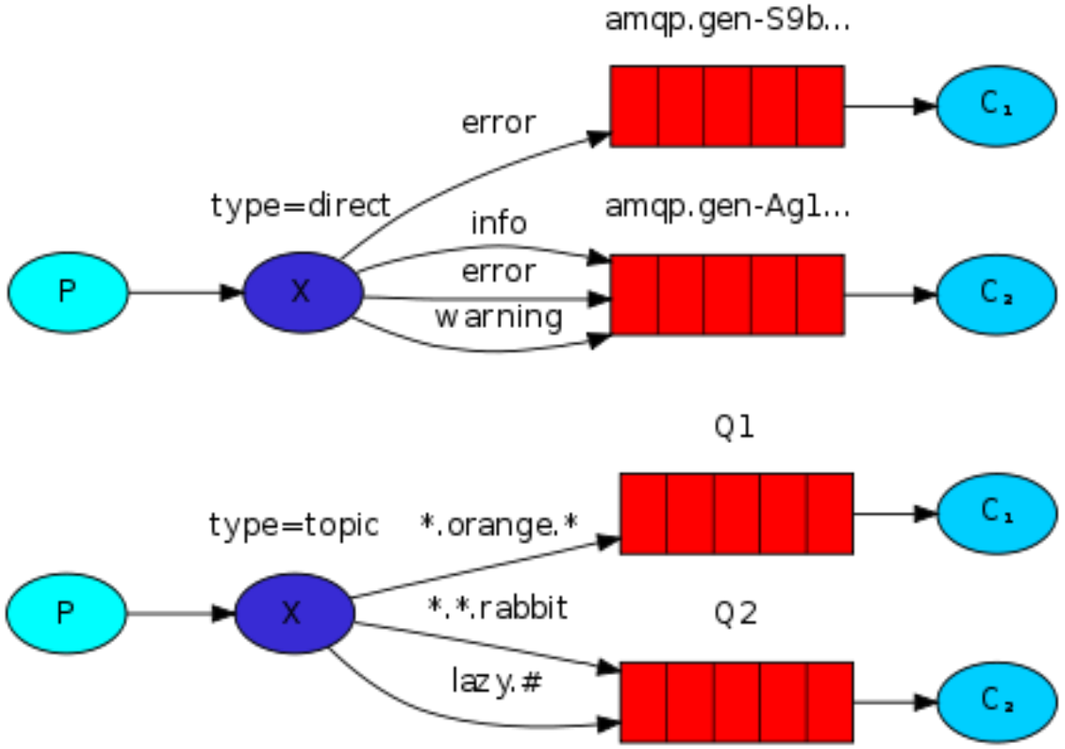
Get data from RabbitMQ

https://www.rabbitmq.com/getstarted.html



https://www.rabbitmq.com/getstarted.html





Working with RabbitMQ

$pip install robotframework-rabbitmq

https://github.com/peterservice-rnd/robotframework-rabbitmq

Sample robot

```
*** Settings ***
Library     RabbitMq
Library     Collections

*** Variables ***
${SERVER}     139.59.246.17
${USER}       admin
${PASSWORD}   xitgmLwmp
```

```
*** Test Cases ***
Simple Test
    Create Rabbitmq Connection  ${SERVER}  15672  5672
     ...   ${USER}    ${PASSWORD}     alias=rmq   vhost=/
    ${overview}=    Overview
    Log Dictionary    ${overview}
    Close All Rabbitmq Connections
```

Compare Image

https://imagemagick.org/index.php

Practice about Python

Let’s coding