# P2 Kafka Python Libs on MacOS

Python docs on lib/build/dependency management:
https://docs.python.org/3.4/installing/
My Python version on Mac OS:

```
# cleanup floats
Yottaas-MBP-3:tmp marinapopova$ python -V
Python 2.7.9
Yottaas-MBP-3:tmp marinapopova$ █
```

Lets try PyKafka Lib first:
Install PyKafka:

https://pypi.python.org/pypi/pykafka/2.2.1

pip install pykafka

...

```
    no previously-included directories found matching '*/__pycache__'
    warning: no previously-included files matching '*.o' found anywhere in distribution
    no previously-included directories found matching 'doc/_build'
    warning: no previously-included files matching '*.pyc' found anywhere in distribution
    warning: no previously-included files matching '.coverage' found under directory 'greentest'
    no previously-included directories found matching 'greentest/htmlcov'
    warning: no previously-included files matching 'ares_build.h.orig' found under directory 'c-ares'
    warning: no previously-included files matching '_corecffi.c' found under directory 'gevent'
    warning: no previously-included files found matching 'Makefile'
  Running setup.py install for greenlet
    building 'greenlet' extension
    /usr/bin/clang -fno-strict-aliasing -fno-common -dynamic -arch i386 -arch x86_64 -g -DNDEBUG -g -fwrapv -O3
all -Wstrict-prototypes -I/Library/Frameworks/Python.framework/Versions/2.7/include/python2.7 -c greenlet.c -o b
ld/temp.macosx-10.6-intel-2.7/greenlet.o
    /usr/bin/clang -bundle -undefined dynamic_lookup -arch i386 -arch x86_64 -g build/temp.macosx-10.6-intel-2.7
reenlet.o -o build/lib.macosx-10.6-intel-2.7/greenlet.so

Successfully installed pykafka kazoo tabulate gevent greenlet
Cleaning up...
Yottaas-MBP-3:tmp marinapopova$ █
```

Test in Python shell:
Producer (in terminal 1):

```
Yottaas-MBP-3:mini-examples-java marinapopova$ python
Python 2.7.9 (v2.7.9:648dcafa7e5f, Dec 10 2014, 10:10:46)
[GCC 4.2.1 (Apple Inc. build 5666) (dot 3)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
>>> from pykafka import KafkaClient
>>> client = KafkaClient(hosts="127.0.0.1:9092")
>>> topic = client.topics['spark_topic']
>>>
>>> with topic.get_sync_producer() as producer:
...     for i in range(4):
...         producer.produce('test message' + str(i) )
...
```

\>\>\>

Consumer (terminal 2):

Yottaas-MBP-3:tmp marinapopova$ python
Python 2.7.9 (v2.7.9:648dcafa7e5f, Dec 10 2014, 10:10:46)
[GCC 4.2.1 (Apple Inc. build 5666) (dot 3)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
\>\>\> **from pykafka import KafkaClient**
\>\>\> **client = KafkaClient(hosts="127.0.0.1:9092")**
\>\>\> **client.topics**
{'spark_topic': None}
\>\>\> **topic = client.topics['spark_topic']**
\>\>\> **consumer = topic.get_simple_consumer()**
\>\>\> **for message in consumer:**
**...    if message is not None:**
**...        print message.offset, message.value**
...
0 test message0
0 test message1
1 test message2
2 test message3

# kafka-python lib - this is the preferred lib

Yottaas-MBP-3:tmp marinapopova$ **pip install kafka-python**
Downloading/unpacking kafka-python
Downloading kafka_python-1.0.1-py2-none-any.whl (137kB): 137kB downloaded
Requirement already satisfied (use --
upgrade to upgrade): six in /Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/site-
packages/six-1.9.0-py2.7.egg (from kafka-python)
Installing collected packages: kafka-python
Successfully installed kafka-python
Cleaning up...
Yottaas-MBP-3:tmp marinapopova$

Create a small script to sent a few messages to Kafka: kaka_python_producer.py
Run it:
Yottaas-MBP-3:Section07_KasfkaStreaming marinapopova$ **python [kafka_python_producer.py](kafka_python_producer.py)**
    *Starting batch #0*
    *sending message #0*
    *sending message #1*
    *sending message #2*

*sending message #3*
*Finished batch #0*
*Sleeping for 5 seconds ...*
*Starting batch #1*
*sending message #0*
*sending message #1*
*sending message #2*
*sending message #3*
*Finished batch #1*
*Sleeping for 5 seconds ...*
*Starting batch #2*
*sending message #0*
*sending message #1*
*sending message #2*
*sending message #3*
*Finished batch #2*
*Sleeping for 5 seconds ...*
*Done sending messages*
*Yottaas-MBP-3:Section07_KasfkaStreaming marinapopova$*

**Start Kafka console consumer:**
/Users/marinapopova/Marina/Tools/kafka_2.10-0.8.2.1/bin/**kafka-console-consumer.sh --zookeeper localhost:2181 --topic spark_topic**

```
1. bash

New Tab    Info    Close    Execute    Profiles

⊗  bash                                                                    ⚙ ⌄

Installing collected packages: kafka-python
Successfully installed kafka-python
Cleaning up...
Yottaas-MBP-3:tmp marinapopova$ /Users/marinapopova/Marina/Tools/kafka_2.10-0.8.2.1/bin/kafka-console-consumer.sh
--zookeeper localhost:2181 --topic spark_topic
test message #0
test message #1
test message #3
test message #2
test message #3
test message #0
test message #1
test message #2
test message #0
test message #2
test message #1
test message #3
▯

⊗  bash                                                                    ⚙ ⌄

Yottaas-MBP-3:Section07_KasfkaStreaming marinapopova$ python kafka_python_producer.py
Starting batch #0
sending message #0
sending message #1
sending message #2
sending message #3
Finished batch #0
Sleeping for 5 seconds ...
Starting batch #1
sending message #0
sending message #1
sending message #2
sending message #3
Finished batch #1
Sleeping for 5 seconds ...
Starting batch #2
sending message #0
sending message #1
```