Assignment 9 - Consumer

February 27, 2022

0.1 Assignment 9 Consumer

The following notebook should help you with debugging and testing assignment 9. It creates a `KafkaConsumer` the subscribes to the `LastnameFirstname-simple`, `LastnameFirstname-windowed`, and `LastnameFirstname-joined` topics and prints any messages.

[1]:
```
import json

from kafka import KafkaConsumer
```

0.1.1 Configuration Parameters

TODO: Change the configuration prameters to the appropriate values for your setup.

[2]:
```
config = dict(
    bootstrap_servers=['kafka.kafka.svc.cluster.local:9092'],
    first_name='Arindam',
    last_name='Samanta'
)

config['client_id'] = '{}{}'.format(
    config['last_name'],
    config['first_name']
)
config['topic_prefix'] = '{}{}'.format(
    config['last_name'],
    config['first_name']
)

config['simple_topic'] = '{}-simple'.format(config['topic_prefix'])
config['joined_topic'] = '{}-joined'.format(config['topic_prefix'])
config['windowed_topic'] = '{}-windowed'.format(config['topic_prefix'])

config
```

[2]:
```
{'bootstrap_servers': ['kafka.kafka.svc.cluster.local:9092'],
 'first_name': 'Arindam',
 'last_name': 'Samanta',
```

```
 'client_id': 'SamantaArindam',
 'topic_prefix': 'SamantaArindam',
 'simple_topic': 'SamantaArindam-simple',
 'joined_topic': 'SamantaArindam-joined',
 'windowed_topic': 'SamantaArindam-windowed'}
```

Close the consumer, waiting indefinitely for any needed cleanup.

[3]:
```
def create_kafka_consumer(topics, config=config):
    bootstrap_servers = config['bootstrap_servers']
    client_id = config['client_id']
    topic_prefix = config['topic_prefix']
    topic_list = ['{}-{}'.format(topic_prefix, topic) for topic in topics]

    return KafkaConsumer(
        *topic_list,
        client_id=client_id,
        bootstrap_servers=bootstrap_servers,
        value_deserializer=lambda x: json.loads(x)
    )

consumer = create_kafka_consumer(['simple', 'windowed', 'joined'])
```

Gets a list of this consumer's current subscriptions

[4]:
```
consumer.subscription()
```

[4]:
```
{'SamantaArindam-joined', 'SamantaArindam-simple', 'SamantaArindam-windowed'}
```

The following function prints messages from the current consumer subscriptions. It will continue until manually stopped.

[5]:
```
def print_messages(consumer=consumer):
    try:
        for message in consumer:
                msg_metadata = 'Message metadata: {}:{}:{}'.format(
                    message.topic, message.partition, message.offset
                )

                if message.key is not None:
                    msg_key = message.key.decode('utf-8')
                else:
                    msg_key = ''
                msg_value = json.dumps(message.value, indent=2)
                msg_value = '\n'.join(['  {}'.format(value) for value in␣
↪msg_value.split('\n')])

                print('Message metadata:')
                print('  Topic: {}'.format(message.topic))
```

```
                print('  Partition: {}'.format(message.partition))
                print('  Offset: {}'.format(message.offset))
                print('Message Key: {}'.format(msg_key))
                print('Message Value:')
                print(msg_value)
                print()
    except KeyboardInterrupt:
        print("STOPPING MESSAGE CONSUMER")

print_messages()
```

```
STOPPING MESSAGE CONSUMER
```

Close the consumer, waiting indefinitely for any needed cleanup.

[ ]:
```
consumer.close()
```

[ ]:
```

```