

**Выполнение инструкции по установке Kafka и
OffSet Explorer для создания кластера в Kafka, а
также тренировка по записи и чтению данных**

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Работа producer (слева) и consumer (справа) в командной строке

```
Командная строка - kafka-cc X + v
at org.apache.kafka.common.security.ssl.DefaultSslEngineFactory$FileBasedStore.load(DefaultSslEngineFactory.java:380)
at org.apache.kafka.common.security.ssl.DefaultSslEngineFactory$FileBasedStore.<init>(DefaultSslEngineFactory.java:352)
at org.apache.kafka.common.security.ssl.DefaultSslEngineFactory.createTruststore(DefaultSslEngineFactory.java:325)
at org.apache.kafka.common.security.ssl.DefaultSslEngineFactory.configure(DefaultSslEngineFactory.java:169)
at org.apache.kafka.common.security.ssl.SslFactory.instantiateSslEngineFactory(SslFactory.java:147)
at org.apache.kafka.common.security.ssl.SslFactory.configure(SslFactory.java:100)
at org.apache.kafka.common.network.SaslChannelBuilder.configure(SaslChannelBuilder.java:180)
... 12 more
Caused by: java.nio.file.NoSuchFileException: C:\maikeystore_reg.pfx
at java.base/sun.nio.fs.WindowsException.translateToIOException(WindowsException.java:85)
at java.base/sun.nio.fs.WindowsException.rethrowAsIOException(WindowsException.java:103)
at java.base/sun.nio.fs.WindowsException.rethrowAsIOException(WindowsException.java:108)
at java.base/sun.nio.fs.WindowsFileSystemProvider.newByteChannel(WindowsFileSystemProvider.java:234)
at java.base/java.nio.file.Files.newByteChannel(Files.java:379)
at java.base/java.nio.file.Files.newByteChannel(Files.java:431)
at java.base/java.nio.file.spi.FileSystemProvider.newInputStream(FileSystemProvider.java:420)
at java.base/java.nio.file.Files.newInputStream(Files.java:159)
at org.apache.kafka.common.security.ssl.DefaultSslEngineFactory$FileBasedStore.load(DefaultSslEngineFactory.java:373)
... 18 more

C:\kafka\bin\windows>kafka-console-producer.bat --bootstrap-server 80.85.250.67:9091 --producer.config C:\client.properties --topic test
2025-04-01T08:20:59.649312300Z main ERROR Reconfiguration failed: No configuration found for '5acf9800' at 'null' in 'null'
>hello from PMU
>second hello from PMU 209
>

Командная строка - kafka-cc X + v
Microsoft Windows [Version 10.0.22631.5039]
(c) Корпорация Майкрософт (Microsoft Corporation). Все права защищены.

C:\Users\Maksim>cd..

C:\Users>cd..

C:\>cd kafka

C:\kafka>cd bin

C:\kafka\bin>cd windows

C:\kafka\bin\windows>kafka-console-consumer.bat --bootstrap-server 80.85.250.67:9091 --consumer.config C:\client.properties -topic test --from-beginning
2025-04-01T08:23:16.441819200Z main ERROR Reconfiguration failed: No configuration found for '5acf9800' at 'null' in 'null'
hello from PMU
second hello from PMU 209
```

Работа producer (слева) и consumer (справа) в командной строке

Добавление и чтение новых записей из топика test

```
Командная строка - kafka-cc x + -
at org.apache.kafka.common.security.ssl.DefaultSslEngineFac
tory$FileBasedStore.load(DefaultSslEngineFactory.java:380)
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tory.createTruststore(DefaultSslEngineFactory.java:325)
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ateSslEngineFactory(SslFactory.java:147)
at org.apache.kafka.common.security.ssl.SslFactory.configur
e(SslFactory.java:100)
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m(SaslChannelBuilder.java:180)
... 12 more
Caused by: java.nio.file.NoSuchFileException: C:\maikeystore_reg.pfx
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379)
at java.base/java.nio.file.Files.newByteChannel(Files.java:
431)
at java.base/java.nio.file.spi.FileSystemProvider.newInputS
tream(FileSystemProvider.java:420)
at java.base/java.nio.file.Files.newInputStream(Files.java:
159)
at org.apache.kafka.common.security.ssl.DefaultSslEngineFac
tory$FileBasedStore.load(DefaultSslEngineFactory.java:373)
... 18 more

C:\kafka\bin\windows>kafka-console-producer.bat --bootstrap-server
80.85.250.67:9091 --producer.config C:\client.properties --topic te
st
2025-04-01T08:20:59.649312300Z main ERROR Reconfiguration failed: N
o configuration found for '5acf9800' at 'null' in 'null'
>hello from PMU
>second hello from PMU 209
>third hello frm myself to myself
>

Командная строка - kafka-cc x + -
Microsoft Windows [Version 10.0.22631.5039]
(c) Корпорация Майкрософт (Microsoft Corporation). Все права защищены.

C:\Users\Maksim>cd..
C:\Users>cd..
C:\>cd kafka
C:\kafka>cd bin
C:\kafka\bin>cd windows

C:\kafka\bin\windows>kafka-console-consumer.bat --bootstrap-server 80.85.250.67
:9091 --consumer.config C:\client.properties -topic test --from-beginning
2025-04-01T08:23:16.441819200Z main ERROR Reconfiguration failed: No configurat
ion found for '5acf9800' at 'null' in 'null'
hello from PMU
second hello from PMU 209
second hello from PMU 209
third hello frm myself to myself
|
```

Работа producer (слева) и consumer (справа) в командной строке

Добавление и чтение новых записей из топика test

```
Командная строка - kafka-cc x + v
D:\kafka\bin>cd windows

D:\kafka\bin\windows>kafka-console-producer.bat --bootstrap-server 80.85.250.67:9091 --producer.config D:\client.properties --topic test
2025-04-09T20:43:24.588971800Z main ERROR Reconfiguration failed: No configuration found for '5acf9800' at 'null' in 'null'
java.nio.file.NoSuchFileException: D:\client.properties
    at java.base/sun.nio.fs.WindowsException.translateToIOException(WindowsException.java:85)
    at java.base/sun.nio.fs.WindowsException.rethrowAsIOException(WindowsException.java:103)
    at java.base/sun.nio.fs.WindowsException.rethrowAsIOException(WindowsException.java:108)
    at java.base/sun.nio.fs.WindowsFileSystemProvider.newByteChannel(WindowsFileSystemProvider.java:234)
    at java.base/java.nio.file.Files.newByteChannel(Files.java:379)
    at java.base/java.nio.file.Files.newByteChannel(Files.java:431)
    at java.base/java.nio.file.spi.FileSystemProvider.newInputStream(FileSystemProvider.java:420)
    at java.base/java.nio.file.Files.newInputStream(Files.java:159)
    at org.apache.kafka.common.utils.Utils.loadProps(Utils.java:655)
    at org.apache.kafka.common.utils.Utils.loadProps(Utils.java:642)
    at org.apache.kafka.tools.ConsoleProducer$ConsoleProducerOptions.producerProps(ConsoleProducer.java:319)
    at org.apache.kafka.tools.ConsoleProducer.start(ConsoleProducer.java:67)
    at org.apache.kafka.tools.ConsoleProducer.main(ConsoleProducer.java:60)

D:\kafka\bin\windows>kafka-console-producer.bat --bootstrap-server 80.85.250.67:9091 --producer.config D:\client.properties --topic test
2025-04-09T20:45:20.793811700Z main ERROR Reconfiguration failed: No configuration found for '5acf9800' at 'null' in 'null'
>Hello
>Hello_from_PMU
>Hello_2
>Hi
>

Командная строка - kafka-cc x + v
Microsoft Windows [Version 10.0.22631.5039]
(c) Корпорация Майкрософт (Microsoft Corporation). Все права защищены.

C:\Users\Maksim>cd..

C:\Users>cd..

C:\>D:

D:\>cd kafka

D:\kafka>cd bin

D:\kafka\bin>cd windows

D:\kafka\bin\windows>kafka-console-consumer.bat --bootstrap-server 80.85.250.67:9091 --consumer.config D:\client.properties -topic test --from-beginning
2025-04-09T20:49:57.201639800Z main ERROR Reconfiguration failed: No configuration found for '5acf9800' at 'null' in 'null'
Hello
Hello_from_PMU
Hello_2
Hi
```

Реализация сервиса по записи и чтению сообщений в топик PUBLISH

За основу взят проект, расположенный по данной ссылке:

[sivagtr/spring-boot-kafka: This is to demonstrate two simple spring boot micro-services exchange message over Kafka.](#)

**Произведена корректировка файлов,
отвечающих за подключение к удаленной Kafka
(расположенной не локально)**

Отправка POST-запросов через producer в топик PUBLISH

The screenshot displays the YARC! v1.3.0 interface, a REST client. The top navigation bar includes the logo, version, and tabs for 'Main', 'Favorites' (0), and 'History'. The 'Request Settings' section is active, showing a URL of 'http://localhost:8081/kafka/msg' and a 'POST' method. The payload is 'PMU_3'. Below this are sections for 'Custom Headers' and 'Authentication'. A green 'Send Request' button is visible. The 'Response' section at the bottom shows the results of the request: 'Request URL: http://localhost:8081/kafka/msg', 'Request Method: POST', 'Response Time: 0.007 seconds', and 'Response Status: 200 - OK'. A large green box with the number '200' is prominently displayed on the right side of the response area.

YARC! v1.3.0 Yet Another REST Client Main Favorites 0 History

Request Settings

URL: ☆ http://localhost:8081/kafka/msg POST

Payload: PMU_3

Custom Headers

Authentication

Send Request

Response

Request URL: http://localhost:8081/kafka/msg
Request Method: POST
Response Time: 0.007 seconds
Response Status: 200 - OK

200

Логи отправки POST-запросов через producer в топик PUBLISH в терминале

```
ssl.truststore.type = JKS
transaction.timeout.ms = 60000
transactional.id = null
value.serializer = class org.apache.kafka.common.serialization.StringSerializer
```

```
2025-04-10 15:35:25.437 INFO 18532 --- [nio-8081-exec-2] o.a.k.c.s.authenticator.AbstractLogin : Successfully logged in.
2025-04-10 15:35:25.816 INFO 18532 --- [nio-8081-exec-2] o.a.kafka.common.utils.AppInfoParser : Kafka version: 2.5.0
2025-04-10 15:35:25.819 INFO 18532 --- [nio-8081-exec-2] o.a.kafka.common.utils.AppInfoParser : Kafka commitId: 66563e712b0b9f84
2025-04-10 15:35:25.819 INFO 18532 --- [nio-8081-exec-2] o.a.kafka.common.utils.AppInfoParser : Kafka startTimeMs: 1744288525814
2025-04-10 15:35:25.822 INFO 18532 --- [nio-8081-exec-2] c.s.s.p.k.ProducerApacheKafkaMsgSender : Msg before Kafka sending PMU_1
2025-04-10 15:35:25.822 INFO 18532 --- [nio-8081-exec-2] c.s.s.p.k.ProducerApacheKafkaMsgSender : Topic : PUBLISH
2025-04-10 15:35:31.384 INFO 18532 --- [ad | producer-1] org.apache.kafka.clients.Metadata : [Producer clientId=producer-1] Cluster ID: yqGWi_Q6SyWYX4pQ6mYeZQ
2025-04-10 15:35:58.555 INFO 18532 --- [nio-8081-exec-1] c.s.s.p.c.ProducerRestController : Received msg : PMU_2
2025-04-10 15:35:58.555 INFO 18532 --- [nio-8081-exec-1] c.s.s.p.k.ProducerApacheKafkaMsgSender : Msg before Kafka sending PMU_2
2025-04-10 15:35:58.555 INFO 18532 --- [nio-8081-exec-1] c.s.s.p.k.ProducerApacheKafkaMsgSender : Topic : PUBLISH
2025-04-10 15:36:08.340 INFO 18532 --- [nio-8081-exec-3] c.s.s.p.c.ProducerRestController : Received msg : PMU_3
2025-04-10 15:36:08.340 INFO 18532 --- [nio-8081-exec-3] c.s.s.p.k.ProducerApacheKafkaMsgSender : Msg before Kafka sending PMU_3
2025-04-10 15:36:08.340 INFO 18532 --- [nio-8081-exec-3] c.s.s.p.k.ProducerApacheKafkaMsgSender : Topic : PUBLISH
```

Отзыв об успешном выполнении POST-запроса

Send Request

Response

Request URL: <http://localhost:8081/kafka/msg>
Request Method: POST
Response Time: 0.007 seconds
Response Status: 200 - OK

200

Response Body

Response Body (RAW)

Response Headers

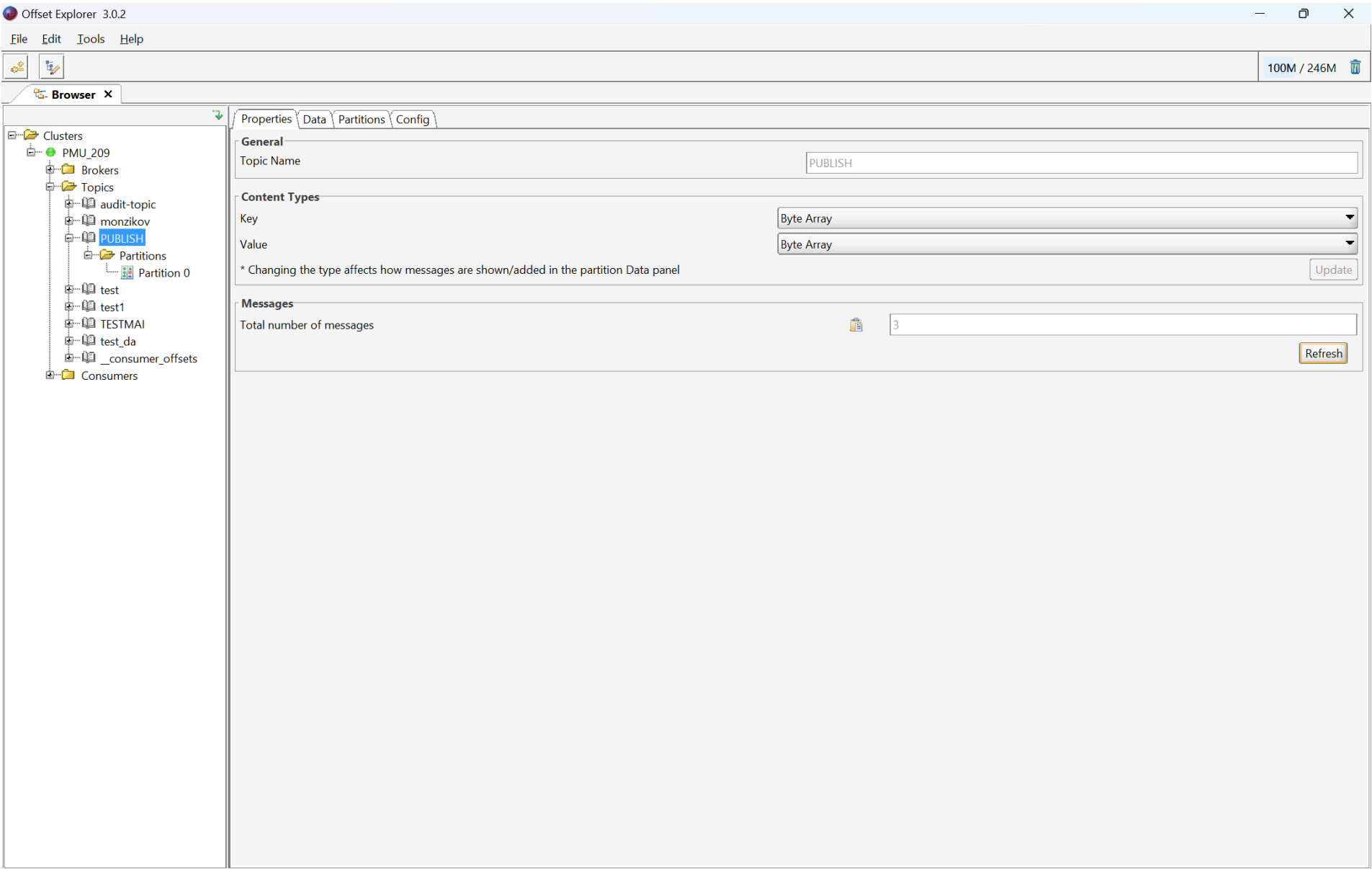
Request Details

```
{
  "method": "POST",
  "transformRequest": [
    null
  ],
  "transformResponse": [
    null
  ],
  "jsonpCallbackParam": "callback",
  "url": "http://localhost:8081/kafka/msg",
  "headers": {
    "Accept": "application/json, text/plain, */*",
    "Content-Type": "application/json;charset=utf-8"
  },
  "data": "PMU_3",
  "timeout": {}
}
```

Copy Request

Copy Response

Количество записей в топике PUBLISH после POST-запросов (3 запроса)



Логи запуска приложения consumer

```
value.deserializer = class org.apache.kafka.common.serialization.StringDeserializer
```


```
2025-04-10 15:37:22.812 INFO 18940 --- [ restartedMain] o.a.k.c.s.authenticator.AbstractLogin : Successfully logged in.
2025-04-10 15:37:23.272 INFO 18940 --- [ restartedMain] o.a.kafka.common.utils.AppInfoParser : Kafka version: 2.5.0
2025-04-10 15:37:23.273 INFO 18940 --- [ restartedMain] o.a.kafka.common.utils.AppInfoParser : Kafka commitId: 66563e712b0b9f84
2025-04-10 15:37:23.273 INFO 18940 --- [ restartedMain] o.a.kafka.common.utils.AppInfoParser : Kafka startTimeMs: 1744288643271
2025-04-10 15:37:23.277 INFO 18940 --- [pool-1-thread-1] o.a.k.clients.consumer.KafkaConsumer : [Consumer clientId=consumer-0-1, groupId=0] Subscribed to topic(s): PUBLISH
2025-04-10 15:37:28.823 INFO 18940 --- [pool-1-thread-1] org.apache.kafka.clients.Metadata : [Consumer clientId=consumer-0-1, groupId=0] Cluster ID: yqGWi_Q6SyWYX4pQ6mYeZQ
2025-04-10 15:37:28.825 INFO 18940 --- [pool-1-thread-1] o.a.k.c.c.internals.AbstractCoordinator : [Consumer clientId=consumer-0-1, groupId=0] Discovered group coordinator 80.85.250.67:9091 (id: 2147483646 rack: null)
2025-04-10 15:37:33.767 INFO 18940 --- [pool-1-thread-1] o.a.k.c.c.internals.AbstractCoordinator : [Consumer clientId=consumer-0-1, groupId=0] (Re-)joining group
2025-04-10 15:37:33.951 INFO 18940 --- [pool-1-thread-1] o.a.k.c.c.internals.AbstractCoordinator : [Consumer clientId=consumer-0-1, groupId=0] Join group failed with org.apache.kafka.common.errors.MemberIdRequiredException: The group member needs to have a valid member id before actually entering a consumer group
2025-04-10 15:37:33.951 INFO 18940 --- [pool-1-thread-1] o.a.k.c.c.internals.AbstractCoordinator : [Consumer clientId=consumer-0-1, groupId=0] (Re-)joining group
2025-04-10 15:37:36.974 INFO 18940 --- [pool-1-thread-1] o.a.k.c.c.internals.ConsumerCoordinator : [Consumer clientId=consumer-0-1, groupId=0] Finished assignment for group at generation 17: {consumer-0-1-79818e92-4993-4c6c-8f1b-9506f4d1413e=Assignment(partitions=[PUBLISH-0])}
2025-04-10 15:37:36.987 INFO 18940 --- [pool-1-thread-1] o.a.k.c.c.internals.AbstractCoordinator : [Consumer clientId=consumer-0-1, groupId=0] Successfully joined group with generation 17
2025-04-10 15:37:36.990 INFO 18940 --- [pool-1-thread-1] o.a.k.c.c.internals.ConsumerCoordinator : [Consumer clientId=consumer-0-1, groupId=0] Adding newly assigned partitions: PUBLISH-0
2025-04-10 15:37:37.024 INFO 18940 --- [pool-1-thread-1] o.a.k.c.c.internals.ConsumerCoordinator : [Consumer clientId=consumer-0-1, groupId=0] Found no committed offset for partition PUBLISH-0
```

master* 0 1 Java: Ready Select Postgres Server

Ln 1, Col 1 Tab Size: 4 UTF-8 CRLF {} Java

15:37
10.04.2025

Отзыв об успешном выполнении GET-запроса

 v1.3.0

Yet Another REST Client

Main

Favorites 0

History

Request Settings

URL: ☆ http://localhost:8081/kafka/msg GET ▾

Payload: application/json

Custom Headers >

Authentication >

Send Request

Response

Request URL: <http://localhost:8081/kafka/msg>
Request Method: GET
Response Time: 0.143 seconds
Response Status: 200 - OK

200

Результат выполнения GET-запроса

Custom Headers

Authentication

Send Request

Response

Request URL: <http://localhost:8081/kafka/msg>
Request Method: GET
Response Time: 0.143 seconds
Response Status: 200 - OK

200

Response Body

Response Body (RAW)

Response Headers

Request Details

```
[  
  "PMU_1",  
  "PMU_2",  
  "PMU_3"  
]
```

Copy Request

Copy Response

Логи выполнения GET-запроса во время работы приложения consumer

The screenshot displays an IDE with a project explorer on the left and a log window on the right. The project explorer shows a project structure with folders like 'controller', 'executor', 'kafkaconsumer', and 'model'. The log window shows the following messages:

```
up failed with org.apache.kafka.common.errors.MemberIdRequiredException: The group member needs to have a valid member id before actually entering a consumer group
2025-04-10 15:51:29.144 INFO 6836 --- [pool-1-thread-1] o.a.k.c.c.internals.AbstractCoordinator : [Consumer clientId=consumer-1-1, groupId=1] (Re-)joining group
2025-04-10 15:51:32.177 INFO 6836 --- [pool-1-thread-1] o.a.k.c.c.internals.ConsumerCoordinator : [Consumer clientId=consumer-1-1, groupId=1] Finished assignment for group at generation 140: {consumer-1-1-3c7b155b-e9e5-4184-9a7c-4ae5c8d8a441=Assignment(partitions=[PUBLISH-0])}
2025-04-10 15:51:32.186 INFO 6836 --- [pool-1-thread-1] o.a.k.c.c.internals.AbstractCoordinator : [Consumer clientId=consumer-1-1, groupId=1] Successfully joined group with generation 140
2025-04-10 15:51:32.190 INFO 6836 --- [pool-1-thread-1] o.a.k.c.c.internals.ConsumerCoordinator : [Consumer clientId=consumer-1-1, groupId=1] Adding newly assigned partitions: PUBLISH-0
2025-04-10 15:51:32.222 INFO 6836 --- [pool-1-thread-1] o.a.k.c.c.internals.ConsumerCoordinator : [Consumer clientId=consumer-1-1, groupId=1] Setting offset for partition PUBLISH-0 to the committed offset FetchPosition{offset=172, offsetEpoch=Optional.empty, currentLeader=LeaderAndEpoch{leader=Optional[80.85.250.67:9091 (id: 1 rack: null)], epoch=0}}
2025-04-10 15:51:37.478 INFO 6836 --- [pool-1-thread-1] c.s.s.c.e.ConsumerExecutorService : Record Key PUBLISH
2025-04-10 15:51:37.479 INFO 6836 --- [pool-1-thread-1] c.s.s.c.e.ConsumerExecutorService : Record Value PMU_1
2025-04-10 15:51:37.479 INFO 6836 --- [pool-1-thread-1] c.s.s.c.e.ConsumerExecutorService : Record Key PUBLISH
2025-04-10 15:51:37.480 INFO 6836 --- [pool-1-thread-1] c.s.s.c.e.ConsumerExecutorService : Record Value PMU_2
2025-04-10 15:51:37.480 INFO 6836 --- [pool-1-thread-1] c.s.s.c.e.ConsumerExecutorService : Record Key PUBLISH
2025-04-10 15:51:37.481 INFO 6836 --- [pool-1-thread-1] c.s.s.c.e.ConsumerExecutorService : Record Value PMU_3
2025-04-10 15:52:03.518 INFO 6836 --- [nio-8081-exec-1] o.a.c.c.C.[Tomcat].[localhost].[/] : Initializing Spring DispatcherServlet 'dispatcherServlet'
2025-04-10 15:52:03.518 INFO 6836 --- [nio-8081-exec-1] o.s.web.servlet.DispatcherServlet : Initializing Servlet 'dispatcherServlet'
2025-04-10 15:52:03.526 INFO 6836 --- [nio-8081-exec-1] o.s.web.servlet.DispatcherServlet : Completed initialization in 7 ms
```