

# TP Intergiciels - Pratique

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## Authentification SASL

Serveurs (brokers) :

```
42 ##### Security settings ##### Auteur : Karim Mosbah
43 listeners=SASL_PLAINTEXT://:9092
44 security.inter.broker.protocol=SASL_PLAINTEXT
45 sasl.mechanism.inter.broker.protocol=PLAIN
46 sasl.enabled.mechanisms=PLAIN
47
48 listener.name.sasl_plaintext.plain.sasl.jaas.config = org.apache.kafka.common.security.plain.PlainLoginModule required \
49     username="admin" \
50     password="admin-secret" \
51     user_admin="admin-secret" \
52     user_alice="alice-secret";
53
```

server.properties

**Listeners** permet d'indiquer le protocole d'authentification, ici du SASL\_PLAINTEXT au lieu du PLAINTEXT qu'on avait avant (et qui voulait dire "pas d'authentification").

**sasl.jaas.config** est nécessaire et indique les noms d'utilisateurs et mots de passe des clients autorisés. Un point négatif ici est que ces données sensibles sont écrites en dur dans les fichiers de configuration.

Clients (producers et consumers) :

```
10 ##### Security settings ##### Auteur : Karim Mosbah
11 sasl.jaas.config=org.apache.kafka.common.security.plain.PlainLoginModule required \
12     username="alice" \
13     password="alice-secret";
14
15 security.protocol=SASL_PLAINTEXT
16 sasl.mechanism=PLAIN
17
18 spring.kafka.jaas.enabled=true
19 spring.kafka.properties.security.protocol=SASL_PLAINTEXT
20 spring.kafka.properties.sasl.mechanism=PLAIN
21 spring.kafka.properties.sasl.jaas.config=org.apache.kafka.common.security.plain.PlainLoginModule required username="alice" password="alice-secret";
```

genkp.properties / kc-etudiants.properties

J'ai utilisé la même configuration sur les consumers et les producers. Dans les deux cas, on s'identifie en tant qu'un des utilisateurs identifiés par le broker. Ici, on s'identifie en tant qu'Alice (exemple tiré de la documentation kafka).

Il faut expliciter le protocole à choisir pendant la négociation sasl. Cela se fait **sasl.mechanism**.

Enfin, configurer spring.

# Vérification

Il suffit d'exécuter go.sh (sur linux) sans erreur et de tester via le service Swagger.

```
File Edit View Search Terminal Help
karim@karim-Latitude-E5570:~/kafka/TP KAFKA$ ./go.sh
[2023-06-01 09:21:50,483] INFO Reading configuration from: /home/karim/kafka/config/zookeeper.properties (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-06-01 09:21:50,483] INFO clientPortAddress is 0.0.0.0:2181 (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-06-01 09:21:50,486] INFO secureClientPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-06-01 09:21:50,486] INFO observerMasterPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-06-01 09:21:50,486] INFO metricsProvider.className is org.apache.zookeeper.metrics.impl.DefaultMetricsProvider (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-06-01 09:21:50,487] INFO autopurge.snapRetainCount set to 3 (org.apache.zookeeper.server.DataDirCleanupManager)
[2023-06-01 09:21:50,487] INFO autopurge.purgeInterval set to 0 (org.apache.zookeeper.server.DataDirCleanupManager)
[2023-06-01 09:21:50,488] INFO Purge task is not scheduled. (org.apache.zookeeper.server.DataDirCleanupManager)
[2023-06-01 09:21:50,490] INFO observerMasterPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-06-01 09:21:50,490] INFO metricsProvider.className is org.apache.zookeeper.metrics.impl.DefaultMetricsProvider (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2023-06-01 09:21:50,490] INFO Starting server (org.apache.zookeeper.server.ZooKeeperServerMain)
[2023-06-01 09:21:50,490] INFO ServerMetrics initialized with provider org.apache.zookeeper.metrics.impl.DefaultMetricsProvider@3ec300f1 (org.apache.zookeeper.server.ServerMetrics)
[2023-06-01 09:21:50,505] INFO zookeeper.snapshot.trust.empty : false (org.apache.zookeeper.server.persistence.FileTxnSnapLog)
[2023-06-01 09:21:50,516] INFO (org.apache.zookeeper.server.ZooKeeperServer)
[2023-06-01 09:21:50,517] INFO (org.apache.zookeeper.server.ZooKeeperServer)
[2023-06-01 09:21:50,517] INFO (org.apache.zookeeper.server.ZooKeeperServer)
[2023-06-01 09:21:50,517] INFO (org.apache.zookeeper.server.ZooKeeperServer)
[2023-06-01 09:21:50,517] INFO (org.apache.zookeeper.server.ZooKeeperServer)
[2023-06-01 09:21:50,517] INFO (org.apache.zookeeper.server.ZooKeeperServer)
[2023-06-01 09:21:50,518] INFO (org.apache.zookeeper.server.ZooKeeperServer)
[2023-06-01 09:21:50,519] INFO Server environment:zookeeper.version=3.6.3--6401e4ad2087061bc6b9f80dec2d69f2e3c8660a, built on 04/08/2021 16:35 GMT (org.apache.zookeeper.server.ZooKeeperServer)
[2023-06-01 09:21:50,519] INFO Server environment:host.name=karim-Latitude-E5570 (org.apache.zookeeper.server.ZooKeeperServer)
[2023-06-01 09:21:50,519] INFO Server environment:java.version=17.0.2 (org.apache.zookeeper.server.ZooKeeperServer)
```

Exécution réussie : démarrage de zookeeper, broker et client/serveur springboot

POST /insa/kppublish Send Message to Kafka Topic http://localhost:port/insa/kppublish

Parameters

Name	Description
message * required (body)	message Example Value : <pre>{   "identifiant": "123",   "nom": "Poutou",   "prenom": "Philippe" }</pre>

Parameter content type: application/json

Execute Clear

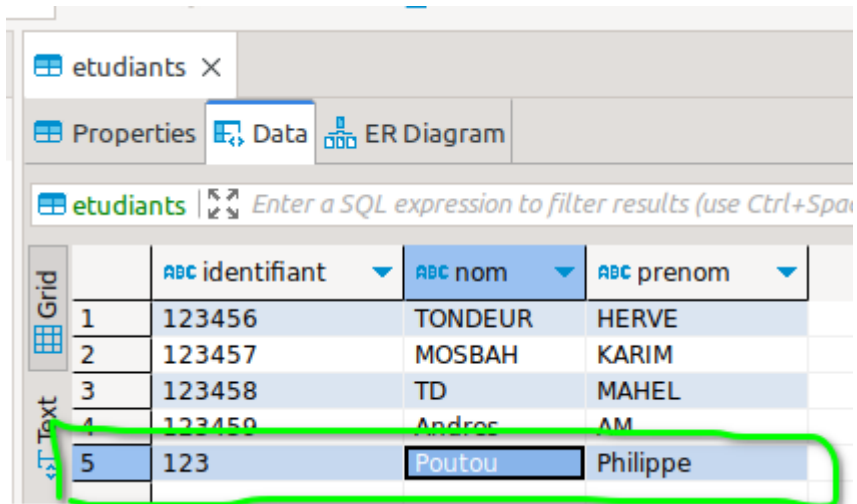
On tente d'insérer un certain "Philippe Poutou" dans la base de données

Server response

Code	Details
201	<p>Response body</p> <pre>{ "response": "Inserted" }</pre> <p>Response headers</p> <pre>access-control-allow-methods: PUT, GET, HEAD, POST, DELETE, OPTIONS access-control-allow-origin: http://localhost:7000 connection: keep-alive content-length: 22 content-type: text/plain; charset=UTF-8 date: Thu, 01 Jun 2023 07:24:54 GMT keep-alive: timeout=60</pre>

Succès : insertion de la donnée

On vérifie que notre BDD est bien modifiée :



The screenshot shows a database application window with the 'etudiants' table selected. The 'Data' tab is active, displaying a table with three columns: 'identifiant', 'nom', and 'prenom'. The table contains five rows of data. The row with 'Poutou' is highlighted in blue and circled in green.

	ABC identifiant	ABC nom	ABC prenom
1	123456	TONDEUR	HERVE
2	123457	MOSBAH	KARIM
3	123458	TD	MAHEL
4	123459	Andres	AM
5	123	Poutou	Philippe

On a Poutou !

# Sitographie

<https://kafka.apache.org/documentation/#security>

<https://stackoverflow.com/questions/60825373/spring-kafka-application-properties-configuration-for-jaas-sasl-not-working>