Kafka-Python SMS Stream Controller Deployment Guide

Zookeeper & Kafka Installation & Configuration:

1. Install Zookeeper

sudo apt-get install zookeeper

1. Install Kafka

Wget http://www.us.apache.org/dist/kafka/2.3.0/kafka\_2.12-2.3.0.tgz

tar xzf kafka\_2.12-2.3.0.tgz

sudo mv kafka\_2.12-2.3.0 /usr/local/kafka

1. Setup system unit file for Zookeeper

sudo nano /etc/systemd/system/zookeeper.service

add below content into the file

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[Unit]

Description=Apache Zookeeper server

Documentation=http://zookeeper.apache.org

Requires=network.target remote-fs.target

After=network.target remote-fs.target

[Service]

Type=simple

ExecStart=/usr/local/kafka/bin/zookeeper-server-start.sh /usr/local/kafka/config/zookeeper.properties

ExecStop=/usr/local/kafka/bin/zookeeper-server-stop.sh

Restart=on-abnormal

[Install]

WantedBy=multi-user.target

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1. Setup system unit file for Kafka

sudo nano /etc/systemd/system/kafka.service

add below content into the file

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[Unit]

Description=Apache Kafka Server

Documentation=http://kafka.apache.org/documentation.html

Requires=zookeeper.service

[Service]

Type=simple

Environment="JAVA\_HOME=PUT\_YOUR\_JAVA\_PATH"

ExecStart=/usr/local/kafka/bin/kafka-server-start.sh /usr/local/kafka/config/server.properties

ExecStop=/usr/local/kafka/bin/kafka-server-stop.sh

[Install]

WantedBy=multi-user.target

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1. Modify the kafka service configuration file

/usr/local/kafka/config/server.properties

Add below content

advertised.listeners=PLAINTEXT:// 18.138.106.158:9092

1. Enable TCP port 9092 in server security policy
2. Start Zookeeper and Kafka by below command

sudo systemctl start zookeeper

sudo systemctl start kafka

1. Create topic for kafka

/usr/local/kafka/bin/kafka-topics.sh --create --zookeeper localhost:2181 --replication-factor 1 --partitions 1 --topic topic-name

*Kafka Producer Implementation in Thingsboard Rule Chain:*

1. Modify the outbound message as below format:

{msg:

{

SMS\_body: xxxxxxxxxxxx,

SMS\_Recipients: [xxx,xxx,xxx],

SMS\_gateway: https://xxxxxx.com

}

}

1. Replace the http output node to kafka node, with the preset topic name

*Python Kafka Consumer Program Deployment:*

1. Install latest Python 3
2. Install pip3
3. Install kafka-python module

pip3 install kafka-python

1. Upload the pre-developed kafka consumer program
2. Install pm2 (if not exist)
3. Run consumer program with pm2 supervising

pm2 start kafkapython.py --interpreter python3