eKuiper 5 minutes quick start

1. Pull an eKuiper Docker image from `https://hub.docker.com/r/lfedge/ekuiper/tags`. It's recommended to use `alpine` image in this tutorial (refer to eKuiper Docker for the difference of eKuiper Docker image variants).
2. Set eKuiper source to an MQTT server. This sample uses server locating at `tcp://broker.emqx.io:1883`. `broker.emqx.io` is a public MQTT test server hosted by EMQ.

   ```
   docker run -p 9081:9081 -d --name ekuiper -e MQTT_SOURCE__DEFAULT__SERVERS=[tcp://broker.emqx.io:1883]
   lfedge/ekuiper:$tag
   ```

3. Create a stream - the stream is your stream data schema, similar to table definition in database. Let's say the temperature & humidity data are sent to `broker.emqx.io`, and those data will be processed in your **LOCAL RUN** eKuiper docker instance. Below steps will create a stream named `demo`, and data are sent to `devices/device_001/messages` topic, while `device_001` could be other devices, such as `device_002`, all of those data will be subscribed and handled by `demo` stream.

   ```
   -- In host
   # docker exec -it ekuiper /bin/sh

   -- In docker instance
   # bin/kuiper create stream demo '(temperature float, humidity bigint) WITH (FORMAT="JSON", DATASOURCE="
   devices/+/messages")'
   Connecting to 127.0.0.1:20498...
   Stream demo is created.

   # bin/kuiper query
   Connecting to 127.0.0.1:20498...
   kuiper > select * from demo where temperature > 30;
   Query was submit successfully.
   ```

4. Publish sensor data to topic `devices/device_001/messages` of server `tcp://broker.emqx.io:1883` with any MQTT client tools. Below sample uses `mosquitto_pub`.

   ```
   # mosquitto_pub -h broker.emqx.io -m '{"temperature": 40, "humidity" : 20}' -t devices/device_001/messages
   ```

5. If everything goes well, you can see the message is print on docker `bin/kuiper query` window. Please try to publish another message with `temperature` less than 30, and it will be filtered by WHERE condition of the SQL.

   ```
   kuiper > select * from demo WHERE temperature > 30;
   [{"temperature": 40, "humidity" : 20}]
   ```

   If having any problems, please take a look at `log/stream.log`.
6. To stop the test, just press `ctrl + c` in `bin/kuiper query` command console, or input `exit` and press enter.

You can also refer to eKuiper dashboard documentation for better using experience.

Next for exploring more powerful features of eKuiper? Refer to below for how to apply eKuiper in edge and integrate with AWS / Azure IoT cloud.

- Lightweight edge computing eKuiper and Azure IoT Hub integration solution
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