Turn off subscriber - > Turn on subscriber

publisher(online) -------------> mosquitto(online) --------------> subscriber(online)

publisher(online) ----123------> mosquitto(online) --------------> subscriber(online)

publisher(online) -------------> mosquitto(online) --------------> subscriber(online)

123

publisher(online) -------------> mosquitto(online) ------123-----> subscriber(online)

publisher(online) -------------> mosquitto(online) ------123-----> subscriber(online) 1 2 3

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++ turn off subscriber ++++++++++++++++++++++++++++++++++++++++

+ **subscriber** setCleanStart(False) and interval to let **broker** remember **subscriber** when **subscriber** restarts+

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

publisher(online) -------------> mosquitto(online) --------------> subscriber(offline)

publisher(online) ----45678----> mosquitto(online) --------------> subscriber(offline)

publisher(online) -------------> mosquitto(online) --------------> subscriber(offline)

4 5 6 7 8

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

++++++++++++++++++++++++++ turn on subscriber +++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

publisher(online) -------------> mosquitto(online) --4-5-6-7-8---> subscriber(online)

4 5 6 7 8

publisher(online) -------------> mosquitto(online) --------------> subscriber(online)

4 5 6 7 8

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Mosquitto.config:

persistence false

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Publisher settings:

pub\_connOpts.setCleanStart(**true**);

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Subscriber settings:

sub\_connOpts.setCleanStart(**false**);

sub\_connOpts.setSessionExpiryInterval(500L);

**subscriber** setCleanStart(False) and interval to let **broker** remember **subscriber** when **subscriber** restarts

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

explanation:

user requirements1:

because the broker needs to remember the subscriber

so it needs to setCleanStart(false)

and set interval setSessionExpiryInterval(500L), 500L is to set 500 seconds,

during this period, broker can remember this subscriber

Attention:

The subscriber here should not be set to qos0, if you set qos0, when the subscribe reconnect or restart the process(to connect and to subscribe)

Turn off subscriber - > Turn off broker

- > Turn on broker - > Turn on subscriber

publisher(online) -------------> mosquitto(online) --------------> subscriber(online)

publisher(online) ----123------> mosquitto(online) --------------> subscriber(online)

publisher(online) -------------> mosquitto(online) --------------> subscriber(online)

123

publisher(online) -------------> mosquitto(online) ------123-----> subscriber(online)

publisher(online) -------------> mosquitto(online) ------123-----> subscriber(online) 1 2 3

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++ turn off subscriber ++++++++++++++++++++++++++++++++++++++++

+ **subscriber** setCleanStart(False) and interval to let **broker** remember **subscriber** when **subscriber** restarts+

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

publisher(online) -------------> mosquitto(online) --------------> subscriber(offline)

publisher(online) ----45678----> mosquitto(online) --------------> subscriber(offline)

publisher(online) -------------> mosquitto(online) --------------> subscriber(offline)

4 5 6 7 8

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

++++++++++++++++++++++++++ turn off broker ++++++++++++++++++++++++++++++++++++++++

++ (setBufferEnabled(true)) to let **publisher** save 9 10 11 12 which didn’t **reach to broker** ++++++++++++++++

+ mosquitto.config set persistence true to let **broker** not to lost 45678 which didn’t **reach to** **subscriber** +

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

publisher(online) -------------> mosquitto(offline) --------------> subscriber(offline)

4 5 6 7 8

publisher(online) -9-10-11-12--> mosquitto(offline) --------------> subscriber(offline)

4 5 6 7 8

publisher(online) -------------> mosquitto(offline) --------------> subscriber(offline)

9 10 11 12 4 5 6 7 8

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++ turn on broker ++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

publisher(online) -------------> mosquitto(online) --------------> subscriber(offline)

9 10 11 12 4 5 6 7 8

publisher(online) -9-10-11-12--> mosquitto(online) --------------> subscriber(offline)

4 5 6 7 8

publisher(online) -------------> mosquitto(online) --------------> subscriber(offline)

45678 9 10 11 12

publisher(online) --13-14-15---> mosquitto(online) --------------> subscriber(offline)

45678 9 10 11 12

publisher(online) -------------> mosquitto(online) --------------> subscriber(offline)

45678 9 10 11 12 13 14 15

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

++++++++++++++++++++++++++ turn on subscriber +++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

publisher(online) -------------> mosquitto(online) -456789101112131415-->subscriber(online)

publisher(online) -------------> mosquitto(online) --------------------->subscriber(online) 456789 10 11 12 13 14 15

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Mosquito.config:

persistence true (*change*)

reason:

when broker **restart**

to let **broker** still save 4 5 6 7 8 which didn’t **reach to** **subscriber**

if persistence true, when broker is offline and online again, 4 5 6 7 8 is lost

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Publisher settings:

pub\_connOpts.setCleanStart(**true**);

pub\_connOpts.setBufferEnable(**true**); (*add*)

reason:

**publisher** save 9 10 11 12 which didn’t **reach to broker**

connOpts.setAutomaticReconnect(**true**); (*add*)

reason:

**publisher** try to connect **broker**, when broker shutdown

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Subscriber settings:

sub\_connOpts.setCleanStart(**false**);

sub\_connOpts.setSessionExpiryInterval(500L);

reason:

**subscriber** setCleanStart(False) and interval to let **broker** remember **subscriber** when **subscriber** restarts

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

explanation:

user requirements1:

because the broker needs to remember the subscriber

so it needs to setCleanStart(false)

and set interval setSessionExpiryInterval(500L), 500L is to set 500 seconds,

during this period, broker can remember this subscriber

user requirements2:

in this case,

on the basis that **publisher** is still online all the time

it requires publisher to save the notification didn’t reach to **broker**

user requirements3:

in this case,

on the basis that **broker** will restart

it requires broker not to lost the notification didn’t reach to **subscriber**

Attention:

The subscriber here should not be set to qos0, if you set qos0, when the subscribe reconnect or restart the process(to connect and to subscribe)

Turn off subscriber - > Turn off broker - > Turn off publisher

- > Turn on broker - > Turn on publisher - > Turn on subscriber

publisher(online) -------------> mosquitto(online) --------------> subscriber(online)

publisher(online) ----123------> mosquitto(online) --------------> subscriber(online)

publisher(online) -------------> mosquitto(online) --------------> subscriber(online)

123

publisher(online) -------------> mosquitto(online) ------123-----> subscriber(online)

publisher(online) -------------> mosquitto(online) ------123-----> subscriber(online)

1 2 3

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++ turn off subscriber ++++++++++++++++++++++++++++++++++++++++

+ **subscriber** setCleanStart(False) and interval to let **broker** remember **subscriber** when **subscriber** restarts+

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

publisher(online) -------------> mosquitto(online) --------------> subscriber(offline)

publisher(online) ----45678----> mosquitto(online) --------------> subscriber(offline)

publisher(online) -------------> mosquitto(online) --------------> subscriber(offline)

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

++++++++++++++++++++++++++ turn off broker ++++++++++++++++++++++++++++++++++++++++

++ (setBufferEnabled(true)) to let **publisher** save 9 10 11 12 which didn’t **reach to broker** ++++++++++++++++

+ mosquitto.config set persistence true to let **broker** **not to lost** 45678 which didn’t **reach to** **subscriber** +

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

publisher(online) -------------> mosquitto(offline) --------------> subscriber(offline)

4 5 6 7 8

publisher(online) -9-10-11-12--> mosquitto(offline) --------------> subscriber(offline)

4 5 6 7 8

publisher(online) -------------> mosquitto(offline) --------------> subscriber(offline)

9 10 11 12 4 5 6 7 8

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++ turn off publisher ++++++++++++++++++++++++++++++++++++++++

+ **publisher** setCleanStart(False) and interval to let **broker** remember **publisher** when **publisher** restarts+

++++ (setPersistBuffer(true)) to let **publisher** **not to lost** 9 10 11 12 which didn’t **reach to** **broker** ++++

++++ MqttDefaultFilePersistence to let **publisher** **not to lost** 9 10 11 12 which didn’t **reach to** **broker** ++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

publisher(offline) -------------> mosquitto(offline) --------------> subscriber(offline)

9 10 11 12 4 5 6 7 8

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++ turn on broker ++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++ publisher(offline) -------------> mosquitto(online) --------------> subscriber(offline)

9 10 11 12 4 5 6 7 8

++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

++++++++++++++++++++++++++ turn on publisher ++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

publisher(online) -------------> mosquitto(online) --------------> subscriber(offline)

9 10 11 12 4 5 6 7 8

publisher(online) -9-10-11-12--> mosquitto(online) ---------------> subscriber(offline)

4 5 6 7 8

publisher(online) -------------> mosquitto(online) --------------> subscriber(offline)

45678 9 10 11 12

publisher(online) ----12345----> mosquitto(online) --------------> subscriber(offline)

45678 9 10 11 12

publisher(online) -------------> mosquitto(online) --------------> subscriber(offline)

45678 9 10 11 12 12345

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

++++++++++++++++++++++++++ turn on subscriber +++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

publisher(online) -------------> mosquitto(online) -456789101112131415-->subscriber(online)

publisher(online) -------------> mosquitto(online) --------------------->subscriber(online) 456789 10 11 12 123456

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Mosquito.config:

persistence true (*change*)

reason:

when broker **restart**

to let **broker** still save 4 5 6 7 8 which didn’t **reach to** **subscriber**

if persistence true, when broker is offline and online again, 4 5 6 7 8 is lost

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Publisher settings:

pub\_connOpts.setCleanStart(**false**); (*change*)

pub\_connOpts.setSessionExpiryInterval(500L); (*add*)

reason:

**publisher** setCleanStart(False) and interval to let **broker** remember **publisher** when **publisher** restarts

++++++++++++++++

pub\_connOpts.setBufferEnable(**true**); (*add*)

reason:

**publisher** save 9 10 11 12 which didn’t **reach to broker**

connOpts.setAutomaticReconnect(**true**); (*add*)

reason:

**publisher** try to connect **broker**, when broker shutdown

++++++++++++++++

MqttAsyncClient pubClient = new MqttAsyncClient(broker, clientId, new MqttDefaultFilePersistence()) (*add*)

pub\_connOpts.setPersistBuffer(**true**); (*add*)

reason:

when publisher **restart**

**publisher** not to lost 9 10 11 12 which didn’t **reach to broker**

**publisher** would use a file to save 9 10 11 12 because use MqttDefaultFilePersistence() would create a file

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

Subscriber settings:

sub\_connOpts.setCleanStart(**false**);

sub\_connOpts.setSessionExpiryInterval(500L);

reason:

**subscriber** setCleanStart(False) and interval to let **broker** remember **subscriber** when **subscriber** restarts

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

+++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

explanation:

user requirements1:

because the broker needs to remember the subscriber

so it needs to setCleanStart(false)

and set interval setSessionExpiryInterval(500L), 500L is to set 500 seconds,

during this period, broker can remember this subscriber

user requirements2:

in this case,

on the basis that **publisher** is still online all the time

it requires publisher to save the notification didn’t reach to **broker**

user requirements3:

in this case,

on the basis that **broker** will restart

it requires broker not to lost the notification didn’t reach to **subscriber**

user requirements4:

in this case,

on the basis that **broker** will restart

it requires **publisher** not to lost the notification didn’t reach to **publisher**

Attention:

The subscriber here should not be set to qos0, if you set qos0, when the subscribe reconnect or restart the process(to connect and to subscribe)

SS

SS