

Offline Back Office QR code Proposition:

Generation:

-Generate a QR code with a JWT as its data payload.

Data payload contains:{UUID, created at, expires in, starting station, number of valid stations}

-UUID generation should depend on the time and creator (station number) to prevent duplicates.

Validation(when entering a station):

- 1-validate the signature of the JWT
- 2-check that the QR code did not expire
- 3-check the AntiPassBack list for the UUID
- 4-check the starting station is the same as the current station
- 5-add the UUID to the local AntiPassBack list

Validation(when exiting the station):

- 1-validate the signature of the JWT
- 2-check that the QR code did not expire
- 3-check the AntiPassBack list for the UUID
- 4-check the starting station and number of valid stations (If within range open the gate)
- 5-add the UUID to the local AntiPassBack list
- 6-propagate the local AntiPassBack list to the BO when it is up

Pros:

- We validate that the QR code was issued by transcity
- We check that the QR code did not expire
- The QR code can only be used to enter once

Cons:

- Starting station and number of valid stations are set at QR code creation, meaning that the customer will have to enter from a specific station.
- QRcode could be used once to exist each station within the allocated station range