**Test cases Document for Backend testing – Iteration 4**

Extended System test cases of “Test Cases\_reviewed.pdf”

Date: 20.7.2016

Last modifications: 22.6.2016

Performed by mzeen

Version: 0.2 in development, on commit 449e3b5

Tests marked with *Redone:* Redone after implementation of temporary work-around to comply with interface documentation

Performed by ricarda42

Date 26.6.2016

Version: commit b07e6de in branch developmentIt3

System test cases extended for iteration 4; redone tests from iteration 3 also to be tested with cleaned-up code

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| **Sr.no** | **Use Case** | **Function Being Tested** | **Initial System State** | **Input** | **Expected Output** | **Test execution documentation** |
| 1 | IC\_C1 | **SF\_S3: Send list of stops** | Stop table exists in database | ./stops | List of stops with stopId, stop name, line passing through the stops, location of the stop, bus schedule of the stop is displaying. Schedule contains line name, lineId, stopId, arriving time and timestamp. | Passed |
| 2 | IC\_C2 | **SF\_S5: Send properties of bus** |  |  | *Not needed* |  |
| 3 |  | **SF\_S6: Send GPS-Data** | GPS data was sent to database | ./busses/{busId}/ | Current GPS Data coordinates with timestamp | Passed |
| 4 | IC\_C3 | **SF\_S6: Send GPS-Data** |  |  | See above |  |
| 5 | IC\_B1 | **SF\_S1: Send list of lines** |  | ./lines | List of Lines with properties lineId, name, routeId, timestamp and busses running on that specific line | Passed |
| 6 |  | **SF\_S2: Send list of busses** | Bus table exists in database | ./busses | List of all busses with their busId, number plate, color, picture and the line they serve | Passed |
| 7 |  | **SF\_S4: Send list of routes** | Route table exists in database | ./routes | List of all routes with routeId, route coordinates in geojson format and timestamp | Passed |
| 8 |  | **SF\_S7: Store bus and line** | Bus and line tables exist in database | ./updateBusStatus  Method: POST  Content type: application/json  Content:  {  "lineId":number,  "busId":number  } | Result status 200,  Bus and line information stored | Passed;  tested with lineId = 3, busId = 2, with initially bus 2 on line 1. Output of post is 200, calling ./lines reveals that bus 2 is now on line 3. |
| 9 | IC\_B2 | **SF\_S13: Store number of available seats**  **(see No. 12 – identical interface)** |  | ./realTimeData  Method:POST  Content type: application/json Content:  {  “busId”:number,  “position”: { “type”: “Point”, “coordinates”: [double, double]},  “takenSeats”:  number  “timestamp”: timeStamp  } | Result status 200;  GPS data and taken seats stored | Passed |
| 10 | IC\_B3 | **SF\_S4: Send list of routes** |  |  | See above |  |
| 11 | IC\_B4 | **SF\_S3: Send list of stops** |  |  | See above |  |
| 12 | - | **SF\_S8: Store GPS data** | Bus table exists in database | ./realTimeData  Method: POST  Content type: application/json  Content:  {  "busId":number,  “position”: { “type”: “Point”, “coordinates”: [double, double]},  “timestamp”: timeStamp  } | Result status 200, GPS Data of bus is stored, timestamp not changed | Passed;  With busId = 1, coordinates [15.0, -3.4] and timeStamp = 1098692636000  the output of POST is 200, calling ./busses/1 reveals that coordinates have been changed to [15.0, -3.4]. The timeStamp remains 1098692634000. |
| 13 | - | **SF\_S9: Send latest timestamp** | Line, bus, route and stops tables exist in database | ./update | Last timestamps for bus, route, line and stops | Passed |
| 14 | IC\_B5 | **SF\_S10: Notification of custom stop request**  **Post custom stop request** | CitizenApp sends new Custom Stop Request | ./customStops  Method: POST  Content type: application/json  Content:  {  "lineId":number,  "location": { "type": "Point", "coordinates": [double , double] },  "numberOfPersons": number,  "deviceId":String,  "info": {  "name": "string",  "address": "string", "assistance": [number,number...]  },  "pickUpTime":Timestamp  } | Result status 200;  New custom stop with assigned requestId, lineId, pickUpTime, location, number of persons, deviceId, information of passenger included name, address, and assistance, status and timestamp | Passed |
| 15.1 |  | **Get custom stop requests ref. to line**  **Valid 1** | Request from CitizenApp with lineId stored where global status is 1.  DriverApp requests customStops for given lineId and busId. The bus has not yet rejected the custom stop (i.e. busId not in rejectingBus list) | ./customStops?lineId={lineId}&busId={busId} | Custom stop request included in output list | Passed  Tested with lineId=1 and busId=1 |
| 15.2 |  | **Get custom stop requests ref. to line**  **Invalid 1** | Request from CitizenApp with lineId stored where global status is 1.  DriverApp requests customStops for given lineId and busId. The bus has already rejected the custom stop (i.e. busId in rejectingBus list) | ./customStops?lineId={lineId}&busId={busId} | Custom stop request not included in output list | Passed  Tested with lineId=1 and busId=1 |
| 15.3 |  | **Get custom stop requests ref. to line**  **Valid 2** | Request from CitizenApp with lineId stored.  DriverApp requests customStops for given lineId and busId. Global status is 2. The bus has accepted this custom stop (i.e. acceptingBus is busId). | ./customStops?lineId={lineId}&busId={busId} | Custom stop request included in output list. | Passed  Tested with lineId=1 and busId=1 |
| 15.4 |  | **Get custom stop requests ref. to line**  **Invalid 2** | Request from CitizenApp with lineId stored.  DriverApp requests customStops for given lineId and busId. Global status is 2. The bus has accepted this custom stop (busId is not acceptingBus) | ./customStops?lineId={lineId}&busId={busId} | Custom stop request not included in output list. | Passed  Tested with lineId=1 and busId=1 |
| 15.5 |  | **Get custom stop requests ref. to line**  **Invalid 3** | Request from CitizenApp with lineId stored.  DriverApp requests customStops for given lineId and busId. All busses on this line rejected this custom stop, i.e. global status is 3. | ./customStops?lineId={lineId}&busId={busId} | Custom stop not in output list | Passed  Tested with lineId=1 and busId=1 |
| 15.6 |  | **Get custom stop requests ref. to line**  **Invalid 4** | Request from CitizenApp with lineId stored.  DriverApp requests customStops for given lineId and busId. A bus accepted and completed this custom stop, i.e. global status is 4. | ./customStops?lineId={lineId}&busId={busId} | Custom stop not in output list | Passed  Tested with lineId=1 and busId=1 |
| 15.7 |  | **Get custom stop requests ref. to line**  **Invalid 5** | Request from CitizenApp with lineId stored.  DriverApp requests customStops for given lineId and busId. A bus accepted this custom stop, but the citizen did not show up, i.e. global status is 5. | ./customStops?lineId={lineId}&busId={busId} | Custom stop not in output list | Passed  Tested with lineId=1 and busId=1 |
| 15.8 |  | **Get custom stop requests ref. to line**  **Valid 3** | Request from CitizenApp with lineId stored.  DriverApp requests customStops for given lineId and busId. This bus accepted this custom stop, but the citizen canceled it, i.e. global status is 6 and busId is acceptingBus. | ./customStops?lineId={lineId}&busId={busId} | Custom stop is in output list | Passed  Tested with lineId=1 and busId=1 |
| 15.9 |  | **Get custom stop requests ref. to line**  **Invalid 6** | Request from CitizenApp with lineId stored.  DriverApp requests customStops for given lineId and busId. A bus different from this bus accepted this custom stop, but the citizen canceled it, i.e. global status is 6 and busId is not acceptingBus. | ./customStops?lineId={lineId}&busId={busId} | Custom stop is not in output list | Passed  Tested with lineId=1 and busId=1 |
| 15.10 |  | **Get custom stop requests ref. to line**  **Invalid 7** | DriverApp requests pending customStops for given lineId and busId; no requests for this line | ./customStops?lineId={lineId}&busId={busId} | Empty list | Passed  Tested with lineId=1 and busId=1 |
| 15.11 |  | **Get custom stop requests ref. to line**  **Invalid 6** | DriverApp requests pending customStops for given lineId and busId; requests for that line have pickUpTime before current time | ./customStops?lineId={lineId}&busId={busId} | Empty list | Passed  Tested with lineId=1 and busId=1 |
| 16.1 |  | **SF\_S11: Response to custom stop request**  **Update status of custom stop requests**  **Valid 1** | DriverApp of a given bus received custom stop requests for the given line.  The driver accepts a custom stop with status pending. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":2,  “busId”: number  } | Result status 200; Status of given request set to 2, acceptingBus set to busId | Passed  Result status 200  With status 2 |
| 16.2 |  | **Update status of custom stop requests**  **Invalid 1** | DriverApp of a given bus received custom stop requests for the given line.  The driver accepts a custom stop where the status has already been changed. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":2,  “busId”: number  } | Result status 200; status of request unchanged | Passed  Result status 200  With status 2 |
| 16.3 |  | **Update status of custom stop requests**  **Valid 2** | DriverApp of a given bus received custom stop requests for the given line.  The driver rejects a custom stop with status pending. Not all busses on this line have already rejected this custom stop. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":3,  “busId”: number  } | Result status 200; status of request unchanged, busId added to list rejectingBus | Passed  Result status 200 With status 3 |
| 16.4 |  | **Update status of custom stop requests**  **Valid 3** | DriverApp of a given bus received custom stop requests for the given line.  The driver rejects a custom stop with status pending. All busses on this line have already rejected this custom stop. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":3,  “busId”: number  } | Result status 200; status of request set to 3, busId added to list rejectingBus | Passed  Result status 200 With status 3 |
| 16.5 |  | **Update status of custom stop requests**  **Valid 4** | DriverApp of a given bus received custom stop requests for the given line.  The driver rejects a custom stop where the status has already been changed. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":3,  “busId”: number  } | Result status 200; status of request unchanged, busId added to rejectingBus list | Passed  Result status 200  With status 3 |
| 16.6 |  | **Update status of custom stop requests**  **Valid 5** | DriverApp of a given bus received custom stop requests for the given line.  The driver accepted a custom stop (i.e. status is 2 and acceptingBus equals busId) and now marks it as complete. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":4,  “busId”: number  } | Result status 200; status of request set to 4 | Passed  Result status 200 With status 4 |
| 16.7 |  | **Update status of custom stop requests**  **Invalid 2** | DriverApp of a given bus received custom stop requests for the given line.  A driver different from this driver accepted a custom stop (i.e. status is 2 and acceptingBus is not equal to busId) This bus driver now marks this custom stop as complete. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":4,  “busId”: number  } | Result status 200; status of request unchanged | Passed  Result status 200  With status 4 |
| 16.8 |  | **Update status of custom stop requests**  **Invalid 3** | DriverApp of a given bus received custom stop requests for the given line.  This driver accepted a custom stop but the status was updated further (i.e. status is not 2 and acceptingBus is equal to busId). This bus driver now marks this custom stop as complete. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":4,  “busId”: number  } | Result status 200; status of request unchanged | Passed  Result status 200  With status 4 |
| 16.9 |  | **Update status of custom stop requests**  **Invalid 4** | DriverApp of a given bus received custom stop requests for the given line.  The bus driver now marks a custom stop as complete he did not accept and where the status is not accepted. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":4,  “busId”: number  } | Result status 200; status of request unchanged | Passed  Result status 200 With status 4 |
| 16.10 |  | **Update status of custom stop requests**  **Valid 6** | DriverApp received custom stop requests for the given line.  The driver accepted a custom stop (i.e. status is 2 and acceptingBus equals busId) and now marks it as not shown up. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":5,  “busId”: number  } | Result status 200; status of request set to 5 | Passed  Result status 200 With status 5 |
| 16.11 |  | **Update status of custom stop requests**  **Valid 7** | DriverApp of a given bus received custom stop requests for the given line.  The driver accepted a custom stop (i.e. status is 2 and acceptingBus equals busId) and now marks it as not shown up. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":5,  “busId”: number  } | Result status 200; status of request set to 5 | Passed  Result status 200 With status 5 |
| 16.12 |  | **Update status of custom stop requests**  **Invalid 5** | DriverApp of a given bus received custom stop requests for the given line.  A driver different from this driver accepted a custom stop (i.e. status is 2 and acceptingBus is not equal to busId) This bus driver now marks this custom stop as not shown up. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":5,  “busId”: number  } | Result status 200; status of request unchanged | Passed  Result status 200 With status 5 |
| 16.13 |  | **Update status of custom stop requests**  **Invalid 6** | DriverApp of a given bus received custom stop requests for the given line.  This driver accepted a custom stop but the status was updated further (i.e. status is not 2 and acceptingBus is equal to busId). This bus driver now marks this custom stop as not shown up. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":5,  “busId”: number  } | Result status 200; status of request unchanged | Passed  Result status 200 With status 5 |
| 16.14 |  | **Update status of custom stop requests**  **Invalid 7** | DriverApp of a given bus received custom stop requests for the given line.  The bus driver now marks a custom stop as not shown up he did not accept and where the status is not accepted. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":5,  “busId”: number  } | Result status 200; status of request unchanged | Passed  Result status 200 With status 5 |
| 16.15 |  | **Update status of custom stop requests**  **Valid 8** | DriverApp of a given bus received custom stop requests for the given line.  The citizen cancels the custom stop. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":6,  “busId”: number  } | Result status 200; status of request set to 6 | Passed  Result status 200 With status 6 |
| 16.17 |  | **Update status of custom stop requests**  **Valid 9** | DriverApp of a given bus received custom stop requests for the given line.  The citizen cancels the custom stop. | ./customStops/{requestId}  Method: POST  Content type: application/json  Content:  {  "status":6  “busId”: number  } | Result status 200; status of request set to 6 | Passed  Result status 200 With status 6 |
| 18.1 |  | **Get custom stop requests ref. to requestId and deviceId** | CitizenApp has the requestId | ./customStops?requestId={requestId}&deviceId={deviceId} | Custom stop request for the given requestId with all properties | *Redone:* Passed |
| 18.2 |  | **Get custom stop requests ref. to requestId** | CitizenApp has the requestId | ./customStops?requestId={requestId} | Custom stop request for the given requestId with all properties | Passed |
| 18.3 |  | **Get custom stop requests ref. to deviceId** | CitizenApp has the requestId | ./customStops?deviceId={deviceId} | All custom stops for the given deviceId with all properties | Passed |
| 19 | IC\_B6 | **SF\_S11: Response to custom stop request** | DriverApp send status as complete | *See above with status complete* |  |  |

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**Status: C**omplete

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**Review Status:** Tested and completed