



# Taxi Service Test Report

Version 1.0

Taxi service	Version: 1.0
Test Report	Date: 2013-01-14

## Revision History

<b>Date</b>	<b>Version</b>	<b>Description</b>	<b>Author</b>
2013-01-13	0.1	Initial Draft	Jelena Jerat
2013-01-13	0.2	Chapter 2.3 Draft	Igor Piljić
2013-01-14	0.3	Chapter 2.2 Draft	Jelena Jerat
2013-01-14	1.0	Chapter 2.4 Draft, First version finalized	Luca Zangari

Taxi service	Version: 1.0
Test Report	Date: 2013-01-14

## Table of Contents

1.	Introduction	4
1.1	Purpose of this document	4
1.2	Intended Audience	4
1.3	Scope	4
1.4	Definitions and acronyms	4
1.4.1	Definitions	4
1.4.2	Acronyms and abbreviations	4
1.5	References	4
2.	Test Results	4
2.1	Customer Client Test Case Results	4
2.1.1	Making order – CCT-01	5
2.1.2	Making order – CCT-02	5
2.1.3	Making order – CCT-03	5
2.1.4	Making order – CCT-04	5
2.1.5	Checking current order – CCT-05	6
2.1.6	Checking current order – CCT-06	6
2.1.7	Checking current order – CCT-07	6
2.1.8	Checking current order – CCT-08	6
2.2	Taxi Client Test Case Results	6
2.2.1	Changing status – TCT-01	6
2.2.2	Changing status – TCT-02	7
2.2.3	Inactive taxi goes to off duty – TCT -03	7
2.2.4	Accepting order – TCT-04	7
2.2.5	Rejecting order – TCT-05	7
2.3	Server Test Case Results	8
2.3.1	Detect Zone – ST-01	8
2.3.2	Coordinates validation – ST-02	8
2.3.3	Make order – ST-03	8
2.3.4	Assign order to first taxi in queue – ST-04	8
2.3.5	Taxi with assigned order changes status to “off duty” – ST-05	8
2.3.6	Taxi with assigned order changes status to “off duty” after order is offered to him, but before he accepted or rejected the order – ST-06	9
2.3.7	All taxis in queue go to “off duty” after order request is made – ST-07	9
2.3.8	Administrator can add taxi – ST-08	9
2.3.9	Administrator can remove taxi – ST-09	9
2.4	Server Stress Test	10

Taxi service	Version: 1.0
Test Report	Date: 2013-01-14

## 1. Introduction

### 1.1 Purpose of this document

This document presents the detailed test results. It is based on the requirements definition document, as well as the acceptance test plan document. It describes the test results and their effect on the system (changes that had to be made to meet the requirements or improve functionality).

### 1.2 Intended Audience

Test Report document is mainly intended for project team members, project supervisor and the customer.

### 1.3 Scope

The scope of this document covers detailed test results for all test cases listed in acceptance test plan document. It also covers test results for server stress testing and the results from automated tests of the server.

### 1.4 Definitions and acronyms

#### 1.4.1 Definitions

Keyword	Definitions
TaxiService	Project name

#### 1.4.2 Acronyms and abbreviations

Acronym or abbreviation	Definitions
CCT	Customer Client Test
TCT	Taxi Client Test
ST	Server Test
URL	Uniform Resource Locator

### 1.5 References

- [TaxiService website](#)
- [Acceptance Test Plan](#)
- [Requirements Definition](#)

## 2. Test Results

### 2.1 Customer Client Test Case Results

Taxi service	Version: 1.0
Test Report	Date: 2013-01-14

### 2.1.1 Making order – CCT-01

Description	User makes an order at his current location
Date of last testing	08.01.2013.
Tester	Jelena Jerat
Test Result	PASS after fixing bugs
Bugs found	<ul style="list-style-type: none"> <li>• Server crashes when there is no taxi available – Fixed</li> <li>• Some zones were not in the database so it was impossible to send the order from some locations – Fixed</li> <li>• Phone numbers with “+” didn’t work because of the URL encoding – Fixed</li> <li>• Button that centers the map on the customer client crashes the application if there is no GPS signal - Fixed</li> </ul>
Remarks	

### 2.1.2 Making order – CCT-02

Description	Customer makes an order without specified location
Date of last testing	08.01.2013.
Tester	Jelena Jerat
Test Result	PASS
Bugs found	
Remarks	Bugs for this test case are the same as for test case CCT-01

### 2.1.3 Making order – CCT-03

Description	Customer makes an order with no phone number
Date of last testing	08.01.2013.
Tester	Jelena Jerat
Test Result	PASS
Bugs found	
Remarks	Bugs for this test case are the same as for test case CCT-01

### 2.1.4 Making order – CCT-04

Description	Customer makes an order outside of Milano
Date of last testing	08.01.2013.
Tester	Jelena Jerat
Test Result	PASS
Bugs found	
Remarks	Bugs for this test case are the same as for test case CCT-01

Taxi service	Version: 1.0
Test Report	Date: 2013-01-14

### 2.1.5 Checking current order – CCT-05

Description	Customer checks position of taxi that is assigned to pick him
Date of last testing	08.01.2013.
Tester	Jelena Jerat
Test Result	PASS after fixing bugs
Bugs found	<ul style="list-style-type: none"> <li>Customer sees the taxi position even after the order is resolved - Fixed</li> </ul>
Remarks	

### 2.1.6 Checking current order – CCT-06

Description	Customer checks position of taxi that is assigned to pick him
Date of last testing	08.01.2013.
Tester	Jelena Jerat
Test Result	PASS
Bugs found	
Remarks	

### 2.1.7 Checking current order – CCT-07

Description	Customer checks position without ordering taxi
Date of last testing	08.01.2013.
Tester	Jelena Jerat
Test Result	PASS
Bugs found	
Remarks	

### 2.1.8 Checking current order – CCT-08

Description	Customer checks detailed information about taxi that is assigned to pick him
Date of last testing	08.01.2013.
Tester	Jelena Jerat
Test Result	PASS
Bugs found	<ul style="list-style-type: none"> <li>ETA field was not set – Fixed after implementing ETA calculation on the server</li> </ul>
Remarks	Bugs for this test case are the same as for test case CCT-05

## 2.2 Taxi Client Test Case Results

### 2.2.1 Changing status – TCT-01

Description	User changes current taxi status from “on duty“ to “off duty“
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Taxi service	Version: 1.0
Test Report	Date: 2013-01-14

Date of last testing	08.01.2013.
Tester	Jelena Jerat
Test Result	PASS
Bugs found	
Remarks	

### 2.2.2 Changing status – TCT-02

Description	User changes current taxi status from “off duty“ to “on duty“
Date of last testing	08.01.2013.
Tester	Jelena Jerat
Test Result	PASS
Bugs found	
Remarks	

### 2.2.3 Inactive taxi goes to off duty – TCT -03

Description	Taxi status changes to “off duty” if taxi didn’t update his location for more than 5 minutes
Date of last testing	08.01.2013.
Tester	Jelena Jerat
Test Result	PASS after fixing bugs
Bugs found	<ul style="list-style-type: none"> <li>User would always go to off duty after 5 minutes from first location update, even if he was sending his location continuously - Fixed</li> </ul>
Remarks	

### 2.2.4 Accepting order – TCT-04

Description	User accepts an order offered to him
Date of last testing	08.01.2013.
Tester	Jelena Jerat
Test Result	PASS
Bugs found	
Remarks	

### 2.2.5 Rejecting order – TCT-05

Description	User rejects an order offered to him
Date of last testing	08.01.2013.
Tester	Jelena Jerat
Test Result	PASS
Bugs found	

Taxi service	Version: 1.0
Test Report	Date: 2013-01-14

Remarks	
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## 2.3 Server Test Case Results

### 2.3.1 Detect Zone – ST-01

Description	Server can detect zone from given GPS coordinates
Date of last testing	09.01.2013.
Tester	Igor Piljić
Test Result	PASS
Bugs found	
Remarks	

### 2.3.2 Coordinates validation – ST-02

Description	Server detects invalid GPS coordinates
Date of last testing	09.01.2013.
Tester	Igor Piljić
Test Result	PASS
Bugs found	
Remarks	

### 2.3.3 Make order – ST-03

Description	Server receives order request and creates new order in the system.
Date of last testing	09.01.2013.
Tester	Igor Piljić
Test Result	PASS after fixing bugs
Bugs found	<ul style="list-style-type: none"> <li>Server creates two orders with same ID – Fixed</li> </ul>
Remarks	

### 2.3.4 Assign order to first taxi in queue – ST-04

Description	Server receives order request and assigns it to first taxi in queue
Date of last testing	09.01.2013.
Tester	Igor Piljić
Test Result	PASS after fixing bugs
Bugs found	<ul style="list-style-type: none"> <li>Server assigns order to wrong taxi – Fixed</li> </ul>
Remarks	

### 2.3.5 Taxi with assigned order changes status to “off duty” – ST-05

Description	Taxi with assigned order changes status to “off duty”, order is offered
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Taxi service	Version: 1.0
Test Report	Date: 2013-01-14

	to next taxi in queue
Date of last testing	09.01.2013.
Tester	Igor Piljić
Test Result	PASS
Bugs found	
Remarks	

2.3.6 Taxi with assigned order changes status to “off duty” after order is offered to him, but before he accepted or rejected the order – ST-06

Description	Taxi with assigned order changes status to “off duty”, order is offered to next taxi in queue
Date of last testing	09.01.2013.
Tester	Igor Piljić
Test Result	PASS
Bugs found	
Remarks	

2.3.7 All taxis in queue go to “off duty” after order request is made – ST-07

Description	All taxis in queue go to “off duty”, server sends error message to client
Date of last testing	09.01.2013.
Tester	Igor Piljić
Test Result	PASS after fixing bugs
Bugs found	<ul style="list-style-type: none"> <li>Customer sees first taxi that the order was offered as the one assigned to him – Fixed</li> </ul>
Remarks	

2.3.8 Administrator can add taxi – ST-08

Description	Administrator can add new taxis to system
Date of last testing	09.01.2013.
Tester	Igor Piljić
Test Result	PASS
Bugs found	
Remarks	

2.3.9 Administrator can remove taxi – ST-09

Description	Administrator can remove taxi from system
Date of last testing	09.01.2013.
Tester	Igor Piljić
Test Result	PASS

Taxi service	Version: 1.0
Test Report	Date: 2013-01-14

Bugs found	
Remarks	

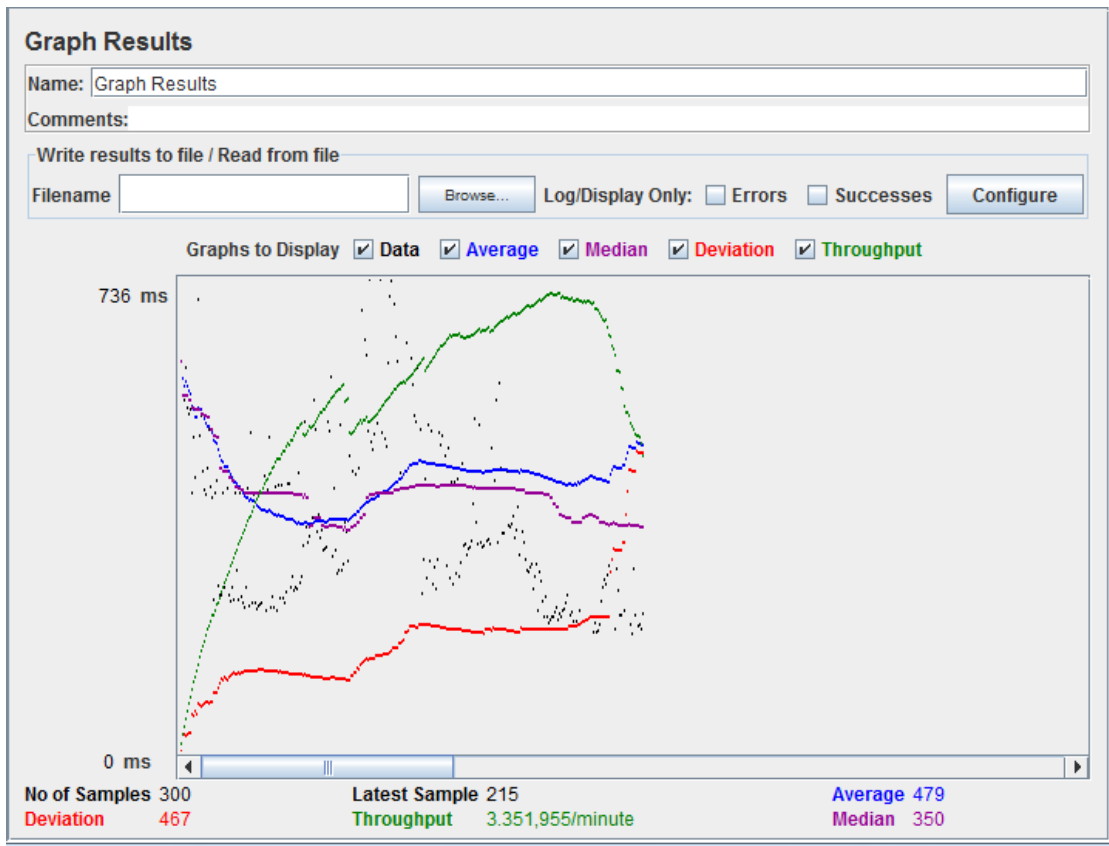
## 2.4 Server Stress Test

The aim of this part is perform different tests to understand how the server works in under a situation of heavy traffic.

We used Jmeter, which is a tool that allows simulating the behavior of different customers at the same time. Our goal was to detect possible calls that could be a bottleneck for the system.

After a study of the different kind of calls and their frequency, we chose the update position call, which is the one that the Taxi Client executes more frequently: once every 30 seconds.

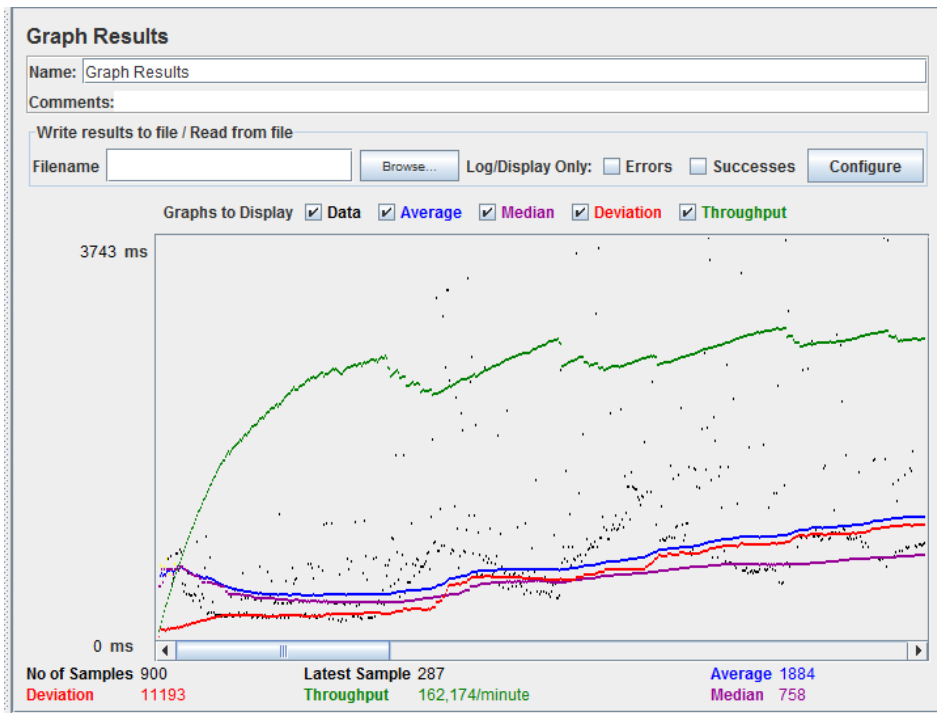
Firstly we have simulated 100 users that called the server in the same time with a rump-up period of 2 seconds. We scheduled 3 loops of the same test and we got the following results.



We can see different lines in the graph: the green one shows that the throughput increased for first 250 samples. This was a good result, we can also see that the average was quite high and constant and also the median was close to the average, therefore the system was answering correctly for every sample.

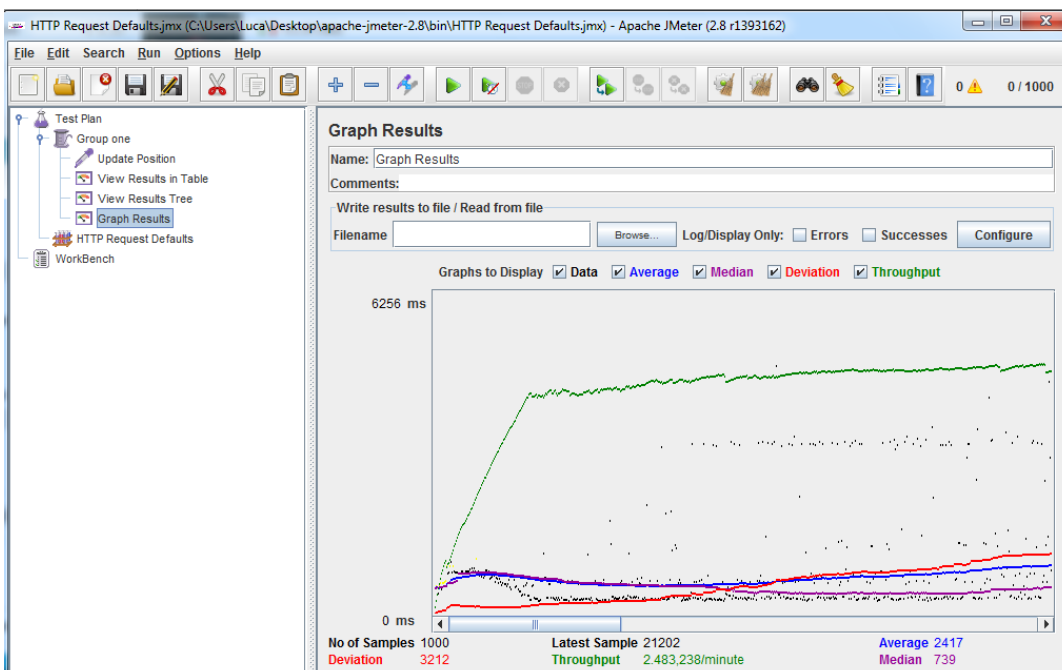
In the second test we simulated 300 users who connected to the server at the same time with a rump-up period of 4 seconds. We scheduled 3 loops of the same test and we got the following results.

Taxi service	Version: 1.0
Test Report	Date: 2013-01-14



We can see a difference in the throughput: this time it was a lot less than the previous test. We can also see that the average was quite slow and constant and also the median was close to the average, the system was answering again correctly for every sample.

As last test we simulated 1000 users that called the server at the same time with a rump-up period of 10 seconds. We scheduled just one loop and we got the following results.



We can see that the throughput was not as bad as before thanks to auto scale factor on Azure. We can see a constant increase in the throughput at the beginning and an almost constant response in the rest of the samples. This result is positive also to say that, if we plan to allocate the calls in different moments we get a better result (rump-up 10s).