



Greta Registry Release V4.2

TEST REPORT

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Document Control

The source of the document will be found in the Control section of the Project File.

Modification History

This document is no longer valid if it has been superseded by a later version.

Version	Date	Author	Reason for Change
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Distribution List

This document has been distributed to:

Version	Date	Name	Title
1.0	20091111	Joachim Jamttjarn	Head of Greta, DECC

Glossary

Term	Description
EUA_AAU	European Assigned Amount unit applicable for Commitment Period 1
CER	Certified Emission Reduction unit
ERU	Emission Reduction unit
UAT	User Acceptance Test(ing)
PID	Project Initiation Document

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1 Introduction

1.1 Document Purpose

To report on the testing activities carried out in the Greta V4.2 project.

1.2 Project Overview

Since the release of Greta Version 3.0.84 against the ITL, several high severity issues have been raised by both licensees and the UNFCCC specifically related to the messaging and transaction performance and robustness.

Analysis performed by the development team at SFW highlighted a number of causes of these errors and proposed to Greta a series of changes to resolve the issues.

The implementation of all the proposed changes was predicted to take from June to November to develop and test. Although this was within the required timescales, it was agreed that the changes should be split into two iterations. The first iteration (this project) is a time-boxed activity where as many changes as possible are implemented (with a guarantee of a minimum deliverable).

The timescale for delivery is early September 2009.

1.3 Executive Summary

All system, regression and user acceptance test activities are complete and there are no outstanding issues to prevent general release.

2 Test Process

The test process covered the following areas:

1. Unit Testing

The purpose of unit testing was to ensure that each build deployed for system test, worked as intended. To achieve this, prior to the deployment of any build for formal testing, the responsible developer would perform testing on their own environment to ensure the build functioned as intended.

The unit testing was conducting against the requirements specification.

This activity was not formally recorded.

The developer was responsible for deciding whether to deploy the build into formal system test.

2. System Testing

The purpose of system testing was to ensure that the application performed against the agreed requirements. All agreed requirements were written in a separate requirements document and also the V4.2 PID (Customer Requirements). To perform the tests, test cases were written. The 'combined approach' was selected as described in QME514.

System testing was also conducted to ensure that bugs raised and resolved from support calls functioned as expected. All bugs to be resolved from the support process were raised in Team System and referenced the Support Desk number (SFWnnnn).

System Testing was carried out by SFW staff using the SFW Greta Test Server hosted at Opal (GretaERWeb) and specifically the System Test environment connected to a Simulator.

3. Load Testing

The purpose of load testing was to ensure that the new implementation did not break under user or data load.

Load Testing was carried out by SFW staff using the SFW Greta Test Server hosted at Opal (GretaERWeb) and specifically the System Test environment connected to a Simulator.

4. Regression Testing

The purpose of regression testing was to ensure that functions not directly affected by the development activities still function as intended.

In addition, regression testing was used to ensure the application was compatible with SQL Server 2005.

Regression Testing was carried out by SFW staff using the SFW Greta Test Server hosted at Opal (GretaERWeb) and specifically the Integration Test environment connected to the Developer Test ITL.

5. User Acceptance Testing

The purpose of User Acceptance Testing (UAT) was to ensure that the application was fit for purpose as deemed by end users.

In addition, UAT was used to execute the latest CITL Test Scenario used by licensees to re-certify Registries prior to deployment into their live environments.

User Acceptance Testing was planned and conducted by Working Group A (as described in the PID) on their own test environments connected to the Registry Test ITL. SFW were responsible for releasing the installation package and providing development resources for bug fixing.

Once Working Group A had completed User Acceptance Test and the defects were below the Quality Criteria set out in the PID, the application would be deemed fit for general release.

3 Test Environments

We used three environments for conducting the tests:

Environment	URL	Server	Connection to ITL	Unit Test	System Test	Load Test	UAT
Developer	Azarole (VM)	Domain-SFW1\Pie	Emulator ¹	✓	✗	✗	✗
System Test	Systemtest.gretaregistrytest.co.uk	GretaERWeb	Simulator ²	✗	✓	✓	✗
Integration Test	Integrationtest.gretaregistrytest.co.uk	GretaERWeb	Developer ITL ³	✗	✓	✗	✓

¹ The Emulator acts as a 'dummy' ITL by automatically responding to any outgoing message. It always responds immediately and always with a positive reply.

² The Simulator is a separate tool that stores incoming messages from a Registry, allows the message to be viewed and the user to select a positive or negative response.

³ The Developer ITL is a real ITL hosted by Logica that Registry Developers use to test against.

4 System Test Results

The system test-cases and results can be found in the Version 4.2 project file in the System Test folder (v4.2 - System Test Cases and Report - v4.2.21 Tests.xls)

In total, there were 59 requirements to test:

- 77 Business Rules for Propose Transfer
- 22 Requirements for the new SAM Service
- 10 Customer Requirements on Performance

In response to the new requirements:

- 48 Test-cases were written on Propose Transfer and the new SAM Service

43 Test-Cases are showing status "PASS" against the final build V4.2.21

5 Test-Cases are showing status "FAIL" but have bugs agreed as low priority for V4.2

All bugs are set to "Closed" or were agreed to be moved to a future release.

Conclusion:

System Testing has successfully completed and there are no outstanding tests, requirements.

The new functionality meets the requirements.

5 Load Test Results

The load testing has been documented in a separate report which accompanies this document.

6 Regression Test Results

The regression test-cases and results can be found in the Version 4.1 project file in the System Test folder (v4.2 - System Test Cases and Report - v4.2.21 Tests.xls)

The regression element of the spreadsheet comprises all tabs.

Regression Testing covered the following functionality:

- System Set-Up and Account Creation (3)
- Account Management (11)
- Issuance (26)
- Allocation (1)
- Cancellation (8)
- Compliance (5)
- Registry Operation (2)
- Validate Installation and Permit (2)
- Notifications (1)

In total, 67 test-cases were run and all are showing status "PASS".

Conclusion:

Regression testing has successfully completed and there are no outstanding tests. The application is deemed compatible with SQL Server 2005.

7 Defects

Microsoft Team System was used to raise defects throughout System Test and User Acceptance Testing.

At UAT sign-off, the defect statistics were:

9th October 2009: V4.2.21									
	Active		Resolved		Closed		Total		
V4.2	20		0		68		88		
Active	P1		P2		P3		P4		
	0	0%	3	3.40%	6	6.80%	11	12.50%	

On product sign-off, all remaining defects will be assigned to the next release (V4.3).

Conclusion:

The defects are all below the Quality criteria set out in the PID and therefore the product was accepted by WGA.

8 User Acceptance Testing

User Acceptance Testing was planned and executed by Working Group A.

Working Group A raised 9 bugs in total.

Working Group A signed the product off for general use on the 9th October.

9 Deviations/Exceptions

None to report