Test Strategy for the June'11 BSC Systems Release

This Test Strategy describes the testing approach used to ensure the quality of the changes included in the June 2011 BSC Systems Release. The strategy describes the activities and responsibilities of test participants used in the approach.

Find the Test Strategy and all about the Release on the
June 2011 BSC Systems Release Webpage

Find out more about ELEXON's testing guidelines

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1   Introduction

The [June 11 Release website](#) contains up to date information on the changes and key testing dates. The changes that require testing are given below:

Changes for the June '11 BSC Systems Release		
Change	Impact	Covered under this Test Strategy?
CP1334 'New PARMS Serials"	PARMS	Yes

The PAB, PARMS Review Group and industry consultation respondents recognised issues with the current Serials and that they lead to unreliability and variations in the reporting. CP1334 aims to address these issues by introducing 12 new Serials which will better facilitate the reporting of PAP performance and aid those Suppliers that use the Serials to identify potential issues with their agents. More information about the new PARMS Serials can be found on the ELEXON website [here](#).

CP1334 is a high risk and medium scope change (for systems); and a high scope change (for ELEXON processes). The change is high risk because it impacts industry performance reporting and Supplier Charges. The change has a larger impact on ELEXON's systems and impacts both the Settlement Risk Report Tool (SRRT) and the Report Generator.

The 12 New PARMS Serials and impacted parties are given below.

12 New PARMS Serials for June'11 Release	
New Serial	**Data Provider**
SP11 (Timely Appointment of Agents)	DC & MOA (HH & NHH)
SP12 (Timely Notification of Changes of the Data Aggregator via D0148)	DC (HH & NHH)
SP13 (Timely Notification of Changes of the Meter Operator Agent via D0148)	DC (HH & NHH)
SP14 (Timely Notification of Changes of the Data Collector via D0148)	MOA (HH & NHH)
SP15 (Missing Appointments of Agents)	DC & MOA (HH & NHH)
HM11 (Timely Sending of HH MTDs to HHDCs)	HHDC
HM12 (Missing HH MTDs)	HHDC & MOA
HM13 (Quality of HH MTDs)	HHDC
HM14 (Timely HH Meter Investigation Requests)	HHDC
NM11 (Timely Sending of NHH MTDs to NHHDCs)	NHHDC
NM12 (Missing NHH MTDs)	NHHDC & MOA
NC11 (Missing NHH Meter Reads & History from Old NHHDC to New NHHDC)	NHHDC

For these new PARMS Serials Suppliers and Agents will be able to submit data against an unknown GSP Group "_U"; however this data will be disregarded for PARMS completeness checking and shall not feed through into Supplier Charges.

For further details on CP1334 please refer to the [June'11 Release](#) pages.

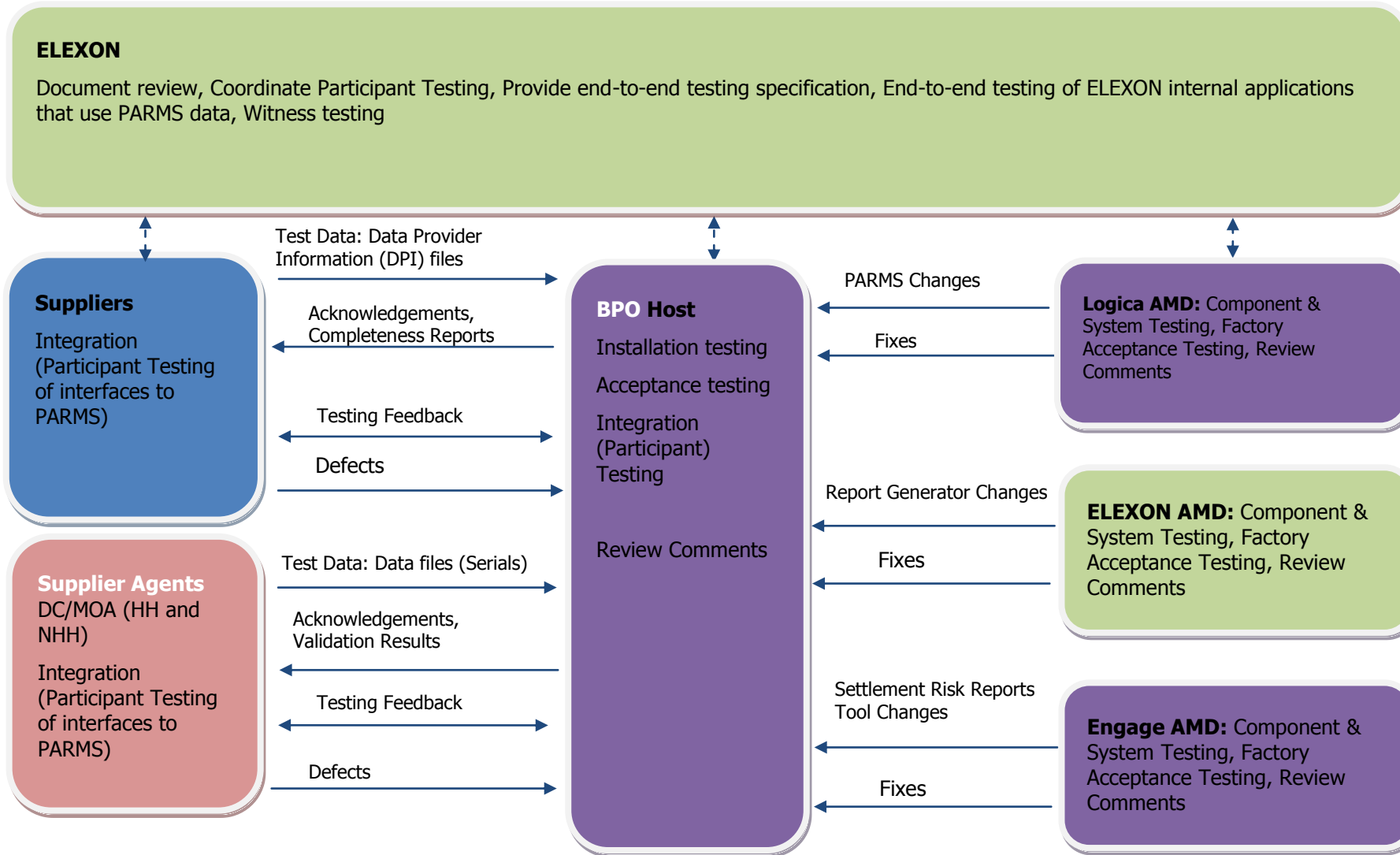June 2011 BSC Systems

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2 Testing Framework

The Testing Framework below shows the test activities that each test participant is responsible for and the interactions between them.

ELEXON

Document review, Coordinate Participant Testing, Provide end-to-end testing specification, End-to-end testing of ELEXON internal applications that use PARMS data, Witness testing

Suppliers

Integration (Participant Testing of interfaces to PARMS)

Test Data: Data Provider Information (DPI) files →

← Acknowledgements, Completeness Reports

Testing Feedback

Defects →

Supplier Agents
DC/MOA (HH and NHH)

Integration (Participant Testing of interfaces to PARMS)

Test Data: Data files (Serials) →

← Acknowledgements, Validation Results

Testing Feedback

Defects →

BPO Host

Installation testing

Acceptance testing

Integration (Participant) Testing

Review Comments

PARMS Changes ←

Fixes ←

Report Generator Changes ←

Fixes ←

Settlement Risk Reports Tool Changes ←

Fixes ←

Logica AMD: Component & System Testing, Factory Acceptance Testing, Review Comments

ELEXON AMD: Component & System Testing, Factory Acceptance Testing, Review Comments

Engage AMD: Component & System Testing, Factory Acceptance Testing, Review Comments

Testing Framework

Integration testing for CP1334 will cover Interface testing of data files for these industry Test Participants: Suppliers and Supplier Agents(HHDC, HHMOA, NHHDC, and NHHMOA)

This section summarises test coverage for the Jun'11 Release testing.

Applications Impacted	Change Reference	Business Risk	Scope	Document Review	Component Test	Factory Acceptance Test (FAT)	Installation Test	Acceptance Test	Participant Test / End to End	Witness Test
PARMS	CP1334	High	Med	B,E,L	L	L	L	L, B	I	B
Peer Comparison Graphical Spreadsheets	CP1334	Low	Low	B,E,L	L	L	N/A	L, B	L	N/A
Settlement Risk Reports Tool	CP1334	Low	Low	B,E	E	E	E	B	E	N/A
Report Generator	CP1334	Low	Low	B	B	B	B	B	B	N/A
Supplier Charge Apportionment	CP1334	Low	Low	N/A	N/A	N/A	N/A	E, B	E	N/A

Note:

The **Supplier Charge Apportionment** system (SCA) is not impacted however regression testing will be performed as part of Acceptance Testing during the end-to-end testing.

The Serials used for some of the Non Public (Quarterly) Peer Comparison will change and hence the spreadsheets that retrieve the data and create the needed graphs will need to be updated. The **Peer Comparison graphical spreadsheets** will be regression tested during end-to-end testing.

Table Key			
Abbreviation	Test Participant	Abbreviation	Test Participant
B	BSCCo/ELEXON	E	Engage
I	Industry Participants (Suppliers & Supplier Agents)	L	Logica

4   Test Management & Procedures

ELEXON will use the test procedures at the appropriate level to meet the quality requirements of the Release. The AMD and BPO will ensure that any test phases they manage and execute will follow good industry practice and their own test procedures.

The Release Manager will approve Release deliverables. Following authorisation, if any member finds a defect against an approved product, ELEXON will manage it as appropriate.

ELEXON will conduct a full quality review prior to document authorisation, therefore believes this risk to be small.

Testing Timeline – Key Dates

The following diagram illustrates the dependencies between various test phases and gives the planned milestone dates in 2011:

March

- **4 March** - Seek Industry volunteers for Participant Testing (ELEXON)

April

- **20 April** - Deadline for Industry Participants to Join (Industry)
- **25 April to 20 May** - PARMS AMD FAT testing (Logica)
- **25 April to 29 April** - PARMS BPO Integration Testing (Logica).

May

- **02 May to 13 May** - 1st Phase of Participant Testing.
- *To Be Decided* - Settlement Risk Reports Tool FAT (Engage).
- **12 May to 10 June** - Settlement Risk Report Tool and Report Generator Testing (ELEXON).
- **23 May to 27 May** - ELEXON End-to-End Testing on OAT Environment.
- **30 May to 10 June** - 2nd Phase of Participant Testing.

Defects

Defects will be logged using the definitions defined by the appropriate contract. Where possible, defects raised during one phase of testing will be cleared by the start of the next phase.

The Release manager may choose to progress to the next phase with outstanding defects of low business impact (i.e. no Severity 1 or 2 defects outstanding), rather than delay the start of the next phase. Service Providers will agree and obtain acceptance for a plan to resolve outstanding defects with ELEXON and log any remaining defects on to the BSC Service Desk.

Unless authorised by the Release Manager, no defects will be allowed to progress into live. Examples where the release manager may consider allowing a defect to enter into live include:

- Situations where the defect is minor and/or cosmetic.
- Situations where fixing the defect prior to go live poses greater risk to live than fixing post-release.

The key test deliverables are documented in the project schedule and will be reviewed as part of the weekly checkpoints.

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5   General Testing

Document Review

ELEXON will review all the test strategies, specifications and scripts used to testing the systems that are being amended for the June 2011 Release. Where ELEXON has drafted strategies, specifications and scripts for systems that are managed by one of our Service Providers, we shall make these materials available to the Service Provider in question.

Test Evidence Review

ELEXON will review the test evidence from any testing performed by our Service Providers. The extent of review will be based on the risk and scope of the change, as follows:

High Risk & Scope: Comprehensive review

Medium Risk & Scope: Spot-check review, focussed on riskiest areas of functionality

Low Risk & Scope: no review or limited spot check of risky functionality.

Witness Testing

ELEXON will witness test Service Provider testing, focusing on high risk areas of functionality. For CP1334 PARMS changes the Service Provider is Logica.

ELEXON will perform its witness testing around the service providers testing schedule and we will not delay any service provider testing to enable us to witness test a particular scenario or business event. ELEXON's witness testing will be performed remotely (over a tool such as Web Ex), with Logica's offshore team and supported by Logica's onshore team where possible.

6   CP1334 Testing

PARMS Testing

Logica Testing

Logica is both the AMD and BPO for PARMS. Therefore, Logica will perform the following testing of PARMS:

- Component and System Testing
- Factory Acceptance Testing (FAT)
- Installation Testing
- Integration Testing
- Participant Testing

Further details of Component Testing, FAT and Installation Testing will be documented in Logica's test strategy and specification. Information on Participant testing is contained within a separate section below.

As part of the Technology Upgrade Project the operating system and database will be upgraded for PARMS. All PARMS development & build and testing will be performed on a post-upgrade test environment using the upgraded operating system and database versions. Installation testing will enable Logica to ensure that the changes can be installed and backed out on the upgraded operating system and database baseline.

FAT will focus on change specific testing the functionality for the new Serials and regression testing functionality that is related to, but not impacted by, CP1334.

An early phase of participant and integration testing is planned prior to the main release of CP1334 PARMS to industry for participant testing. In order for industry to have as much time as possible to test their systems and to fix any defects, an early version of the software is being released in parallel with Logica's FAT phase. ELEXON will manage

industry expectations and this integration test phase is to enable us to sanity check the early release of the software before releasing it.

Logica will be responsible for developing all test materials for the testing detailed above, except for the Participant Test specification that will be created by ELEXON for Participant testing.

The AMD will compile and review all test evidence and provide ELEXON with a plan of how they intend to resolve all outstanding defects prior to Go Live.

Once all testing is complete, the updated test materials (e.g. updated test scripts) will be sent to ELEXON for its own archiving and auditing purposes.

Notable Test Scenarios

Notable business scenarios that should be covered by Logica's PARMS testing include:

- Testing the transition between old and new PARMS Serials.
- Completion checking and SP01, including the exclusion of retired Serials from completeness checking following go live.
- Testing the correct handling of GSP group '_U' for NEW PARMS Serials.

Participant Testing

Participant testing has been scheduled to allow industry to ensure that the data that it sends to PARMS is successfully processed. Participant testing also provides additional assurance to ELEXON and Logica that the software is fit for purpose.

There will be two phases of testing. Phase 1 (early release of PARMS software) is expected to take the first two weeks of May 2011 and Phase 2 (PARMS after completion of AMD FAT testing) for two weeks in early June 2011.

The participant test environment will be set up as if the new PARMS Serials had gone live on the 1 March 2011.

ELEXON will draft a participant test specification and manage & coordinate the participant testing activities for the PARMS interface with Industry systems used by BSC Parties. ELEXON will finalise the details of these testers, their test environments and associated email addresses two weeks before the start of the first phase of participant testers. As much as possible, ELEXON will ensure that:

- Participant testers keep their test and live processes separate by creating separate test email addresses and sending these to ELEXON at least two weeks before testing.
- Participants 'live' email addresses will not be used during testing.

During the first phase of participant testing, ELEXON will be the first point of contact regarding any queries during Participant testing and Logica will be the second line of support. ELEXON will resolve as many participant tester queries as possible so that Logica can focus on completing its FAT.

Peer Comparison Testing

Logica will test the changes to the peer comparison spreadsheets. The changes are small scale and low risk so ELEXON will review the test results and not conduct any additional testing for this area of the development.

Settlement Risk Report Tool (SRRT)

Engage develops and maintains SRRT for ELEXON. The testing that will be performed by Engage on SRRT will be documented in their own test strategy and specification. Engage will develop/update the test materials required to test SRRT and will provide a complete, updated set of materials to ELEXON following go live.

The following approach will be taken, subject to confirmation by the Engage in their Impact Assessment after they have reviewed the requirements specification for SRRT:

- Two versions of the SRRT will be run in parallel. The first will deal with the reporting run-off period for the old Serials, following go live. The second will

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enable us to start reporting on the new PARMS Serials from the end of August 2011 onwards, following go live.

- In line with this parallel run approach Engage will set up the test environment as going live from 1st March 2011 in order to process April Serial submissions during Phase 1 Participant Testing, and to process May Serial submissions during Phase 2 Participant Testing.
- Mahesh Gogtay (ELEXON) will review the Engage Impact Assessment to confirm the agreed approach or any variations to it.

Engage will follow a small project methodology and will not produce a FAT specification, in order to save time and reduce cost, as this is a low risk change. However Engage will produce a high level list of all the test scenarios to be covered during testing of SRRT, for review by ELEXON to give assurance of test completeness/coverage before testing starts. All defects with the new PARMS Serials will be logged on Remedy via the BSC Service Desk. After testing Engage will provide all data and evidence for review/auditing by ELEXON.

Notable Test Scenarios

Notable business scenarios that should be covered by Engage's SRRT testing include:

- Testing the transition between old and new PARMS Serials.
- Regression Testing of SRRT reports that are not impacted by the Serial changes to ensure no unforeseen issues arise as a result of the changes.
- End-to-End process testing (see the E2E section below).

Report Generator

ELEXON will be responsible for developing and testing the changes to the report generator. As part of this work, test materials and scripts will be produced to test the new serial functionality. The tests will be based on the requirements specification that will be produced following the design workshops with Logica.

Notable Test Scenarios

Notable business scenarios that should be covered by the Report Generator testing include:

- The transition from old to new PARMS Serials.
- End-to-End process testing (see the E2E section below).

End-to-End Testing

Industry Participant Testing will feed into the early stages of End-to-End testing, as ELEXON will be able to make use of the new PARMS serial data that is submitted by Industry to test downstream processes and systems such as the SRRT.

During End-to-End testing ELEXON will check that that the New PARMS serial data is correctly transferred and processed by other downstream systems that interface with PARMS.

The table below shows the data flows between Industry Participants and PARMS that will be tested during Participant Testing.

End-to-End test flows			
Flow	From	To	Test
DPI Files	Suppliers	PARMS	GSP group '_U' accepted by PARMS
PARMS Serials	Supplier Agents	PARMS	Data for New PARMS Serials accepted. Data for 'existing, to-be continued', and 'now obsolete' PARMS Serials accepted.

Data Receipt Acknowledgements (ER)	PARMS	Participants	Files sent to Industry for New PARMS Serials. Data for 'existing, to-be continued', and 'now obsolete' PARMS Serials accepted.
Data Validation Reports (DR)	PARMS	Participants	Files sent to Industry for New PARMS Serials
Data Completeness Reports (CR and TR)	PARMS	Suppliers	Files sent to Industry for New PARMS Serials

Industry Participants will not be involved in the later stages of End-to-End testing because there are no direct interfaces with Industry for the ELEXON internal applications. The table below shows the high level testing for these downstream ELEXON applications.

End-to-End test flows			
Data	From	To	Test
PARMS Serials	PARMS	Settlement Risk Reports tool	Check correct reporting of the Serials
PARMS Serials	PARMS	Report Generator	Check correct reporting of the Serials
PARMS Serials	PARMS	Supplier Charges Apportionment	Sanity check of Supplier Charges calculation
PARMS Serials	PARMS	Peer Comparison	Check graphs and spreadsheet work correctly.

The Supplier Charges Apportionment system component above will not involve any development changes. However ELEXON will be sanity checking that all existing calculations and functionality continues to work correctly to minimise risk to industry.

The Peer Comparison component will involve development changes and will be tested.

7 Assumptions, Risks and Issues

This section details relevant Release assumptions, their associated risks and any issues that are present. Each assumption corresponds to a risk with the same number i.e. assumption one corresponds to risk one etc…

Assumptions

1. The operating system and database upgrades will be completed to the timescales specified in the Technology Upgrade Project plan

2. There is sufficient contingency in the June 11 Release plan to allow for the fix and retest of defects.

3. Participants Testers are ready and able to submit/receive test PARMS data flows.

4. We are able to manage the volume of participant testers that want to take part in the participant test phases.

5. The operating system and database upgrades will be completed prior to the release of the CP1334 PARMS changes. Engage will be able to fully regression test SRRT and SCA against the upgraded database prior to the development of CP1334.

Risks

1. The operating system and database upgrades are delayed and have an impact on testing timescales for CP1334 PARMS resulting in inconvenience for Participant Testers."

2. We do not have sufficient time to fix and retest all defects found during CP1334 testing, resulting in as delay to the start of Participant Testing Phase 2 or defects being fixed post-go live.

3. Not all Participants are ready for Phase 1 of Participant Testing. The risk is that we will not get the additional assurance that changes to the PARMS interface done by the Participants and ELEXON are in line with the specification.

4. ELEXON is unable to manage the large number of Participant Testers (and the volumes of data used) resulting in Logica being diverted from FAT or slippage in ELEXON tasks.

5. Any delay in the operating system and database upgrades (such that these are not rolled out until the completion of CP1334 development for PARMS) will mean more testing is required for CP1334 changes to ensure that these are fully database compatibility regression tested as part of the overall CP1334 testing.

Document Control

Authorities				
Version	Date	Author	Reviewer	Reason for review
0.1	25 Feb 2011	ASK	RIB, MAG	Peer Review
0.2	03 Mar 2011	ASK	RIB	Peer Review
0.3	03 Mar 2011	ASK	RIB	Removed CP1325 from scope
0.4	03 Mar 2011	RIB	Minor updates	Formal review
0.5	24 March 2011	ASK	Logica, Cognizant, Engage, DBK, MAG, OLD, Service Delivery	Formal review by ELEXON, AMD, BPO

Terms Used and References

Acronyms and definitions	
Term	Definition
AMD	Application Manager and Developer
BPO	Business Process Host/Operator
CSD	Code Subsidiary Document
CVA	Central Volume Allocation
DC	Data Collector
FAT	Factory Acceptance Testing
HH	Half Hourly
HHDA	Half Hourly Data Aggregator
HHDC	Half Hourly Data Collector
MOA	Half Hourly Meter Operator Agent
OAT	Operational Acceptance Testing
NHH	Non Half Hourly
NHHDA	Non Half Hourly Data Aggregator
NHHDC	Non Half Hourly Data Collector
PARMS	Performance Assurance Reporting and Monitoring System
SAT	Software Acceptance Testing
SRDN	Software Release Delivery Note
SVA	Supplier Volume Allocation
SVAA	Supplier Volume Allocation Agent

References	
Reference	Document
Reference 1	CP1334 Change Proposal requirements and solutions
Reference 2	Testing Guidelines
Reference 3	June 11 PID and Plan