

**Version K 1.1**

## **Appendix K**

# **SMKI and Repository Test Scenarios Document**

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# **1 Introduction**

## **1.1 Purpose**

The purpose of this document is to:

- define the procedural steps to be undertaken by a Party or RDP wishing to complete the SMKI and Repository Entry Process Tests (SREPT).Section H14.23 requires those tests to be undertaken in accordance with the SMKI and Repository Test Scenarios Document;
- set out the SMKI and Repository Entry Process Tests that a Relevant Party or RDP must successfully complete in order to be entitled to apply to become an Authorised Subscriber or access the SMKI Repository in accordance with Section L7.1.
- describe the role and responsibilities with regard to the conduct of SREPT including in:
  - Entry and exit requirements;
  - Defining Test Scripts;
  - Defining Test Data;
  - Planning the manner in which tests will be undertaken;
  - Executing the tests;
  - Reporting the results of those tests to the DCC for approval; and
  - Performing regression testing where required.

## **2 Scope**

Section 5 of this document sets out which Test Scenarios a Relevant Party or RDP must successfully complete, depending upon:

- which SMKI Interface or SMKI Repository Interface the Relevant Party or RDP will access and whether this is for Device or Organisation Certificates; and
- whether access to the SMKI Interface will be through a DCC Gateway Connection or using the SMKI Portal interface via the Internet.

Section 8 Appendix C: Test Scenarios of this document sets out the SMKI and Repository Entry Process Test Scenarios as referred to in Section H14.22.

### **3 Test Preparation**

The Enduring Test Approach Document sets out rights and obligations relating to gaining Test Certificates.

Parties or RDPs wishing to undertake SREPT must comply with the security requirements applicable to Testing Participants set out in the Enduring Testing Approach Document.

To gain access to the test systems to undertake SREPT, as set out in the Enduring Testing Approach Document, the following activities must take place:

- the applicant organisation must have completed the procedure to verify the organisational identity for testing purposes;
- an applicant organisation must have at least one test SMKI Senior Responsible Officer (SMKI SRO) appointed for test purposes;
- an applicant organisation must have at least one test SMKI Authorised Responsible Officer (SMKI ARO) appointed for test purposes; and
- the procedure for provision of test credentials to SMKI AROs for accessing test SMKI Services and/or test SMKI Repository Services must have been completed.

## **4 Test Sequence**

A Relevant Party or RDP may undertake the Test Scenarios set out in this document in any order.

## 5 SREPT Procedure

### 5.1 Overview

This section describes the procedure that must be completed in order for a Relevant Party or RDP to complete SREPT.

### 5.2 SMKI & Repository Entry Process Testing

The matrices in Table 1 SREPT Matrix – DCC – DCC Gateway Connection and Table 2 SREPT Matrix – No DCC Gateway Connection, below, provide a mapping to determine which test scenarios described in this document a Relevant Party or RDP must undertake. The column ‘SMKI RAPP Ref’ is used to determine which tests should be performed, based on the interfaces the Relevant Party or RDP wishes to use to access the SMKI and/or Repository Services and whether they wish to subscribe for Organisation and/or Device Certificates.

Detailed test scenarios identified to support the SREPT process are listed in section 8.1 SMKI and Repository Entry Process Test Scenarios with DCC Gateway Connection and section 8.2 SMKI & Repository Entry Process Test Scenarios without DCC Gateway Connection.

#### 5.2.1 Test Scenarios for Parties or RDPs with a DCC Gateway Connection

Test Scenario Reference	Test Scenario Title	Applicant Organisation				
		DCC (DCC Service Provider)	Supplier	RDP	Non-Supplier Party	SMKI RAPP Ref
SMKI 02	Access the test SMKI Service, through the SMKI Portal interface over a DCC Gateway Connection	✓	✓	✓	✓	5.4.1 5.4.2
SMKI 03	Access the test SMKI Service, through the Ad Hoc Device CSR Web Service interface and the Batched Device CSR Web Service interface, over a DCC Gateway Connection	✓	✓		✓*	5.4.3 5.4.4



SMKI 05	Access the test SMKI Repository through the SMKI Repository Portal interface over a DCC Gateway Connection	✓	✓	✓	✓	5.4.5
Applicant Organisation						
Test Scenario Reference	Test Scenario Title	DCC (DCC Service Provider)	Supplier	RDP	Non-Supplier Party	SMKI RAPP Ref
SMKI 06	Access the test SMKI Repository via the SMKI Repository Web Service interface over a DCC Gateway Connection	✓	✓	✓	✓	5.4.6
SMKI 07	Access the test SMKI Repository through the SSH File Transfer Protocol (SFTP) interface over a DCC Gateway Connection	✓	✓	✓	✓	5.4.7
SMKI 22	Submit Organisation Certificate Signing Requests and receive Organisation Certificates, through the SMKI Portal interface over a DCC Gateway Connection	✓	✓	✓	✓	5.4.1
SMKI 23	Submit a Device Certificate Signing Request and receive a Device Certificate through the SMKI Portal interface over a DCC Gateway Connection	✓	✓		✓*	5.4.2
SMKI 24	Submit Batched Device Certificate Signing Request and receive Device Certificates through the SMKI Portal interface over a DCC Gateway Connection	✓	✓		✓*	5.4.2
SMKI 25	Submit a Device Certificate Signing Request and receive Device Certificate through the Ad Hoc Device Web Service interface over a DCC Gateway Connection	✓	✓			5.4.3
SMKI 29	Download a copy of all 'In Use' SMKI Test Certificates from the test SMKI Repository through the SFTP (SSH File Transfer Protocol) interface over a DCC Gateway Connection	✓	✓	✓	✓	5.4.7
SMKI 30	Download a daily delta file of SMKI Test Certificates through the SFTP interface over a DCC Gateway Connection	✓	✓	✓	✓	5.4.7
SMKI 31	Query the test SMKI Repository for Organisation Certificates through the SMKI Repository Portal interface over a DCC Gateway Connection	✓	✓	✓	✓	5.4.5
SMKI 32	Query the test SMKI Repository for Organisation Certificates through the SMKI Repository Web Service interface over a DCC Gateway Connection	✓	✓	✓	✓	5.4.6
SMKI 33	Query the test SMKI Repository for Device Certificates through the SMKI Repository Portal interface over a DCC Gateway Connection	✓	✓		✓	5.4.5

Test Scenario Reference	Test Scenario Title	Applicant Organisation				
		DCC (DCC Service Provider)	Supplier	RDP	Non-Supplier Party	SMKI RAPP Ref
SMKI 34	Query test SMKI Repository for Device Certificates through the SMKI Repository Web Service interface over a DCC Gateway Connection	✓	✓		✓	5.4.6
SMKI 48	Obtain the latest Organisation CRL and Organisation ARL through the SMKI Repository Portal interface over a DCC Gateway Connection	✓	✓	✓	✓	5.4.5
SMKI 50	Obtain the latest Organisation CRL and Organisation ARL through using the URL to the SMKI Repository over a DCC Gateway Connection	✓	✓	✓	✓	5.4.6
SMKI 57	Submit a Batched Device Certificate Signing Request and receive Certificates for Devices through the Batched Device CSR Web Service interface over a DCC Gateway Connection	✓	✓		✓*	5.4.4

Table 1 SREPT Matrix – DCC Gateway Connection

## Key

- ✓ Applicant organisation required to undertake this test if they wish to receive credentials for this service / access to this interface
- ✓\* Applicant organisation required to undertake this test if they wish to access to this interface and can provide reasonable evidence to suggest that it is necessary for the applicant organisation to become an Authorised Subscriber for Device Certificates in order for them to carry out business processes that will, or are likely to, lead to the installation of Devices in premises

## 5.2.2 Test Scenarios for Parties without a DCC Gateway Connection

SMKI SRTSD Scenario Reference	Headline Scenario Title	Applicant Organisations			SMKI RAPP Ref
		Supplier	Non-Supplier Party		
SMKI 04	Access the test SMKI Services for (i) Organisation Certificates and (ii) Device Certificates, through the SMKI Portal interface over the internet	✓ ✓	✓ ✓*		5.4.1, 5.4.2
SMKI 08	Submit Requests for Repository Content using the SMKI Portal interface over the internet	✓ ✓	✓ ✓*		5.4.1, 5.4.2
SMKI 26	Submit Organisation Certificate Signing Request (CSR) and receive Organisation Certificates through the SMKI Portal interface over the internet	✓	✓		5.4.1
SMKI 27	Submit a Device Certificate Signing Request (CSR) through the SMKI Portal interface over the internet	✓	✓*		5.4.2
SMKI 28	Submit a Batched Certificate Signing Request (Batched CSR) through the SMKI Portal interface over the internet	✓	✓*		5.4.2
SMKI 38	Download Organisation Certificates and OCA Certificates through the SMKI Portal interface over the internet	✓ ✓	✓ ✓*		5.4.1, 5.4.2

Table 2 SREPT Matrix – No DCC Gateway Connection

### Key

- ✓ Applicant organisation required to undertake this test if they wish to receive credentials for this service / access to this interface
- ✓\* Applicant organisation required to undertake this test if they wish to access this interface and can provide reasonable evidence to suggest that it is necessary for the applicant organisation to become an Authorised Subscriber for Device Certificates in order for them to carry out business processes that will, or are likely to, lead to the installation of Devices in premises.

### 5.3 SREPT Initiation

Each Relevant Party or RDP and the DCC shall each take reasonable steps to comply with the timescales that are set out within the procedures in Table 3, Table 4 & Table 5. In the event that a Relevant Party or RDP does not comply with the timescales in Table 3, Table 4 & Table 5, the DCC will reschedule subsequent activities to occur as soon as is reasonably practicable thereafter and for such purposes the DCC may reschedule that Relevant Party or RDP's test execution date.

#### 5.3.1 Procedural Steps

The table below sets out the steps that must be undertaken prior to initiation of the SREPT by both the DCC and the Relevant Party seeking to undertake SREPT and the timeframes within which such steps must be completed.

Ref	When	Action	From	To	Information Required	Method
5.3.1.1	60 Working Days (WD) prior to commencement of SREPT	Notify intention to undertake SREPT	Relevant Party or RDP	DCC	Party / RDP notification of intention to undertake testing <ul style="list-style-type: none"> <li>• Party / RDP id (s)</li> <li>• Confirmation that notification provided to SECAS, User Role(s)</li> <li>• Test start date</li> <li>• Identity of Test Manager and contact details</li> </ul>	By email as attachments
5.3.1.2	Within 2 WD of receipt of the notification under 5.3.1.1	Acknowledge request	DCC	Relevant Party or RDP	Confirmation of Party / RDP notification: <ul style="list-style-type: none"> <li>• Party / RDP id (s)</li> <li>• Test start date</li> <li>• DCC Test Manager contact</li> <li>• Date for SREPT initiation meeting</li> </ul>	By email as attachments
5.3.1.3	Within 5 WD of receipt of the notification under 5.3.1.2	Conduct SREPT Initiation Meeting	DCC	Relevant Party or RDP	DCC to provide guidance information on conducting SREPT including a guide to the SMKI and Repository Entry Process Tests.	Meeting

Ref	When	Action	From	To	Information Required	Method
5.3.1.4	In each week occurring within the period from 40 WD prior to start of testing	Provide progress report, demonstrating readiness to begin tests	Relevant Party or RDP	DCC	Test Readiness Report	By email as attachments
5.3.1.5	25 WD prior to start of testing	Provide test artefacts to support conduct of SREPT	Relevant Party or RDP	DCC	<ul style="list-style-type: none"> <li>• Test Plan incorporating the Test Schedule</li> <li>• Requirements Traceability Matrix (see section 6.1.6)</li> <li>• Test Scripts (see section 6.1.7)</li> <li>• Test Data Plan (see section 7)</li> </ul>	By email as attachments
5.3.1.6	By 20 WD prior to start of testing	DCC complete review of test artefacts	DCC	Relevant Party or RDP	<p>Details regarding any deficiencies in the test artefacts and where necessary, a revised start date for testing provided – continue from 5.3.1.7</p> <p>Or, confirmation that the DCC has accepted the test artefacts – continue from 5.3.1.9</p>	By email as attachments
5.3.1.7	By 10 WD prior to start of testing	Party / RDP to provide revised documents	Relevant Party or RDP	DCC	Revised documents	By email as attachments
5.3.1.8	By 7 WD prior to start of testing	DCC complete review of revised test artefacts	DCC	Relevant Party or RDP	<p>Details regarding any deficiencies in the test artefacts and a revised start date for testing provided where agreed it is necessary – Regress and continue from 5.3.1.7</p> <p>Or confirmation that test artefacts accepted – continue from 5.3.1.9</p>	By email as attachments

Ref	When	Action	From	To	Information Required	Method
5.3.1.9	By 5 WD prior to start of testing	<ol style="list-style-type: none"> <li>Review Test Readiness Report and confirm the Entry Criteria for commencing testing in relation to Relevant Party or RDP have been met</li> <li>Confirm Start Date and Test Schedule for execution of tests by Relevant Party or RDP</li> </ol>	DCC Quality Gate meeting	Relevant Party or RDP	Source: Test Readiness Report, Test Schedule  Output: Confirmation of Relevant Party or RDP readiness to proceed	Quality Gate Review meeting
	If there is any outstanding documentation presented at the Quality Gate Review, the DCC shall assess it as part of its assessment of the Entry Criteria under clause 5.3.2					

Table 3 SREPT Initiation: Procedural Steps

### 5.3.2 SREPT Entry Criteria

Each Relevant Party or RDP wishing to undertake SREPT must comply with (and, where specified below, shall provide evidence of complying with) the following criteria prior to entry into SREPT:

- the interfaces that the Relevant Party or RDP wishes to access must have been identified to determine the SMKI & Repository Entry Process Tests that are to be undertaken;
- all relevant test artefacts (as set out in sections 5.3.1.1, 5.3.1.4 and 5.3.1.5) must have been produced by the Relevant Party or RDP and accepted by the DCC. This includes:
  - Party / RDP Notification of Intention to Undertake Testing
  - Test Readiness Report
  - Test Plan incorporating the Test Schedule
  - Requirements Traceability Matrix
  - Test Scripts
  - Test Data Plan
- have provided evidence that an appropriate test environment and an appropriate level of resources available to support the SREPT process; and
- confirm that the security requirements set out in the Enduring Testing Approach Document have been met.

Where the DCC reasonably believes that the Relevant Party or RDP has not met the Entry Criteria, the DCC may:

- prevent the Relevant Party or RDP from undertaking SREPT until such time as the DCC reasonably believes that the Relevant Party or RDP meets the Entry Criteria (and in which case DCC shall inform the Relevant Party or RDP why it believes that they have not met the Entry Criteria); and
- reschedule the test start date for the Relevant Party or RDP. In doing so, the DCC shall provide the earliest practicable alternative date; or
- provide provisional approval of the Test Readiness Report (and approval to proceed) with an understanding that the outstanding documentation will be provided before the start of testing, otherwise testing will not commence.

Pursuant to Section H14.25, where the DCC does not reasonably believe that a Relevant Party or RDP meets the Entry Criteria to commence testing, the Relevant Party or RDP may refer the matter to the Panel. Where the Panel determines that the Relevant Party or RDP has met the Entry Criteria, the DCC shall schedule the start of testing as soon as reasonably practicable thereafter.

SREPT shall only commence when DCC has successfully completed Part 1 of SMKI and Repository Testing.

## 5.4 SREPT Execution

### 5.4.1 Procedural Steps

The table below sets out the steps that must be undertaken prior to or during test execution by either the DCC or a Relevant Party or RDP seeking to undertake SREPT and the timeframes within which such steps must be complete as set out in the Test Schedule which will be updated by the Relevant Party or RDP from time to time to reflect test progress.

Ref	When	Action	From	To	Information Required	Method
5.4.1.1	SREPT Start Date or earlier (if appropriate)	Verification of Organisation Identity and appointment of, SMKI SRO and SMKI ARO for test purposes	Relevant Party or RDP	DCC	Submission of relevant forms	As per Enduring Testing Approach Document
5.4.1.2	SREPT Start Date or earlier (if appropriate)	Carry out checks such that the Relevant Party or RDP has at least one test SMKI SRO and at least one test SMKI ARO. Confirm with Relevant Party or RDP.	DCC	Relevant Party or RDP	Confirm Organisation Identity is verified and test SMKI ARO and test SMKI SRO Registration is complete.  Grant approval to execute SREPT scenarios and which scenarios will be undertaken	As per Enduring Testing Approach Document
5.4.1.3	In accordance with Test Schedule and 5.4.1.2 completed	Conduct SREPT	Relevant Party or RDP		Approved test artefacts	As per test artefacts
5.4.1.4	Daily Basis, or alternative schedule agreed with DCC	Provide daily progress report using the template provided to DCC	Relevant Party or RDP	DCC	Test execution dashboard and Daily Testing Issue Report	By email as attachment
5.4.1.5	SREPT execution complete	Provide Test Completion report	Relevant Party or RDP	DCC	SREPT completion report including: details of Test Scripts executed and Testing Issues resolved (see section 9.6)	By email as attachment

Table 4 SREPT Execution: Procedural Steps



### **5.4.2 SREPT Test Suspension/Resumption**

During the execution of tests the DCC, Relevant Party or RDP each have the right to suspend testing where it reasonably considers that this is necessary.

Testing will only recommence when agreed by both the DCC and the Relevant Party or RDP subject to the suspension.

#### **5.4.2.1 Possible Suspension Criteria**

Reasonable grounds for suspension of testing may include any of the following;

- Application components are not available as scheduled
- A Testing Issue prevents further useful testing from proceeding
- A significant percentage of planned Test Scripts for a given day fail, taking Testing Issue severity and volume of tests into consideration which would generate root cause analysis to be undertaken to establish the cause. Testing Issues trending should also be used to determine any recommendation. The outcome of any root cause analysis activity may result in testing being suspended
- Test Scripts to be executed are in a “blocked” status due to an identified Testing Issue
- The Relevant Party or RDP has failed to comply with the procedural steps for executing SREPT

#### **5.4.2.2 Test Resumption Criteria**

Where testing has been suspended, either the DCC or the Relevant Party or RDP as appropriate shall produce a test suspension report reflecting the cause of the suspension, and what actions are to be taken by whom and when in order for testing to resume – the ‘Test Resumption Criteria’. The DCC and the Relevant Party or RDP shall take reasonable steps to support each other to achieve the Test Resumption Criteria.

Testing will only resume once the DCC or Relevant Party or RDP has demonstrated to the other Party’s satisfaction that the Test Resumption Criteria have been met.

#### **5.4.2.3 Disputes regarding Test Suspension/Resumption**

Each of the DCC and the Party or RDP undertaking the SMKI and Repository Entry Process Tests may suspend testing in accordance with the requirements set out above. Any dispute between the DCC and a Party or the RDP regarding the suspension (or consequent resumption) of such testing may be referred to the Panel for its determination. Where the DCC or the Party or RDP disagrees with any such determination of the Panel, then the DCC or the Party or RDP may refer the matter to the Authority for its determination (which determination shall be final and binding for the purposes of this Code).

Where a dispute regarding the suspension/resumption of testing is made, testing will not resume whilst the dispute is being heard by the Panel, and/or until the Test Resumption Criteria are met by the DCC or the Relevant Party or RDP.

## 5.5 SREPT Completion

### 5.5.1 Procedural Steps

The table below sets out the steps that must be undertaken during test completion by either the DCC or Relevant Party or RDP and the timeframes within which such steps must be complete.

Ref	When	Action	From	To	Information Required	Method
5.5.1.1	Within 2 WD of receipt of the report in 5.4.1.5	Confirm receipt of notification of Test complete (Test completion report)	DCC	Relevant Party or RDP	SREPT Test Completion Report (see section 9.6)	By email
5.5.1.2	Within 5 WD of receipt of the notification 5.5.1.1	DCC review completion report and confirm that SREPT concluded or further testing required	DCC	Relevant Party or RDP	SREPT Test Completion Report and evidence as requested by DCC. 5.4.1.5 refers	Quality Gate Review meeting
5.5.1.3	Within 2 WD of successful Quality Gate Review meeting	Confirm Test Complete	DCC	Relevant Party or RDP, SMKI Registration Authority	Issue Test Completion Certificate (see section 10) and provide copy to SMKI Registration Authority	By email as attachment

Table 5 SREPT Completion: Procedural Steps

Notwithstanding 5.5.1.3 above pursuant to Section H14.28 the DCC shall confirm on request by the Relevant Party or RDP whether or not it considers that the Relevant Party or RDP has successfully completed SREPT.

### 5.5.2 SREPT Exit Criteria

A Relevant Party or RDP must meet the following Exit Criteria prior to that Relevant Party's or RDP's completion of and exit from SREPT:

- All Tests have been executed and results have been documented by the Relevant Party or RDP and evidence captured in the Relevant Party or RDP's Test Management Tool (or other system) and provided to the DCC
- All testing issues identified during a Relevant Party's test execution have been recorded in the Test Management Tool. Of those Testing Issues either:
  - the Testing Issue generated by the Relevant Party as a result of its UEPT has been fixed and verified by retest; or
  - where outstanding, the Testing Issue has been reviewed and documented, and been included as part of a remediation plan that outlines the next steps to be taken, including estimated timescales required to resolve each of their outstanding Testing Issues. The remediation plan must be agreed by the DCC
- any outstanding Testing Issue count must not exceed those defined in Table 6 - Testing Issue Threshold below:

Severity***	Threshold for Outstanding Testing Issues
1	0
2	0
3	5*
4	10*
5	As agreed**

Table 6 Testing Issue Threshold

\* - Work around and remediation plan to be agreed with the DCC for each issue that ensures no impact on other Users

\*\* - As agreed with the DCC, requiring no impact on market operations

\*\*\* - Refer to Appendix G for definitions of Issue severities.

- A Test Completion Report has been created by the Relevant Party or RDP and approved by the DCC
- A Quality Gate Review meeting has been held between the Relevant Party or RDP and the DCC, with progress approved by the DCC

Pursuant to Section H14.25, where the DCC considers that a Relevant Party or RDP has not met the SREPT Exit Criteria, the Relevant Party or RDP may refer the matter to the Panel.

Where a dispute regarding whether a Relevant Party or RDP has met the SREPT Exit Criteria occurs, the SREPT Completion process will not resume whilst the dispute is being heard by the Panel, or until the SREPT Exit Criteria are met by the Relevant Party or RDP.

### **5.5.3 Quality Gate Review**

Evidence of test completion may be requested for all or any of the tests during the Quality Gate Review, and irrespective of whether the information is reviewed, it shall be retained by the Relevant Party or RDP and may be requested by DCC at a later date.

Any remediation plan shall be discussed by the DCC and the Relevant Party or RDP and agreed as part of the evidence review.

A final decision regarding whether a Relevant Party or RDP has successfully completed SREPT will be provided to the Relevant Party or RDP no later than 2 Working Days after the date on which the Quality Gate Review meeting is held.

In addition, pursuant to Section H14.28, the DCC shall confirm on request by the Relevant Party or RDP whether or not it considers that the Relevant Party or RDP has successfully completed SREPT.

### **5.5.4 SREPT Test Completion Certificate**

The SREPT Test Completion Certificate shall be issued by the DCC to the Relevant Party or RDP once the Quality Gate Review has concluded that the Relevant Party or RDP has met the SREPT Exit Criteria.

## **5.6 SREPT Regression Testing**

DCC shall inform all Relevant Parties and RDPs undertaking SREPT and all Relevant Parties and RDPs that have completed SREPT of any change to DCC Systems that may affect SREPT.

Where the DCC deems that a change to DCC Systems necessitates Regression Testing, DCC may require Relevant Parties and RDPs to perform Regression Testing of the SREPT.

Where DCC does not require Relevant Parties or RDPs to perform Regression Testing, the decision as to whether Regression Testing is performed as a consequence of a change to DCC Systems or a change to User Systems, rests with the Relevant Party or RDP.

Where a Relevant Party or RDP performing Regression Testing has already completed SREPT, the SREPT Test Completion Certificate shall remain effective.

## 6 Appendix A: Test Artefacts

The DCC and each Relevant Party or RDP will be required to produce and maintain a number of documents, dashboards and reports during the testing lifecycle as depicted in Figure 1 Test Documentation Hierarchy, below.

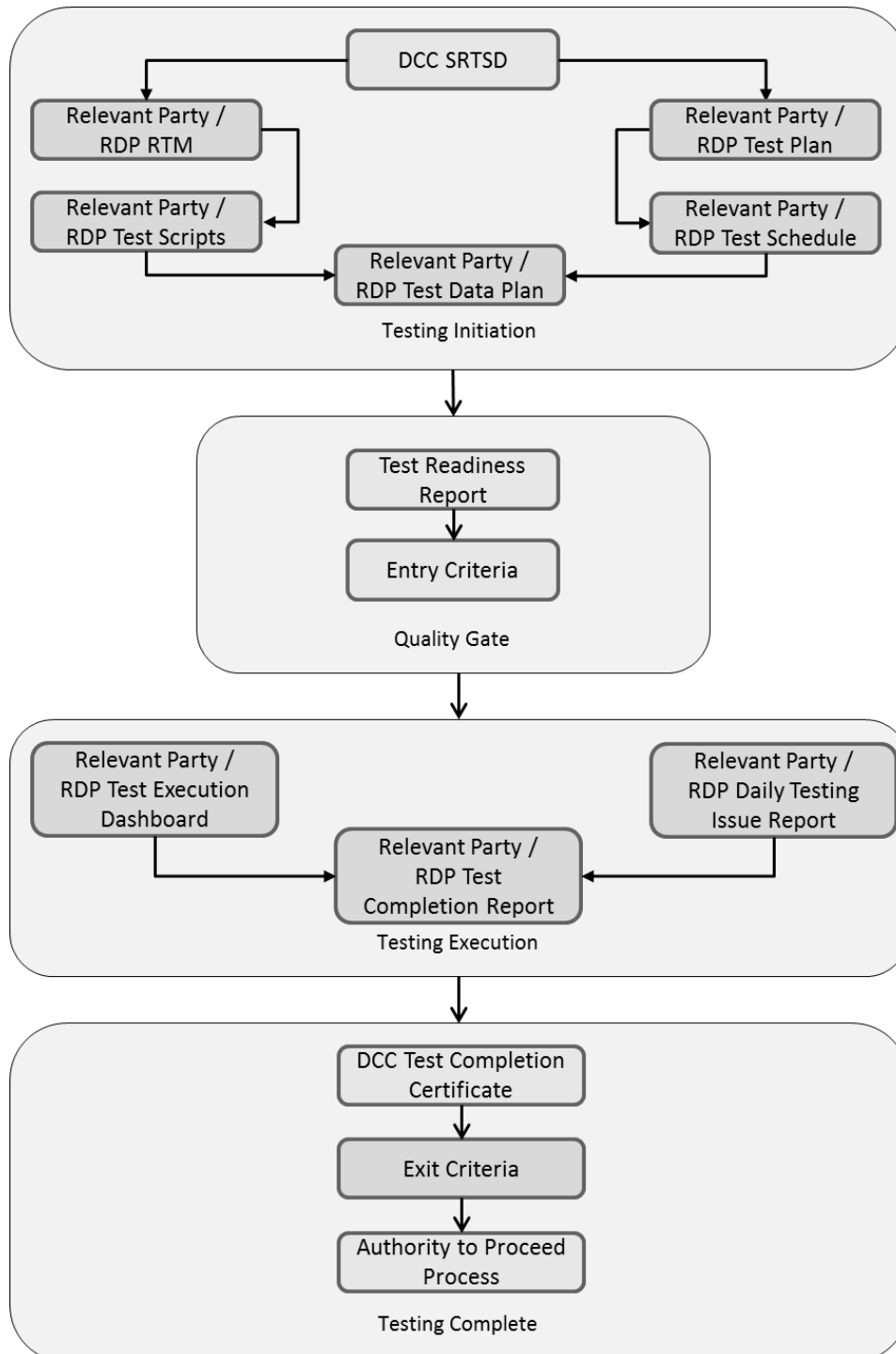


Figure 1 Test Documentation Hierarchy

## **6.1 Relevant Party or RDP Documents & Reports**

### **6.1.1 Test Preparation Document Set**

The following documentation must be produced by a Relevant Party or RDP before Testing commences:

- Test Readiness Report
- Scope of SREPT testing
- Test Plan
- Test Data Plan
- Test Schedule
- Requirements Traceability Matrix
- Test Scripts
- Note regarding scope of SREPT testing: Which SREPT test scenarios need to be undertaken is determined by:
  - which SMKI Interface or SMKI Repository Interface the Relevant Party or RDP will access and whether this is for Device or Organisation Certificates; and
  - whether access to the SMKI Interface will be through a DCC Gateway Connection or using the SMKI Portal interface via the Internet.

### **6.1.2 Reports and Dashboard**

Table 7 Test Stage Supporting Documentation Set sets out the Reports and Dashboard that a Relevant Party or RDP must produce to demonstrate progress in preparing for and executing testing.

### **6.1.3 Test Readiness Report (TRR)**

The Test Readiness Report shall be produced by the Relevant Party or RDP

The report must be provided to the DCC by the Party or RDP on a weekly basis, commencing 40 Working Days prior to the start of Testing and must indicate progress against the following criteria:

- Previous Test Phase / Stage Exit Criteria (if appropriate)
- Relevant Party or RDP Test Management tool selected and available
- Relevant Party or RDP key RAID (Risk, Assumption, Issue and Dependency) items, including, for each key item that has the potential to cause significant disruption to the commencement and / or completion of SMKI & Repository Entry Process Testing:

- Priority (High, Medium, Low)
- Severities of open issues
- Action taken
- Target close date
- Overall RAG status (based on progress to plan)
- Relevant Party or RDP Test Plan produced
- Relevant Party or RDP Test Schedule produced
- Relevant Party or RDP Requirements Traceability Matrix
  - Total numbers of Requirements identified
    - Total number of testable requirements documented
    - Total number of testable requirements in progress
    - Total number of testable requirements not started
  - Total number of Requirements deemed not testable
- Relevant Party or RDP Test Script complete to date – to reflect the following breakdown
  - Planned number of Test Scripts
  - Total number of Test Scripts produced to date
  - Total number of Test Scripts in progress
  - Total number of Test Scripts not started
- % Test Data readiness by Party against planned Test Scripts
- Readiness of Party or RDP Test Resources and Technical (support) Resource
- Relevant Party or RDP test environment readiness – to include
  - Security code of connection satisfied
  - All interfaces required to support testing
- Overall RAG status (based on likelihood of starting to plan)

#### **6.1.4 Test Execution Dashboard**

The Test Execution Dashboard will identify the Relevant Party or RDP's progress when executing testing and will be provided in a format specified by the DCC. The dashboard must

be updated by the Relevant Party or RDP and provided to the DCC on a daily basis once testing commences, or per an alternative schedule agreed with the DCC.

The dashboard will include the following details:

- Name of Relevant Party or RDP, Party or RDP ids under test;
- Location of Relevant Party or RDP testing;
- Date and time test execution dashboard updated by Relevant Party or RDP;
- Total number of tests Relevant Party or RDP scheduled for execution and projected as a test execution glide path;
- Actual number of tests executed by Relevant Party or RDP to date reflected on an incremental daily count including test results (passed, failed, blocked, not run, Ready for Test);
- Relevant Party or RDP summary of Testing Issues to include:
  - Total number of Testing Issues generated
    - Counts by status Open, Fixed, Closed etc.
    - Counts by Severity 1, 2, 3 etc.
    - Counts by Priority
    - Escalated to Issue Resolution Board (IRB).
- Relevant Party or RDP Regression Test execution results;
- Relevant Party or RDP summary progress against Exit Criteria;
- Relevant Party or RDP top 5 risks and issues – to include any environment concerns; and
- Relevant Party or RDP overall RAG status (based on progress against testing schedule)

### **6.1.5 Test Completion Report**

The Relevant Party or RDP shall produce a Test Completion Report and submit the draft to the DCC 10 working days prior to the test completion date or at such time as agreed between DCC and the Party or RDP. The finalised version of the Test Completion Report will be submitted to the DCC on completion of each test execution activity.

A Test Completion Report template will be provided by the DCC to ensure that all Relevant Party or RDP reports contain the same level of detail. The report will include:

- Relevant Party or RDP Test approach and Scope of Testing Undertaken
- Details of updates made to the test environment during the course of testing;



- Relevant Party or RDP Summary of the Test Results
- Total number of tests originally scheduled for execution
- Total number of tests executed
- A table of tests run to include:
  - Overall results achieved
    - Passed, Failed, Blocked, Not Run

Any tests not run, blocked or not successfully executed end to end must be supported by an explanation.

- Relevant Party or RDP Summary of Testing Issues
  - Total number of Testing Issues generated
  - Total counts by status Open, Fixed, Closed
  - Total counts by Severity

### **6.1.6 Test Traceability**

To provide the DCC with a sufficient level of test assurance, all tests executed by each Relevant Party or RDP undertaking SREPT will be required to demonstrate full traceability as follows:

- Each requirement captured in the Requirements Traceability Matrix that can be tested during SREPT must be linked to one or many Test Scripts
- Each Test Script executed must be reflected in one or many test execution cycles
- A record of each test executed and the results of that test
- Where an executed test generates a Testing Issue;
  - Each Testing Issue must be linked to the test that generated the Testing Issue
  - Any subsequent retesting to validate a fix of Testing Issue carried out must be linked to the Testing Issue
  - Each retest executed must reflect a result achieved as a result of execution

### **6.1.7 Test Scripts**

A Relevant Party or RDP shall develop its own test scripts and demonstrate how those test scripts meet the requirements in accordance with H14.26.

Test Stage Supporting Documentation Set								
No	Phase	Description	DCC Responsibility	Relevant Party or RDP Responsibility	When/Frequency	Entry Criteria	Exit Criteria	Sign-Off Authority
1	Initiation	Guide to the SMKI and Repository Entry Process Tests	Produce and maintain	None	Prior to commencement of SREPT	N	N	DCC
2	Initiation	Test Data Plan (Device CSRs)	Produce	Use, if required	Prior to commencement of SREPT	N	N	DCC
3	Initiation	Test Plan including Test Schedule	Review and Approve	Produce and maintain	Test Stage Entry Quality Gate and updated during execution as required in preparation for Test Stage Exit Quality Gate	Y	Y	DCC
4	Initiation	Requirements Traceability Matrix	Review and Approve	Produce and maintain	Test Stage Entry Quality Gate and updated during execution as required in preparation for Test Stage Exit Quality Gate	Y	Y	DCC
5	Initiation	Test Scripts	Review and Approve	Produce and maintain	Test Stage Entry Quality Gate and updated during execution as required in preparation for Test Stage Exit Quality Gate	Y	Y	DCC
6	Initiation	Test Data Plan	Review	Produce and maintain	Test Stage Entry Quality Gate and updated during execution as required in preparation for Test Stage Exit Quality Gate	Y	N	DCC
7	Initiation	Test Readiness Review Checklist	Provide Template Review and Approve	Produce and maintain	Test Stage Entry Quality Gate	Y	N	DCC

Test Stage Supporting Documentation Set								
No	Phase	Description	DCC Responsibility	Relevant Party or RDP Responsibility	When/Frequency	Entry Criteria	Exit Criteria	Sign-Off Authority
8	Initiation	Test Stage Entry Criteria (part of final Test Readiness Report)	Review and Approve	Produce	Test Stage Entry Quality Gate	Y	N	DCC
9	Execution	Test Execution Dashboard	Review	Produce and maintain	Produced and updated daily (or other schedule agreed with the DCC) during execution in preparation for Test Stage Exit Quality Gate	N	Y	DCC
10	Execution	Testing Issue Report (part of the Test Execution Dashboard)	Review	Produce and maintain	Produced and updated daily (or other schedule agreed with the DCC) during execution in preparation for Test Stage Exit Quality Gate	N	Y	DCC
11	Execution	Test Completion Report	Provide Template Review and Approve	Produce and file	Test Stage during execution in preparation for Test Stage Exit Quality Gate	N	Y	DCC
12	Execution	Test Stage Quality Gate Exit Criteria (part of Test Completion Report)	Review and Approve	Produce	Test Stage Exit Quality Gate	N	Y	DCC

Table 7 Test Stage Supporting Documentation Set

Once these steps are complete the DCC will issue a Test Completion Certificate (see section 10).

## 7 Appendix B: Test Data

A Test Data Plan will be developed by the Relevant Party and coordinated with DCC in accordance with Section 5.4.1.3. The DCC and Relevant Party will be responsible for set up of Test Data on their respective system which must be defined in the Relevant Party Test Data Plan. The Data defined will be based on the following principles;

- No personal data which identifies any individual will be used for testing, but anonymised live Data is acceptable
- Test Data will be representative of data likely to be used in the live environment once the Relevant Party is eligible in the relevant User Role
- A full range of Test Data covering all services to be tested will be used

The DCC shall ensure that data supplied by the DCC for the purposes of testing is segregated when testing is being conducted by multiple Relevant Parties.

Table 8 Test Data Responsibilities below outlines the responsibilities in regard to preparing Test Data required to support UEPT.

Deliverable / Activity	Accountable / Responsible	Support
Test Data Preparation	DCC Licensee, Relevant Party or RDP	DSP

Table 8 Test Data Responsibilities

The DCC shall not provide the Relevant Party or RDP with either IKI or Organisation Certificate Signing Requests (CSRs). Instead, a Relevant Party or RDP shall provide sufficient test data to be able to demonstrate its capability to produce CSRs for test Organisation Certificates in accordance with ETAD. The DCC shall provide Device CSRs for those Parties who are not able to provide their own to be able to undertake Device-related SMKI Interface testing.

## 8 Appendix C: Test Scenarios

### 8.1 SMKI & Repository Entry Process Test Scenarios with DCC Gateway Connection

The following sub sections contain the SMKI & Repository Entry Process Test Scenarios that are applicable to each prospective user of SMKI & Repository Services that have access to a DCC Gateway Connection.

#### 8.1.1 Security Credentials Access Tests for Test SMKI Service

ID SMKI 02	
Title:	Access the test SMKI Service, through the SMKI Portal interface over the DCC Gateway Connection
Description	A Party / RDP's SMKI Authorised Responsible Officer (SMKI ARO) accesses the Test SMKI Service, through the SMKI Portal interface via the DCC Gateway Connection, using the security credentials supplied by the DCC.
Objective	<ul style="list-style-type: none"> <li>To prove that the SafeNet<sup>1</sup> Client Installed on the SMKI ARO's computer validates their security credentials</li> <li>To prove that a Party / RDP's ARO can use the FIPS Token which is registered to them and their organisation when accessing the SMKI Portal interface via the DCC Gateway Connection for Organisation and / or Device Certificates (as required)</li> </ul>

ID SMKI 03	
Title:	Access the test SMKI Service, through the Ad Hoc Device CSR Web Service interface and the Batched Device CSR Web Service interface, over a DCC Gateway Connection

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<sup>1</sup> The DCC makes available to PKI Client software (SafeNet Client), as set out in section 2.3.1 of the SMKI Code of Connection.

Description	A Party System using the IKI security credentials supplied by the DCC accesses the Test SMKI Services, through the Ad Hoc Device CSR Web Service interface and the Batched Device CSR Web Service interface over a DCC Gateway Connection
Objective	<ul style="list-style-type: none"> <li>To prove that the Party can access the Test SMKI Service through the Ad Hoc Device CSR Web Service interface and Batched Device CSR Web Service interface, as required, using the relevant IKI credentials.</li> <li>To prove IKI credentials correctly authenticate to the SMKI Device Web Service interfaces.</li> </ul>

### 8.1.2 Security Credentials Access Tests to the test SMKI Repository

ID SMKI 05	
Title:	Access the test SMKI Repository through the SMKI Repository Portal interface over a DCC Gateway Connection
Description	A Party / RDP's SMKI ARO uses their individual IKI security credentials to access the test SMKI Repository through the SMKI Repository Portal interface
Objective	<ul style="list-style-type: none"> <li>To prove access for the Party / RDP's ARO to the test SMKI Repository using the SMKI Repository Portal interface using the SMKI URL, username and password</li> </ul>

ID SMKI 06	
Title:	Access the test SMKI Repository via the SMKI Repository Web Service interface over a DCC Gateway Connection
Description	The Party's system uses the API Key issued by the DCC to access the test SMKI Repository using the SMKI Repository Web Service interface
Objective	<ul style="list-style-type: none"> <li>To prove that the Party's system can access the test SMKI Repository using the SMKI Repository Web Service interface</li> </ul>

ID SMKI 07	
Title:	Access the test SMKI Repository through the SSH File Transfer Protocol (SFTP) interface over a DCC Gateway Connection
Description	The Party / RDP's system or ARO uses the security credentials provided by the DCC to access the test SMKI Repository through the SMKI Repository SFTP (SSH File Transfer Protocol) interface
Objective	<ul style="list-style-type: none"> <li>To prove that the Party / RDP's system or ARO can access the test SMKI Repository through the SMKI Repository SSH (Secure File Transfer Protocol) interface</li> </ul>

### 8.1.3 Submission of CSR and Receipt of Certificates

ID SMKI 22	
Title:	Submit Organisation Certificate Signing Requests and receive Organisation Certificates through the SMKI Portal interface over a DCC Gateway Connection
Description	A Party / RDP's SMKI Authorised Responsible Officer (SMKI ARO) submits an Organisation Certificate Signing Request (CSR) and receives an Organisation Certificates for that CSR through the SMKI Portal interface
Objective	<ul style="list-style-type: none"> <li>To prove a Party / RDP can generate and submit an Organisation CSR in the format specified in the SMKI Interface Design Specification</li> <li>To prove that a Party / RDP can download Organisation Certificates issued in respect of the submitted CSRs, and to confirm the information contained in the issued Organisation Certificate is consistent with the information contained within the corresponding CSR</li> <li>To prove that an Organisation Certificate can be rejected by the Party / RDP (according to the mechanism set out in the SMKI RAPP and / or specified in the SMKI Interface Design Specification)</li> </ul>

ID SMKI 23	
Title:	Submit a Device Certificate Signing Request and receive a Device Certificate through the SMKI Portal interface over a DCC Gateway Connection
Description	A Party's SMKI ARO submits a Device Certificate Signing Request (CSR) and receives a Device Certificate for that Device CSR through the SMKI Portal interface
Objective	<ul style="list-style-type: none"> <li>• To prove that the Party's ARO can use the SMKI Portal Interface to submit an Ad Hoc Device Certificate Signing Request</li> <li>• To prove that the Party can use the SMKI Portal Interface to download individual Device Certificates and confirm the information contained in the issued Device Certificate is consistent with the information contained within the corresponding submitted Device CSR</li> <li>• To prove that the issued Device Certificate can be rejected by the Party (according to the mechanism set out in the SMKI RAPP and / or specified in the Portal specification)</li> </ul>

ID SMKI 24	
Title:	Submit Batched Device Certificate Signing Requests and receive Device Certificates through the SMKI Portal interface over a DCC Gateway Connection
Description	A Party's SMKI ARO submits a Batched Device Certificate Signing Request (CSR) and receives Device Certificates for each valid Device CSR through the SMKI Portal interface
Objective	<ul style="list-style-type: none"> <li>• To prove that the Party's ARO can use the SMKI Portal Interface to submit Batched Device CSR</li> <li>• To prove that Device CSRs are batched correctly by the Party</li> <li>• To prove that the Party can use the SMKI Portal Interface to download Device Certificates issued from the Batched Device CSRs</li> <li>• To prove that the issued Device Certificates are also lodged in the test SMKI Repository</li> </ul>



ID SMKI 25	
Title:	Submit a Device Certificate Signing Request and receive Device Certificate through the Ad Hoc Device Web Service interface over a DCC Gateway Connection
Description	A Party's system submits a Device Certificate Signing Request (CSR) and receives a Device Certificates through the Ad Hoc Device Web Service interface
Objective	<ul style="list-style-type: none"> <li>To prove that the Party's system can submit a Device CSR through the Ad Hoc Device Web Service interface</li> <li>To prove that the Party can receive Device Certificates issued in respect of the submitted Device CSR from the Ad Hoc Device Web Service</li> <li>To prove that the issued Device Certificate is lodged in the test SMKI Repository</li> </ul>

ID SMKI 57 <sup>2</sup>	
Title:	Submit Batched Device Certificate Signing Requests and receive Device Certificates through the Batched Device Web Service interface over a DCC Gateway Connection
Description	A Party's system submits Batched Certificate Signing Requests (CSRs) and receives Device Certificates through the Batched Device CSR Web Service interface
Objective	<ul style="list-style-type: none"> <li>To prove that the Party's system can use the Batched Device Web Service Interface to submit Batched Device CSRs</li> <li>To prove that Device CSRs are batched correctly by the Party</li> <li>To prove that Parties can download their Device Certificates issued in respect of Batched Device CSRs</li> <li>To prove that the issued Device Certificates are also lodged in the test SMKI Repository</li> </ul>

<sup>2</sup> Subject to delivery of the Change Request to deliver this functionality.

### 8.1.4 Download Certificates from the test SMKI Repository

ID SMKI 29	
Title:	Download a copy of all 'In Use' SMKI Test Certificates from the test SMKI Repository through the SFTP (SSH File Transfer Protocol) interface over a DCC Gateway Connection
Description	Using a file transfer client the Party downloads a copy of all in use SMKI Certificates from the test SMKI Repository via SFTP (SSH File Transfer Protocol) interface
Objective	<ul style="list-style-type: none"> <li>To prove that the Party / RDP can use a file transfer client that supports SFTP in accordance with the standards in the SMKI Repository Interface Design Specification to access the SFTP interface</li> <li>To prove that the Party / RDP's file transfer client can download a complete copy of all in use Certificates (including OCA and DCA Certificates)</li> </ul>

ID SMKI 30	
Title:	Download a daily delta file of SMKI Test Certificates through the SFTP interface over a DCC Gateway Connection
Description	Using a file transfer client the Party / RDP downloads a partial / daily 'delta file' copy of all SMKI Certificates issued in the preceding twenty four hours from the test SMKI Repository via SFTP (SSH File Transfer Protocol) interface
Objective	<ul style="list-style-type: none"> <li>To prove that the Party / RDP's file transfer client can download a partial/'Daily Delta File' batch containing Certificates published to the test SMKI Repository during the preceding twenty four hours (including OCA and DCA Certificates)</li> </ul>

### 8.1.5 Query the test SMKI Repository and Retrieve Certificates

ID SMKI 31	
Title:	Query the test SMKI Repository for Organisation Certificates through the SMKI Repository Portal interface over a DCC Gateway Connection

Description	A Party / RDP's SMKI ARO uses the SMKI Repository Portal Interface to query the test SMKI Repository for an Organisation Certificate and downloads the Organisation Certificate
Objective	<ul style="list-style-type: none"> <li>• To prove the Party / RDP's ARO is able to use the SMKI Repository Portal Interface</li> <li>• To prove that the Party / RDP's ARO can query the test SMKI Repository using the SMKI Repository Portal interface to locate an Organisation Certificate in the test SMKI Repository</li> <li>• To prove a Party / RDP's ARO is able to download the located Organisation Certificate</li> </ul>

ID SMKI 32	
Title:	Query the test SMKI Repository for Organisation Certificates through the SMKI Repository Web Service interface over a DCC Gateway Connection
Description	A Party / RDP's system queries the test SMKI Repository for an Organisation Certificate via the SMKI Repository Web Service interface and retrieves the Organisation Certificate
Objective	<ul style="list-style-type: none"> <li>• To prove the Party / RDP's system is able to use the SMKI Repository Web Service</li> <li>• To prove that the Party / RDP's system can query the test SMKI Repository using the SMKI Repository Web Service interface to locate an organisation Certificate in the test SMKI Repository</li> <li>• To prove the Party / RDP's system can receive the located Organisation Certificate</li> </ul>
ID SMKI 33	
Title:	Query the test SMKI Repository for Device Certificates through the SMKI Repository Portal interface over a DCC Gateway Connection
Description	A Party's SMKI ARO uses the SMKI Repository Portal Interface to query the test SMKI Repository for a Device Certificate and downloads the Device Certificate
Objective	<ul style="list-style-type: none"> <li>• To prove the Party's ARO is able to use the SMKI Repository Portal Interface (if not already done as part of SMKI 31)</li> </ul>

	<ul style="list-style-type: none"> <li>• To prove that the Party's ARO can query the test SMKI Repository using the SMKI Repository Portal interface to locate a Device Certificate in the test SMKI Repository</li> <li>• To prove a Party's ARO is able to download the located Device Certificate</li> </ul>
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ID SMKI 34	
Title:	Query test SMKI Repository for Device Certificates through the SMKI Repository Web Service interface over a DCC Gateway Connection
Description	A Party's system queries the test SMKI Repository for a Device Certificate via the SMKI Repository Web Service interface and retrieves an Device Certificate
Objective	<ul style="list-style-type: none"> <li>• To prove the Party's system is able to query the test SMKI Repository to determine the presence of a Device Certificate in the test SMKI Repository</li> <li>• To prove a Party's system can retrieve the located Device Certificate</li> </ul>

### 8.1.6 Obtain Organisation Certificate Revocation List and Organisation Authority Revocation List

ID SMKI 48	
Title:	Obtain the Organisation Certificate Revocation List (CRL) and Organisation Authority Revocation List (ARL) through the SMKI Repository Portal interface over a DCC Gateway Connection
Description	A Party / RDP's SMKI Authorised Responsible Officer (SMKI ARO) wishes to access the Organisation CRL and ARL using the SMKI Repository Portal interface via a DCC Gateway Connection
Objective	<ul style="list-style-type: none"> <li>• To prove that a Party / RDP's SMKI ARO can access and / or download the Organisation CRL and Organisation ARL using the SMKI Repository Portal interface via DCC Gateway Connection</li> </ul>

ID		SMKI 50
Title:		Obtain the latest Organisation CRL and Organisation ARL through using the URL to the SMKI Repository over a DCC Gateway Connection
Description		The Party / RDP's system accesses the test SMKI Repository using URL to obtain the latest Organisation CRL and Organisation ARL
Objective		<ul style="list-style-type: none"><li>• To prove that a Party / RDP's system can access and / or download the latest Organisation CRL and Organisation ARL using the URL to the SMKI Repository</li></ul>

## 8.2 SMKI & Repository Entry Process Test Scenarios without DCC Gateway Connection

The following sub sections contain the SMKI & Repository Entry Process Test Scenarios that are applicable to each prospective user of SMKI & Repository Services that do not have access to a DCC Gateway Connection.

### 8.2.1 Security Credentials Access Tests to SMKI

ID SMKI 04	
Title:	Access the Test SMKI Service, through the SMKI Portal interface over the internet
Description	For a Party without a DCC Gateway Connection, a SMKI ARO accesses the Test SMKI Service, through the SMKI Portal interface using the security credentials supplied by the DCC.
Objective	<ul style="list-style-type: none"> <li>To prove that the SafeNet Client Installed on the SMKI ARO's computer validates their security credentials</li> <li>To prove that a Party's ARO can use the FIPS Token which is registered to them and their organisation when accessing the SMKI Portal interface via the internet</li> </ul>

### 8.2.2 Submission of CSR and Receipt of Certificates

ID SMKI 26	
Title:	Submit Organisation Certificate Signing Requests and receive Organisation Certificates through the SMKI Portal interface over the internet
Description	For a Party without a DCC Gateway Connection, a SMKI ARO submits an Organisation Certificate Signing Request (CSR) and receives an Organisation Certificates for that CSR through the SMKI Portal interface over the internet
Objective	<ul style="list-style-type: none"> <li>To prove a Party can generate and submit an Organisation CSR in the format specified in the SMKI Interface Design Specification</li> <li>To prove that a Party can download Organisation Certificates issued in respect of the submitted CSRs, and to confirm the information contained in the issued Organisation Certificate is consistent with the information contained within the corresponding CSR</li> </ul>

	<ul style="list-style-type: none"> <li>To prove that an Organisation Certificate can be rejected by the Party (according to the mechanism set out in the RAPP and / or specified in the Portal specification)</li> </ul>
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<b>ID SMKI 27</b>	
Title:	Submit a Device Certificate Signing Request and receive a Device Certificate through the SMKI Portal interface over the internet
Description	For a Party without a DCC Gateway Connection, SMKI ARO submits a Device Certificate Signing Request (CSR) and receives a Device Certificate for that Device CSR through the SMKI Portal interface over the internet
Objective	<ul style="list-style-type: none"> <li>To prove that the Party's ARO can use the SMKI Portal Interface to submit an Ad Hoc Device Certificate Signing Request</li> <li>To prove that the Party can use the SMKI Portal Interface to download individual Device Certificates and confirm the information contained in the issued Device Certificate is consistent with the information contained within the corresponding submitted Device CSR</li> <li>To prove that the issued Device Certificate can be rejected by the Party (according to the mechanism set out in the RAPP and / or specified in the Portal specification)</li> </ul>

<b>ID SMKI 28</b>	
Title:	Submit Batched Device Certificate Signing Requests and receive Device Certificates through the SMKI Portal interface over the internet
Description	For a Party without a DCC Gateway Connection, an SMKI ARO submits a Batched Device Certificate Signing Request (CSR) and receives Device Certificates for each valid Device CSR through the SMKI Portal interface over the internet
Objective	<ul style="list-style-type: none"> <li>To prove that the Party's ARO can use the SMKI Portal Interface to submit Batched Device CSR</li> <li>To prove that Device CSRs are batched correctly by the Party</li> <li>To prove that the Party's ARO can use the SMKI Portal interface to download Device Certificates issued from the Batched Device CSRs</li> </ul>

### 8.2.3 Submit Requests for Repository Content and Obtain DCA, OCA and DCC Certificates

ID SMKI 08	
Title:	Submit Requests for and Receive Repository Content using the SMKI Portal interface over the Internet
Description	For a Party without a DCC Gateway Connection, an SMKI ARO accesses the SMKI Portal interface and makes a request for and receives content from the test SMKI Repository
Objective	<ul style="list-style-type: none"> <li>To prove that a Party's SMKI ARO can use the SMKI Portal interface to request and receive the latest Organisation CRL and latest Organisation ARL</li> </ul>

ID SMKI 38	
Title:	Download Organisation Certificates and OCA Certificates through the SMKI Portal interface over the internet
Description	For a Party without a DCC Gateway Connection, a SMKI ARO accesses the SMKI Portal interface over the Internet, locates and downloads Organisation Certificates that are required to be installed on Devices ahead of installation
Objective	<ul style="list-style-type: none"> <li>To prove that the Party's ARO can locate and download the zip file of Device trust anchor Organisation Certificates through the SMKI Portal over the internet</li> </ul>



## 9 Appendix D: Forms and Templates

Extant versions of templates for the following documents will be maintained on the DCC Website or SharePoint. The following templates are provided in this document to support the consultation process:

Section	Template
9.1	Party / RDP Notification of Intention to Undertake Testing Template
9.2	DCC Acknowledgement of Intention to Undertake Testing Template
9.3	Test Readiness Report Template
9.4	Test Plan Template
9.5	Test Execution Dashboard Template
9.6	Test Completion Report Template

## 9.1 Party / RDP Notification of Intention to Undertake Testing Template

To: [DCC]

From: [PARTY / RDP]

Date: [Date]

Dear Sir or Madam,

### **PARTY / RDP NOTIFICATION OF INTENTION TO UNDERTAKE TESTING**

**TEST:** SMKI and REPOSITORY ENTRY PROCESS TESTS

We hereby give notice that we intend to undertake SMKI and Repository Entry Process Tests in accordance with the SMKI & Repository Test Scenarios Document.

The required information is provided in the table below:

Party / RPD	SEC Party / RDP ID	Test Start Date	Name, Email & Phone Number of Test Manager

Yours faithfully

[Name]

[Position]

Acting on behalf of [Party].

## 9.2 DCC Acknowledgement of Intention to Undertake Testing Template

To: [PARTY / RDP]

From: [DCC]

Date: [Date]

Dear Sir or Madam,

### **DCC ACKNOWLEDGEMENT OF INTENTION TO UNDERTAKE TESTING**

#### **TEST: SMKI & REPOSITORY ENTRY PROCESS TESTS**

We hereby acknowledge your notification that you intend to undertake SMKI & Repository Entry Process Tests in accordance with the SMKI & Repository Test Scenarios Document.

The table below confirms the contact details of our Test Manager and the date of the SMKI & Repository Entry Process Test (SREPT) Initiation Meeting:

Party / RDP	SEC Party / RDP ID	Test Start Date	Name, Email & Phone Number of DCC User Entry Process Test Manager	Date of SREPT Meeting	Initiation

Yours faithfully

[Name]

[Position]

Acting on behalf of the DCC.

### 9.3 Test Readiness Report Template

To: [DCC]

From: [PARTY / RDP]

Date: [Date]

Dear Sir or Madam,

#### TEST READINESS REPORT

##### TEST: SMKI & REPOSITORY ENTRY PROCESS TESTS

We hereby provide our current assessment of our readiness to conduct SMKI & Repository Entry Process Tests for:

##### Overview:

Party / RDP: [Party / RDP]

Test Start Date: [Test Start Date]

##### Report Information:

Date of Report: [Date]

Period Covered by Report: [From date to date]

Produced by: [Name of Reporter]

##### Readiness Information:

Overall RAG: [Red / Amber / Green]

Test Tool Selected & Available: [Y / N]

Party Test Plan produced: [Y/N]

Party Test Schedule produced: [Y/N]

##### Risks, Assumptions, Issues & Dependencies (RAID):

*Please detail key RAID (Risk, Assumption, Issue and Dependency) items that have the potential to cause significant disruption to the commencement and / or completion of SMKI & Repository Entry Process Testing*

RAID Description	Priority(H/M/L)	Action Taken	Target Close Date	RAG Status (R/A/G)

**Requirements Traceability Matrix Progress:**

RTM Information Required	Response
Requirements Traceability Matrix complete to date (%)	
Numbers of Requirements identified (number)	
Number of testable requirements in progress (number)	
Number of testable requirements not started (number)	
Number of Requirements deemed not testable (number)	

**Test Script Development Progress:**

Test Script Information Required	Response
Test Scripts complete to date (%)	
Planned number of Test Scripts (number)	
Number of Test Scripts produced to date (number)	
Number of Test Scripts in progress (number)	
Number of Test Scripts not started (number)	
Test Data readiness by Party against planned Test Scripts (%)	

**Resources & Environments Progress:**

Resources & Environments Information Required	Response
Test Resources & Technical (support) Resource Ready (Y/N if N, date expected to be ready)	
Environment Readiness:	
All interfaces required to support testing (Y/N)	

**Environments information:**

[Environment configuration approved as suitable – to include breakdown and description of hardware]

**SREPT Entry Criteria (to be completed by final report):**

Entry Criteria	Complete (Y/N)
Confirm that the person requesting to commence testing is a SEC Party / RDP	
Party / RDP has identified the SMKI Interfaces the Party or RDP will access and whether this is for Device or Organisation Certificates and whether access will be through a DCC Gateway Connection	
Party has produced relevant test artefacts in sections 5.3.1.1, 5.3.1.5, and 5.3.1.6 of the SMKI & Repository Test Scenarios Document:	
- Party Notification of Intention to Undertake Testing	
- Test Readiness Report (this document)	
- Test Plan incorporating the Test Schedule	
- Requirements Traceability Matrix	
- Test Scripts	
- Test Data Plan	
has complied with the procedural steps for initiating SREPT (as set out in Table 2 of the SRTSD)	
Party has provided evidence to the DCC that a test environment capable of supporting the planned testing has been established and is available	
Party has provided evidence to the DCC that an appropriate level of resources are available to support the SREPT process	
Party has provided confirmation that the Security Requirements set out in the Enduring Testing Approach Document have been met	

**Overall Status:**

Overall Status (R/A/G)

R – testing start in line with planned date is not achievable

A – testing start in line with planned date is at risk

G – testing is expected to start on the planned date

End of report.

Yours faithfully

[Name]

[Position]

Acting on behalf of [Party / RDP].

## 9.4 Test Plan Template

To: [DCC]  
 From: [PARTY / RDP]  
 Date: [Date]

Dear Sir or Madam,

### TEST PLAN INCLUDING TEST SCHEDULE

#### TEST: SMKI & REPOSITORY ENTRY PROCESS TESTS

We hereby provide our Test Plan, in accordance with the SMKI & Repository Test Scenarios Document.

#### Overview:

Party: [Party / RDP]  
 Test Start Date: [Test Start Date]

#### Scope

*[Textual description of testing scope].*

#### Scenarios to be Tested

*See the matrices in section 5 to determine the scenarios to be tested.*

Reference to Section 5

(List all scenarios to be tested, as determined by the privileges requested, or to be requested, via the SMKI RAPP.


#### Approach

*[Textual description of the following:*

- *Test Scenarios & Scripts*
- *Test Cycles*
- *Re-Testing*
- *Regression*
- *Defect Management*
- *Test Data*
- *Tools]*



### **Test Schedule**

*[Provide a schedule of the testing that you will undertake. This can be the form of a Project Plan, or Spreadsheet, or other format agreed with the DCC.]*

### **Resources**

*[Provide details of the resources required to support the testing set out above. This can be included in the Project Plan or Spreadsheet.*

*This should consider roles such as Test Manager, Test Lead, Senior Test Analysts, Test Analysts, IS Support Requirements.]*

End of report.

Yours faithfully

[Name]

[Position]

Acting on behalf of [Party / RDP].

## 9.5 Test Execution Dashboard Template

To: [DCC]

From: [PARTY / RDP]

Date: [Date]

Dear Sir or Madam,

### TEST EXECUTION DASHBOARD

#### TEST: SMKI & REPOSITORY ENTRY PROCESS TESTS

We hereby provide our Test Execution Dashboard, in accordance with the SMKI & Repository Test Scenarios Document.

#### Overview:

Party / RDP: [Party / RDP]

Party /RDP ID: [Party / RDP ID]

Location: [Location of Testing / Test Manager]

Test Start Date: [Test Start Date]

#### Report Information:

Date & Time of Report: [Date, Time]

Period Covered by Report: [Date (for daily reports) or from date to date (for other reporting frequency)]

Produced by: [Name of Reporter]

#### Progress Information:

*[Please provide a 'Glide Path' for the testing you are undertaking, showing progress toward execution of 100% of the tests planned. This can be in the form of a spreadsheet or other format agreed with the DCC.]*

Test Script Information Required	Number
Total Planned number of Tests (Test Readiness Report)	
Number of Tests scheduled for execution by report date	
Number of Tests executed by report date	
Number of Test passed by report date	
Number of Test failed by report date	
Number of Test blocked by report date	
Number of Test not run by report date	

**Test Issue Report Information:**

Testing Issue Information Required	Number
Number of Testing Issues generated	
Number of Testing Issues closed	
Number of Testing Issues open	
Number of open Testing Issues, by severity:	
- Severity 1	
- Severity 2	
- Severity 3	
- Severity 4	
- Severity 5	

**Progress Toward Exit Information:**

*[Textual description of progress made so far toward completion of testing]*

Progress Toward Exit Required	Date
Anticipated Completion Date (Submission of Test Completion Report)	

**Risk Information:**

Risk	Description	Target Close Date	RAG Status (R/A/G)
1			
2			
3			
4			
5			

**Overall Status:**

Overall Status (R/A/G)

R – completion within one week of planned date is not achievable

A – completion within one week of planned date is at risk

G – completion is expected within one week of planned date

## 9.6 Test Completion Report Template

To: [DCC]  
 From: [PARTY / RDP]  
 Date: [Date]

Dear Sir or Madam,

### TEST COMPLETION REPORT

**TEST:** SMKI & REPOSITORY ENTRY PROCESS TESTS

We hereby provide our Test Completion Report, in accordance with the SMKI & Repository Test Scenarios Document.

#### Overview:

Party / RDP: [Party / RDP]

Test Start Date: [Test Start Date]

#### Approach and Scope of Testing Undertaken:

*[Per the Test Plan, noting any variations.]*

#### Summary of Test Results:

Test Script Information Required	Number
Number of tests originally scheduled for execution	
Number of tests originally scheduled for execution	
Number of tests passed	
Number of tests failed	
Number of tests not run	
Number of tests blocked	

#### Detail of Tests Not Successfully Executed:

Test	Explanation

**Summary of Testing Issues:**

Testing Issue Information Required	Number
Number of Testing Issues generated	
Number of Testing Issues closed	
Number of Testing Issues open	
Number of open Testing Issues, by severity:	
- Severity 1	
- Severity 2	
- Severity 3	
- Severity 4	
- Severity 5	

**SREPT Exit Criteria Checklist:**

Entry Criteria	Complete (Y/N)
Test Results have been documented by the Party and evidence captured in the Party's Test Management Tool and are available to be provided to the DCC	
Testing issues identified during a Party's test execution have been recorded in the Test Management Tool (see note, below)	
Test Completion Report has been created by the Party and approved by the DCC	

Note: All testing issues must either:

- been fixed and verified by retest; or
- where outstanding, have been reviewed and documented, and been included as part of a remediation plan that outlines the next steps to be taken, including estimated timescales required to resolve each of their outstanding Testing Issues. The remediation plan must be agreed by the DCC

End of report.

Yours faithfully

[Name]

[Position]

Acting on behalf of [Party].

## 10 Appendix E: Test Completion Certificate

### TEST COMPLETION CERTIFICATE

To: [Party / RDP] [SEC Party / RDP ID]

From: [DCC]

[Date]

Dear Sirs,

### TEST COMPLETION CERTIFICATE

The relevant tests have been successfully completed to provide the following credentials:

Test Scenarios for Parties or RDPs with a DCC Gateway Connection
IKI credentials for submission of Organisation CSRs using SMKI Portal via DCC Gateway Connection
IKI credentials for submission of Device CSRs using SMKI Portal via DCC Gateway Connection
IKI credentials for Ad Hoc Device CSR Web Service
IKI credentials for Batched Device CSR Web Service
Credentials for SMKI Repository Portal
Credentials for SMKI Repository Web Service
Credentials for SMKI Repository Portal SFTP

Test Scenarios for Parties without a DCC Gateway Connection
IKI credentials for submission of Organisation CSRs using SMKI Portal via the Internet
IKI credentials for submission of Device CSRs using SMKI Portal via the Internet

We confirm that the relevant tests have been executed in accordance with the relevant Test Documents. We confirm that the relevant Exit Criteria have been achieved.

Yours faithfully

[Name]

[Position]

Acting on behalf of the DCC

## 11 Appendix F: Definitions

Term	Definition	Source
Authorised Subscriber	means a Party which is an Authorised Subscriber for the purposes (and in accordance with the meaning given to that expression in Annex A [of the SEC]) of either or both of the Certificate Policies	SEC
Daily Testing Issue Report	The document reporting on the status of any testing issues identified (part of the Test Execution Dashboard)	This document
CRL	Certificate Revocation List	SEC
CSR	Certificate Signing Request	SEC
DCA	Device Certification Authority	SEC
User	A Party that has completed the User Entry Process (and, in respect of Services available in accordance with this Code to Users acting only in one or more User Roles, a Party that has completed the User Entry Process for that User Role)	SEC
Exit Criteria	The criteria that must be satisfied before testing can be considered complete	SEC
FIPS token	Cryptographic Credential Token issued in accordance with the SMKI RAPP	This document
OCA	Organisation Certification Authority	SEC
RDP	Registration Data Provider	SEC
Regression Testing	Testing of a previously tested program following modification to ensure that defects have not been introduced or uncovered in unchanged areas of the software, as a result of the changes made (and Regression Test shall be construed accordingly)	International Software Testing Qualifications Board
Relevant Party	A Party which is undertaking SMKI and Repository Entry Process Tests	This document
SMKI RAPP	SMKI Registration Authority Policies and Procedures	SEC
(Requirements) Traceability Matrix	A matrix of defined requirements that provides traceability (linkage) to Test Scripts for the purpose of providing a measurement of test coverage as intended in the relevant specification.	International Software Testing Qualifications Board
SMKI	Smart Metering Key Infrastructure	SEC
SREPT	SMKI and Repository Entry Process Tests	This document



SREPTS	SMKI and Repository Entry Process Test Scenarios	This document
SRT	SMKI and Repository Testing – A test stage that will commence prior to Interface Testing Stage	SEC
SRTSD	SMKI and Repository Test Scenarios Document (this document)	SEC
Test Completion Certificate	A certificate issued by the on successfully completes SREPT as set out in Appendix E: Test Completion Certificate	This document
Test Completion Report	A document summarising testing activities and results. It also contains an evaluation of the corresponding test items against Exit Criteria	This document
Test Completion Certificate	A certificate issued by the DCC to the Party when the Party has met the SREPT Exit Criteria	This document
Test Data	Any data constructed for the purposes of undertaking SMKI and Repository Entry Process Testing	This document
Test Data Plan	The document that sets out: the size and type/format of data, who is responsible for providing the data; and when the data is required to be available to support test activities in a Test Plan	This document
Test Execution Dashboard	The document summarising testing activities and results, produced at regular intervals, to report progress of testing activities against a baseline (such as the original test plan) and to communicate risks and alternatives requiring a decision to management	This document
Test Management Tool	A tool that has the ability to log and track Testing Issues	This document
Test Plan	A document describing the scope, approach, resources and schedule of intended test activities within a Test Stage that will be produced as set out in Section 9.4.	This document
Test Result	The consequence/outcome of the execution of a Test Script	This document
Test Readiness Report	A report that when completed provides the capability to assess the status of test preparation and determine the readiness to proceed into test execution	This document
Test Schedule	A list of test process activities, tasks or events identifying their intended start and finish dates and/or times and interdependencies	This document

Test Script	A document specifying a sequence of actions for the execution of a test	This document
Test SMKI Repository Services	Test versions of the SMKI Repository Services (see definition in SEC) provisioned for the purposes of SREPT	This document
Test SMKI Services	Test versions of the SMKI Services (see definition in SEC) provisioned for the purposes of SREPT	This document
Test Stage	A group of test activities that are organised and managed together	This document
WD	Working Day	SEC

## 12 Appendix G: Testing Issue Severity Descriptions

Severity	Description
Severity 1	<p>An Issue which in relation to the Relevant Party or RDP:</p> <ul style="list-style-type: none"> <li>would prevent user from using their systems</li> <li>would have a critical adverse impact on business activities</li> <li>would cause significant financial loss</li> <li>would result in any material loss or corruption of Data.</li> </ul> <p>Non-exhaustive examples:</p> <ul style="list-style-type: none"> <li>an Issue leading to non-availability of systems</li> <li>all test progress is blocked.</li> </ul>
Severity 2	<p>An Issue which in relation to the Relevant Party or RDP:</p> <ul style="list-style-type: none"> <li>would have a major (but not critical) adverse impact on use of systems</li> <li>would cause limited financial loss</li> </ul> <p>Non-exhaustive examples:</p> <ul style="list-style-type: none"> <li>an Issue leading to non-availability of or to loss of resilience of a material part of their systems</li> <li>large areas of functionality will not be able to be tested</li> <li>testing not completely blocked but has been significantly impacted.</li> </ul>
Severity 3	<p>An Issue which in relation to the Relevant Party or RDP:</p> <ul style="list-style-type: none"> <li>would have a major adverse impact on business activities but which can be reduced to a moderate adverse impact through a work-around</li> <li>would have a moderate adverse impact on the business activities</li> </ul> <p>Non-exhaustive examples:</p> <ul style="list-style-type: none"> <li>testing can progress but the work-around will impact test progress.</li> </ul>
Severity 4	<p>An Issue which in relation to the Relevant Party or RDP:</p> <ul style="list-style-type: none"> <li>would have a minor adverse impact on business activities</li> </ul> <p>Non-exhaustive examples:</p> <ul style="list-style-type: none"> <li>minor service interruptions in the business process</li> </ul>
Severity 5	<p>An Issue which in relation to the Relevant Party or RDP:</p> <ul style="list-style-type: none"> <li>would have minimal impact on business activities</li> </ul> <p>Non-exhaustive examples:</p> <ul style="list-style-type: none"> <li>trivial Issues with work-arounds which are noted for future releases but minimal impact of running existing activities</li> <li>tests can still pass but there are cosmetic issues.</li> </ul>