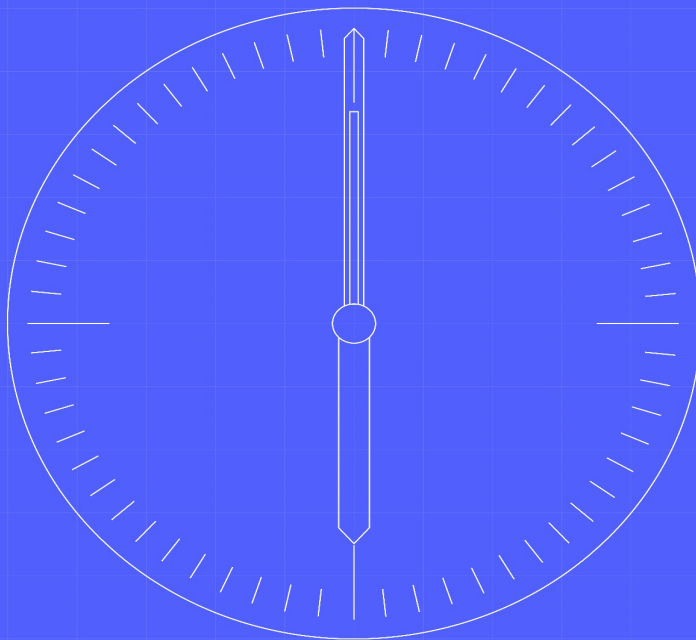


SIT Migration Test Data Approach & Plan



Document owner

Cesar Lopes

Status:

Draft

Document number

MHHS-DEL1662

Date

20 November 2023

Version

0.3

Classification

Public

Deleted: 3

Deleted: 20

Contents

1.1 Change Record 3

1.2 Reviewers 3

1.3 References 3

1.4 Terminology 3

2 Executive Summary 4

3 Introduction 5

3.1 Document Purpose 5

3.2 Reviews and Approvals 5

3.3 Change Forecast 5

3.4 Summary of Changes 6

3.5 Assumptions and Caveats 6

3.5.1 Assumptions 6

3.5.2 Caveats 6

4 Objectives 7

4.1 Objectives 7

5 Scope 7

5.1 In Scope 7

5.2 Out of Scope 7

6 Test Architecture & Coverage 9

6.1 MHHS Architecture and Coverage 9

7 Test Data Approach 11

7.1 Test Intervals 11

7.2 Test Data Allocation 11

7.3 Test Data Load 12

7.4 Test Data Augmentation 15

7.5 Test Data Generators 16

7.6 DIP – Onboarding and Test Data Seeding 16

7.7 Test Data – Elexon Central Settlement Services 16

7.8 Test Data – MPRS 16

7.9 Test Data – SDS and ADS 17

7.10 Test Data – Metering Service 17

7.11 Test Data – Suppliers 17

7.12 Test Data – Network Operators 18

7.13 Test Data – UMSO 18

7.14 Test Data – UMSDS 18

7.15 Test Data – EES 18

7.16 Test Data – DCC 18

7.16.1 Central Switching Service (CSS) 18

7.16.2 Data Service Provider (DSP) 19

7.17 Smart metering Data 19

Deleted: 17

Deleted: 18

8

Test Data Anonymisation

20

8.1

Test Data Anonymisation for Testing Reports and Test Evidence

20

9

Draft Test Data Schedule – *to be confirmed on completion of Migration test plan*

21

Figures

Figure 1 – TOM illustration

9

Figure 2: Test Data Loading Mechanism #1 – IF/PUB Content Loader

12

Figure 3: Test Data Loading Mechanism #2 – DTS Message Content Loader

13

Figure 4: Test Data Loading Mechanism #3 – Business as Usual

13

Figure 5: Test Data Loading Mechanism #4: Plain CSV Content Loader

14

Figure 6 – MPAN obfuscation for Test Reports and evidence

20

Figure 7: Migration Test Data Schedule

Error! Bookmark not defined.

1.1 Change Record

Date	Author(s)	Version	Change Detail
19/10/2023	Cesar Lopes	0.1	Initial Draft
01/11/2023	Cesar Lopes	0.2	Changes following Programme Review
20/11/2023	Cesar Lopes / John Wiggins	0.3	Changes following Industry Consultation

1.2 Reviewers

Reviewer	Role
Lee Cox	SI Test Manager
Kevin Davis	SI Test Architect
Simon Berry	SI Environments and Release Manager
John Wiggins	SI Data Migration Manager
Adrian Ackroyd	SRO Function Programme Test Manager
Smitha Pichrikat	SRO Function Client Delivery Manager
Warren Fulton	SRO Migration Manager
Kevin Spencer	SRO Industry SME for Migration
Mike Fensome	SRO Design Senior BA
Code Bodies (BSC and REC)	Various

1.3 References

Ref No.	Document/Link	Publisher	Published	Additional Information
REF-01	MHHS-DEL-315E2E Testing & Integration Strategy	SI Testing	29 th April 2022	
REF-02	MHHS-DEL1781 - SIT Migration Test Approach & Plan	SI Testing	2 nd November 2023	
REF-03	MHHS-DEL 300 Test Data Strategy	SI Testing	18 th May 2023	
REF-04	MHHS-DEL813 Overarching Test Data Approach & Plan	SI Testing	24 th May 2023	
REF-05	MHHS-DES138-Interface Catalogue	MHHS	5 th July 2023	
REF-06	MHHS-DEL618 - Environment Approach & Plan	SI Testing	28 th February 2023	
REF-07	MHHS-DEL1181 MHHS Programme Data Cleanse Plan	SI Testing	9 th June 2023	
REF-08	MHHS-DEL816 Population of Data Items for Testing	SI Testing	April 2023	

1.4 Terminology

Term	Description
Various	For terminology, see Programme Glossary on the MHHS portal: Programme Glossary (SharePoint.com)

2 Executive Summary

The Market-wide Half Hourly Settlement programme (MHHS) when completed will contribute to a more cost-effective electricity system, encouraging more flexible use of energy and helping consumers lower their bills.

[REF-01] 'MHHS-DEL315 - E2E Testing & Integration Strategy' describes the overall, end-to-end (E2E) approach to testing - the way all parties involved in the MHHS programme will conduct testing.

One of the major test phases is the **Systems Integration Testing (SIT)**. The purpose of SIT phase is to prove that the component Services are implemented in a way consistent with the MHHS E2E Design and interact coherently and consistently.

The SIT comprises sub-test stages: (1) **Component Integration Testing (CIT)**, (2) **Functional Test**, (3) **Migration Test**, (4) **Non-Functional Test** and (5) **Operational Test**.

This document, associated with the [REF-02] MHHS-DEL1781 - SIT Migration Test Approach & Plan which can be found on the [SIT Migration Test & Test Data Approaches & Plans page](#) of the MHHS Website, provides the data preparation guidance for the **SIT Migration Test**.

This document is a child document of a series of documents progressively detailing the data approach for testing. Therefore, it is recommended the following documents are read in conjunction:

- [REF-03] MHHS-DEL 300 Test Data Strategy: covers the data required to be co-ordinated across the systems for testing purposes.
- [REF-04] MHHS-DEL813 Overarching Test Data Approach & Plan establishes a common and fully aligned set of test data for use in the industry-wide test phases of MHHS.

3 Introduction

3.1 Document Purpose

This document aims to define a Test Data Approach specifically for the SIT Migration Tests. It provides a detailed view of specific data required per participant role.

This document is intended to be read by the following groups:

- Senior Responsible Owner Function (SRO)
- Lead Delivery Partner (LDP)
- Testing and Migration Advisory Group (TMAG)
- Data Working Group (DWG)
- Programme Participant Test Managers
- All Programme party teams and resources involved in SIT execution or support.

3.2 Reviews and Approvals

The SIT Migration Test Data Approach and Plan will go through an initial LDP review by the following team members:

- Lee Cox, SI Test Manager
- Kevin Davis, SI Test Architect
- Simon Berry, SI Environments and Release Manager
- John Wiggins, LDP Transition/Migration Lead

Upon completion of the LDP review, any comments and feedback would be incorporated before going to the SRO team for formal review by:

- Adrian Ackroyd, SRO Client Programme Test Manager,
- Smitha Pichrikat, SRO Function Client Delivery Manager,
- Warren Fulton, SRO Migration Manager,
- Kevin Spencer, SRO Industry SME for Migration,
- Mike Fensome, SRO Design Senior BA,
- Balancing and Settlement Code (BSC) and Retail Energy Code (REC)

Upon completion of the SRO and Code Body review it will then be distributed to the DWG for consultation where comments will be incorporated leading to a recommendation of approval by the group.

Approval will then be requested from:

- Testing and Migration Advisory Group (TMAG).

The document will be made available for information via the programme portal.

3.3 Change Forecast

The SI team will own this document and keep it up to date, with review and approval by MHHS programme governance as appropriate. Each new version supersedes the previous version in its entirety.

- At the time of writing, the SIT Migration test scenarios and cases are still under development, once a greater degree of maturity has been reached on these artefacts, the test cases will be analysed to determine the detailed data requirements for the execution of SIT Migration testing. These aspects will be socialised and

developed in consultation with the DWG and the agreed output, then formalised in a new full version of this document that will be targeted for approval in the Mar-24 TMAG.

- **Detailed test cases and Test Data Augmentation:** The test cases will drive detailed requirements for test data preparation and augmentation. The "section 7.4 Test Data Augmentation" will be refined. However, the overall test data approach shouldn't change.
- Specific loading mechanisms for the following group of participants:
 - **DCC:** the data cut scope, approach and data requirements for CSS has been agreed with DCC. However, the specific mechanics for updating MPANs related Agent and Suppliers will utilise the same approach as that used for SIT Functional. Section 7.16 will require refinement. The CSS will be in scope to support CoS Forward Migrations and Reverse Migrations which are initiated by a Supplier switching utilising the CSS.
 - **DIP:** The Migration Testing activity is assumed to use the end-to-end process set out with the baselined Migration Design. This means that no seeding of data is required prior to the initiation of Migration testing, i.e. the IF-031 will be the initial message sent to the DIP for each MPAN under test, which will use then use the designed functionality to populate the DIP with the required data.
 - **Registration Service:** A subset of the interfaces utilised for SIT Functional will be utilised for data population within MPRS. DIP messages will not be utilised (as the MPAN is in a Legacy state) but DTS flows and DB flows will be utilised. The pre-migration data load techniques for EMSE ID and Domestic Premises Indicator will also be utilised between SI and BUUK and SSEN MPRS test instances (and verified between SI and St Clements).
- The [REF-08] MHHS-DEL816 Population of Data Items for Testing will be updated after alignment with Programme Participants and the Migration Test Cases to include the detailed method for each data item's population.
- A new section will be added to describe the specific test data approach for Test Scenarios involving the creation of a new MPAN in the DIP.

Deleted: and DSP

Deleted: tools and MPRS

All updates to this document will follow the review and approval process outlined in section 3.2.

3.4 Summary of Changes

Not applicable, as this is version 0.1 of the document.

3.5 Assumptions and Caveats

3.5.1 Assumptions

- The Programme Participants taking part in SIT have already identified their systems that will be deployed in the Test Environments and will be used during SIT Tests.
- The Programme Participants, as part of the PIT Testing, are being able to create and load test data to their systems in their PIT test environment.
 - Whenever possible, the tools developed by the participants during the PIT stage can be reused to load test data for SIT.

3.5.2 Caveats

N/A.

4 Objectives

4.1 Objectives

The objective of the SIT Migration Test stage is to functionally validate the new MHHS migration processes specified in the E2E MHHS Migration Design Artefacts are appropriate to support the migration of MPANs from current "as is" systems, moving through the migration steps to arrive in the final MHHS "to be" state. Additional MHHS reverse migration processes will also be validated to cater for MHHS to legacy Change of Supplier eventualities that occur between the Programme's M10 and M14 Milestones.

The objective of this document is to establish the approach to obtain the test data required to execute and pass all test scenarios / cases in the scope of the Test Stage without exception.

5 Scope

5.1 In Scope

As described in [REF-02] MHHS-DEL1781 - SIT Migration Test Approach & Plan which can be found on the [SIT Migration Test & Test Data Approaches & Plans page](#) of the MHHS Website, the scope of SIT Migration involves the following roles:

1. Data Integration Platform (DIP)
2. BSC Central Service – Industry Standing Data (ISD), Volume Allocation Service (VAS), Settlement Operations, Load Shape Service (LSS), Market-wide Data Service (MDS)
3. Registration Service (MPRS)
4. Smart Data Service (SDS)
5. Advanced Data Service (ADS)
6. Metering Service Smart (MSS)
7. Metering Service Advanced (MSA)
8. Electricity Suppliers
9. Network Operations
10. RECCo - Electricity Enquiry Service (EES)
11. Unmetered Supplies Operator (UMSO)
12. Unmetered Supplies Data Service (UMSDS)
13. Data Communications Company (DCC) – ~~Central Switching Service (CSS)~~
14. ElectraLink – Data Transfer Network (DTS)
15. Non-Half Hourly Data Collector (NHHDC)
16. Half Hourly Data Collector (HHDC)
17. Non-Half Hourly Meter Operator (NHHMOA)
18. Half Hourly Meter Operator (HHMOA)

Deleted: Data Service Provider (DSP) and

This document provides the Test Data Approach per role.

When developed the SIT Migration Test Scenarios will provide further detail of the SIT Migration scope and coverage.

5.2 Out of Scope

This document does not cover the details of the provisioning of data for:

- All the other SIT Stages – these will be the subject of separate Test Data Approach and Plan documents:
 - Component Integration Test
 - Functional Test
 - Non-Functional Test
 - Operational Test
- UIT Test Stages:
 - Qualification Test
 - E2E Sandbox

6 Test Architecture & Coverage

6.1 MHHS Architecture and Coverage

SIT Migration Testing will be achieved by establishing a test environment where all Central Systems, the Registration Service and at least two Services for each Role are connected via to the Data Integration Platform (DIP), in addition to DCC (CSS only) RECCo (EES) and Electralink (DTS). Note that SIT Participants will have proven DIP connectivity to SIT- A prior to the commencement of CIT/SIT Functional. Connectivity proving to SIT-B ahead of SIT Migration test execution will be required for all Participants. On commencement of SIT Migration, Tests will then be conducted based on the test scenarios and cases in scope. It should be noted that metering components fall outside of the MHHS design scope, and for this reason consumption data generators will be used for the purposes of testing.

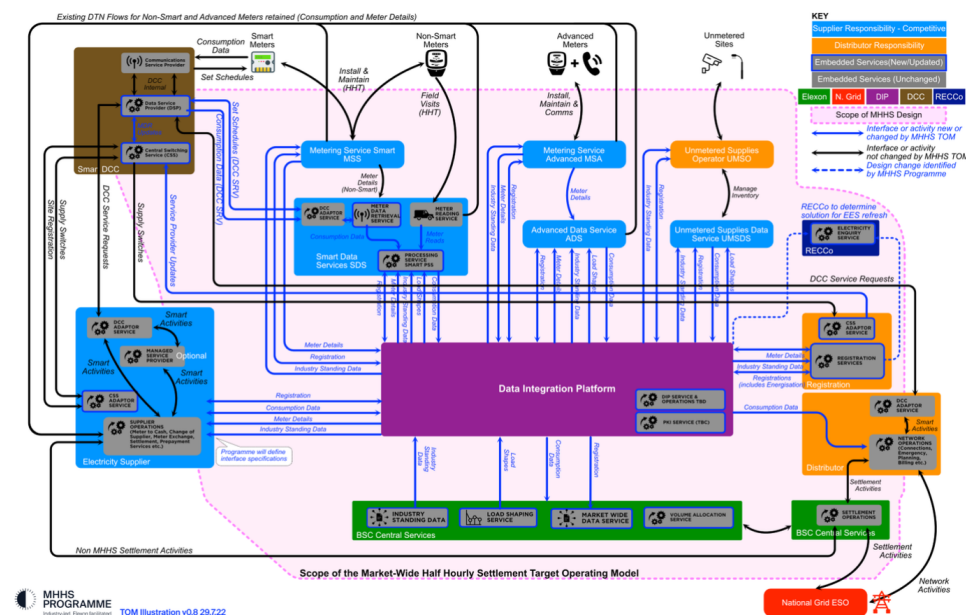


Figure 1 – TOM illustration

Notes:

1. The interface (IF number) is fully documented on [REF-05] MHHSP-DES138-Interface Catalogue. All Mandatory data items per test scenario shall be obtained from there, including details of data type, enumerations and format.
2. Data Conditions means any specific conditions called out in the MHHSP-DES138-Interface Catalogue, which are used to determine the routing. For example, routing for an IF-009 can depend on the DI-979 Response Code being 'A' (Accept) or 'R' (Reject).
3. In this test phase, tests will also be required to show the working of the full migration functionality, data integrations and feedback.
4. Additional Market Roles will be present in Migration Testing to those that are present in Functional Testing. These additional roles represent the Legacy roles which will be present within the Migration process. Those roles will demonstrate that the relevant processes for Forward and Reverse Migration can be successfully completed.

5. Legacy Roles will transfer data to MHHS Roles utilising the DTS.

For Details of the Test Environment, please refer to [REF-06] MHHS-DEL618 – Environment Approach & Plan

7 Test Data Approach

7.1 Test Intervals

Test execution will be conducted as a single phase within the MHHS SIT test scope, however, some tests may be set to "deferred" if it has been agreed by all concerned parties that they will be executed in a later cycle, release, or test phase.

Prior to testing SIT volunteer participants will have been paired with contracted partners where possible or other participants in order to support:

- 1) Forward Migration: Which will involve the transfer of an MPAN from the Legacy Arrangements to the new MHHS arrangements. This will require the transfer of data from the Legacy Roles of HHDC/NHHDC and HHMOA/NHHMOA to the new MHHS Roles of Data Service and Metering Service; and, in the case of Migrations co-incident with a Change of Supplier, the transfer of data between Suppliers.
- 2) Reverse Migration: Which will involve the transfer of an MPAN from the MHHS Arrangements back to the Legacy Arrangements when a Supplier, who is not yet MHHS Qualified, Switches an MPAN which has previously Migrated to the MHHS Arrangements. Suppliers in SIT will be testing the CoS loss of the MPAN, the CoS gain of an MPAN by an unqualified Supplier is not within scope of participant testing.
- 3) The utilisation of Legacy Roles will provide the programme with assurance that the e2e migration processes are operable. It is not envisioned that all testing executed by all programme participants will require execution of the e2e process involving the Legacy roles, but this will be done for a subset of tests undertaken by participants. As there is no functional change to the legacy role of DA, the DA role will not be within scope of testing (the tests will complete with the generation of a D0209 from MPRS).

Test Data will need to be allocated and loaded appropriately to the test environment to support all cycles.

The [REF-02] MHHS-DEL1781 - SIT Migration Test Approach & Plan, which can be found on the [SIT Migration Test & Test Data Approaches & Plans page](#) of the MHHS Website, contains the detailed Test Plan.

7.2 Test Data Allocation

1. For each SIT Migration Test Scenario, the SI Test Lead will allocate a minimum of **50 MPANs** in total with the required data conditions.
 - o In the event that more MPANs are required during the test phases, the SI will identify and allocate further MPANs for the relevant participants to ingest into their respective environments.
 - o The required data conditions will be described in the SIT Migration Test Cases.
2. All MPANs records used in testing will be allocated unique reference IDs that will be used in all communications, including test results and defect reports.
 - o The reference ID is to protect MPAN data (GDPR PII) and that the use of MPANs in emails, instant messages, test results and defect reports must not happen to prevent a risk of GDPR non-compliance.
3. The SI Test Lead will identify and allocate suitable data considering the participant's own data cut.
 - o During the Test Data preparation activities for the SIT Migration Tests, a data integrity check will be executed between Programme Participant and SI to confirm the data is suitable for the tests and are properly loaded to the environment (see section 9 [Draft Test Data Schedule](#)).
4. When suitable data is not available from the Participant's own data cut, the SI Data Lead will manufacture or re-allocate data from another participant with a bigger dataset.
 - o It is the participant's responsibility to load the allocated test data, including any manufactured test data (eg: electricity consumption), to the test environment.
 - o The SI will publish to the participant a list of MPANs re-allocated, including the origin and destination participant.

Deleted: .

Deleted: Draft Test Data Schedule

5. For SIT Migration Tests, the SI will avoid allocating MPANs used during the CIT or Functional Tests.
- o The state of MPANs used in CIT or SIT Functional tests may be corrupted or misaligned between participants. In addition, for CIT tests, the systems are not expected to execute fully functional business processes.

7.3 Test Data Load

Following the same approach as SIT Component Integration Testing and SIT Functional Testing, the test environment for SIT Migration will be populated with data from the SIT Data Cut taken on the 19th August. The [REF-04] MHHS-DEL813 Overarching Test Data Approach & Plan provides the date and scope of the Data Cut.

Figure 2, Figure 3, Figure 4, Figure 5 and Table 1 have the details of the Test Data Loading mechanisms proposed for SIT Migration Tests.

Notes:

1. The participants will be required to load test data related only to the MPANs within the Licensed Distribution System Operators (LDSOs) who volunteered to SIT.
2. The Test Data Loading **Mechanism #1 IF/PUB Content Loader** which was utilised as the primary method for data population within CIT and SIT Functional, will not be utilised for SIT Migration as the assumption is that all MPANs utilised within Migration Testing, will be in a Legacy state at the beginning of execution for each test case. For testing of Reverse Migration, it is proposed that the same MPANs used for Forward Migration are then utilised for Reverse Migration.
3. **Mechanisms #2 DTS Message Content Loader** will be utilised to augment Legacy data within parties' systems, that is not present within the data cut taken on the 19-Aug-23.
4. The SI Test Data Lead will provide the list of MPANs to be loaded per Test Scenario/Test Case for each participant.
5. For the DTS messages present in the TOM, the SI Test Data Lead will ask the participant owner/sender of the data to share the DTS message content via the DTS (ElectraLink) and/or MHHS Test Data sFTP.
6. The [REF-08] MHHS-DEL816 Population of Data Items for Testing will be updated after alignment with Programme Participants and the Migration Test Cases to include the detailed method for each data item's population.

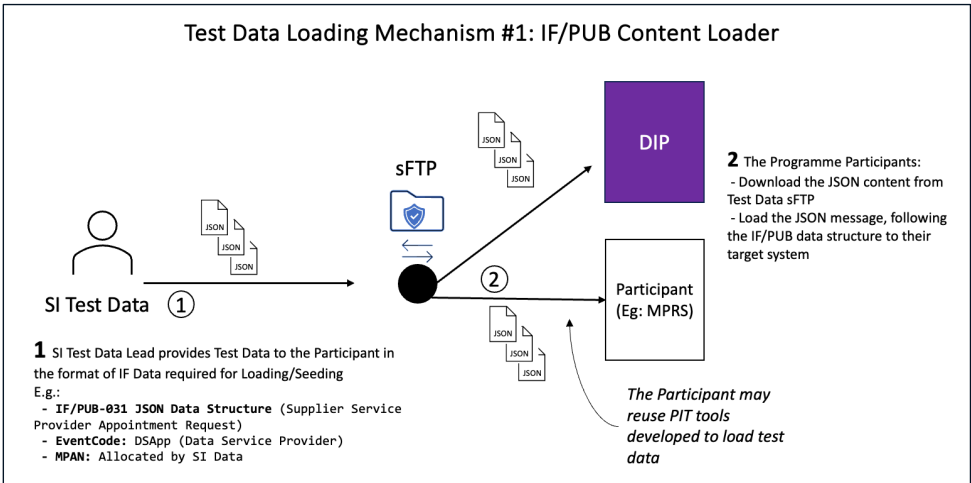


Figure 2: Test Data Loading Mechanism #1 – IF/PUB Content Loader

Formatted: Superscript

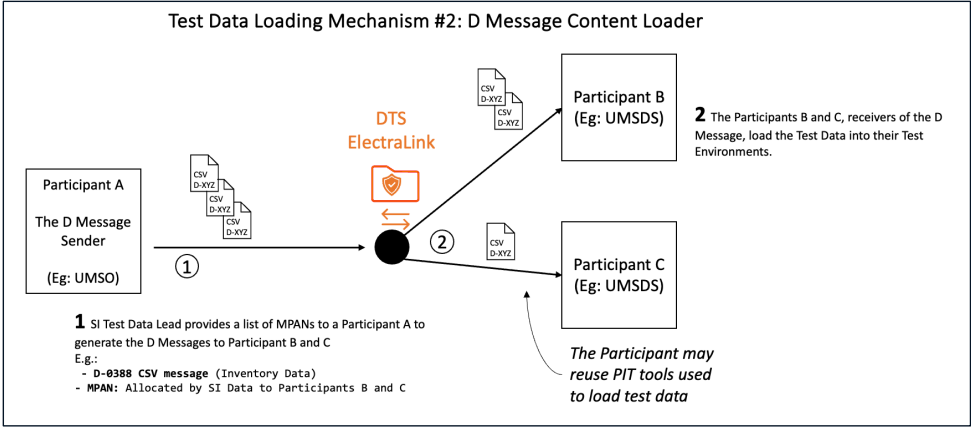


Figure 3: Test Data Loading Mechanism #2 – DTS Message Content Loader

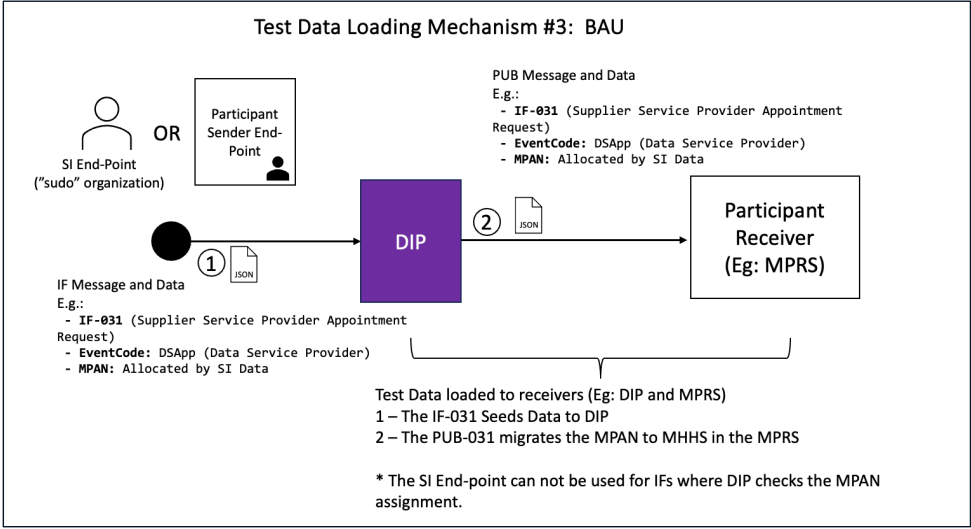


Figure 4: Test Data Loading Mechanism #3 – Business as Usual

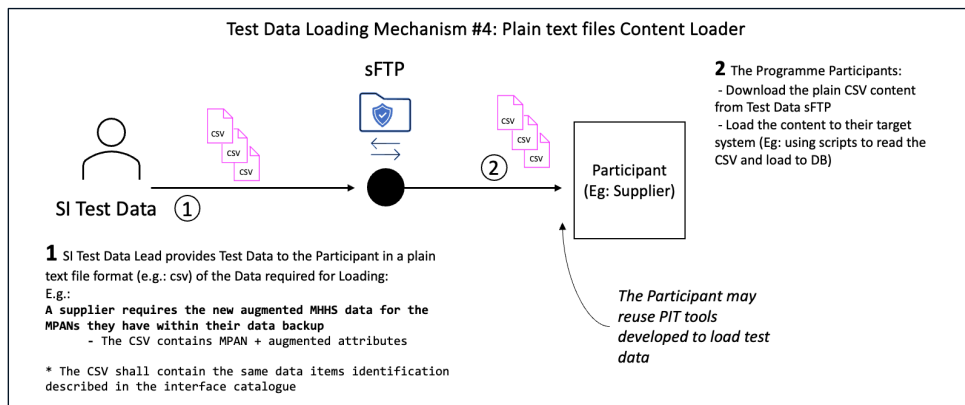


Figure 5: Test Data Loading Mechanism #4: Plain CSV Content Loader

Table 1: Test Data Loading Mechanism Pros and Cons

#	Test Data Loading Mechanism	Pros	Cons	Notes
1	IF/PUB Content Loader	<ul style="list-style-type: none"> NA – not required for data augmentation, as the data pre-condition for migration testing is that the MPANs start in a legacy state. 	<ul style="list-style-type: none"> Require the development/usage of a specific Test Data Load tool. Do not follow the Business Process, then it may create inconsistencies. 	Programme Participant may reuse tools developed to load PIT test data
2	DTS Message Content Loader	<ul style="list-style-type: none"> Allow to set-up Test Data independently of Test Case Execution Follows the same data structure as the DTS message (Eg: D0388 Inventory Data) 	<ul style="list-style-type: none"> Require the development/usage of a specific Test Data Load tool. Do not follow the Business Process, then it may create inconsistencies. 	Programme Participant may reuse tools developed to load PIT test data

#	Test Data Loading Mechanism	Pros	Cons	Notes
3	Business as Usual Data Loader	<ul style="list-style-type: none"> Do not require development of any testing tool. It will be executed anyway as part of SIT Migration Test Scenarios. Less risky to create inconsistent test data (if the registration/migration functions do not have critical bugs) 	<ul style="list-style-type: none"> Critical bugs in Migration functions will block the execution of other tests. Require the pairing of Participants to send/receive message for Test Data Loading before the execution of the core functions being tested. Time consuming step to be executed before the execution of any test case. 	<p>Can be used only when the registration or migration business process is fully functional for all involved parties.</p> <p>The SI End-point cannot be used for IIs where DIP checks the MPAN assignment or ownership</p>
4	Plain CSV Content Loader	<ul style="list-style-type: none"> Simple to understand, simple to generate. It will contain only the minimum data required to be loaded or updated. 	<ul style="list-style-type: none"> Require participants to have specific tools to read CSV and load to their data bases. 	<p>Programme Participant may reuse tools developed to load PIT test data</p>

7.4 Test Data Augmentation

Following CP1558 and R0032 implementation in Jun-23, new data attributes have been created in the Registration Services. Since the Data Cut, taken in Aug-23, won't have all attributes populated this data will require augmentation (as per SIT Functional). The SI Data Lead will provide test data values to the participants to populate the values for MPANs used in testing. The attributes include:

- Association of Import MPANs and Export MPANs
- Population of Smart Meter Data ([e.g. ESME ID](#))
- Creation of Connection Type
- Population of Domestic Premises Indicator and other related MPAN attributes

Notes:

- The spreadsheet [REF-08] MHHS-DEL816 Population of Data Items for Testing will contain, by service, the data items which will be augmented and provided back to PPs from the SI.
 - The SI is working with the PPs to ascertain a definitive list of data items.
 - The Data Items requiring cleanse will be derived from [REF-07] MHHS-DEL1181 MHHS Programme Data Cleanse Plan.

- c. The spreadsheet will be fully complete and locked by 01-Mar-24 (three months ahead of the kick-off of SIT Migration Tests). By then, the spreadsheet will incorporate all requirements based on detailed Migration Test Cases.
2. To create any given file for the loading Test Data, the SI Test Data Lead will require data from EES data cut, taken on the 19-Aug-24.
3. For the required data augmentation (eg: Connection Type), the SI Test Data Lead will provide the content of the missing data.

7.5 Test Data Generators

For electricity consumption data, data generators shall be used instead of historical consumption data.

The Data Generator tool, which launched on 24-May-23, provides realistic test data for the following types of data to use during Pre-Integration Testing (PIT) and Systems Integration Testing (SIT):

- IF-021 – Directly consumable data, consumed by Elexon Central Systems (ECS) among others.
- IF-041 – Directly consumable data, consumed by the Data Services

The Data Generator tool fully simulates the above-mentioned types of Meter and Settlement data and produces valid data for testing.

Information on the Data Generator is available on the Simulators & Emulators page of the Collaboration Base. Participants will need their own tool to transform and inject the data into the relevant Service, where appropriate.

Notes:

1. Participants shall **NOT use real domestic customer consumption data** associated with the real MPANs in the Test Environment.
2. If, during the Data Cut, real domestic consumption data is extracted as part of the production data backup and loaded to the participant test environment, the participant shall apply a transformation script to modify and randomise the domestic consumption data.
3. Participants **may use real consumption data for non-domestic** MPANs. It is the responsibility of the participant to analyse the risks and impact of using real consumption data in the test environment. The real consumption data may expose participants' business-sensitive information.

7.6 DIP – Onboarding and Test Data Seeding

It is proposed that no seeding is required within the DIP as the IF-031 will be utilised as per the Migration Design, which will use the developed functionality to populate the DIP, for each MPAN, as the tests are executed.

7.7 Test Data – Elexon Central Settlement Services

It is proposed that no seeding is required within Elexon Central Services as the IF-036 will be utilised as per the Migration Design, which will use the developed functionality to populate data, for each MPAN, as the tests are executed.

7.8 Test Data – MPRS

To populate the Registration Services, three load mechanisms will be required (See section 7.3):

1. Mechanism #2 – DTS message / CSS Message:
 - a. SI Data Lead to provide text files containing DTS flow D0312 (without using the DTS).
 - b. SI Data Lead to provide JSON files replicating CSS messages related to Registration data.
2. Mechanism #3 – BAU:

- a. A set of MPANs will be reserved/allocated to be used for Testing Scenarios involving the registration / agent appointment business process and messages (e.g. IF-031)

3. Mechanism #4 – CSV:

- a. CSV files containing DB messages for updating LDSO data items. E.g. DB02 and DB05.

In order to save time and effort, Functional SIT Augmented Data loads for MPRS will be re-used. This will avoid the need to develop new augmented data and the loading of the SIT Functional Augmented data would have been proven to work. This data set would not include the DIP Appointment Messages as MPANs needs to be in a legacy state, but other pre-MHHS updates can be re-used.

Formatted: No bullets or numbering

7.9 Test Data – SDS and ADS

For populating SDS and ADS test data, the Migration Design process will be utilised, meaning data will be populated as the test cases are executed. (See section 7.3):

1. Mechanism #3 – BAU:

- a. A set of MPANs will be reserved/allocated for Testing Scenarios involving the full business processes involving all registration messages.

7.10 Test Data – Metering Service

For populating SDS and ADS test data, the Migration Design process will be utilised, meaning data will be populated as the test cases are executed. (See section 7.3):

1. Mechanism #3 – BAU:

- a. A set of MPANs will be reserved/allocated for Testing Scenarios involving the full business processes involving all registration messages.

Test Data – Legacy Agent Roles

For populating Supplier Registration, Data Service Appointment and Metering Service Appointment, the SI will send data using the following load mechanisms (See section 7.3):

1. Mechanism #2 – D message:

- a. SI Data Lead to provide text files containing DTS data flow D0312 / D0155 (without using the DTS).

The SI Data Lead to provide D0155 (appointment) / D0312 (meter details) to the Legacy Agent test managers to load the information for the allocated MPANs.

For the participant's allocated MPANS, each Legacy Agent shall load the test environment with test data taken from the Data Cut production backup. The Meter Operator test environment will contain the Meter Technical Details (MTD) for the allocated MPANs.

If loading only the allocated MPANs to the test environment is not feasible for any technical reason, the participant may opt to load the content of all MPANs contained in the data backup.

The data shall contain all meter technical details required to generate DTS messages.

Formatted: MHHS Body, Numbered + Level: 2 + Numbering Style: a, b, c, ... + Start at: 1 + Alignment: Left + Aligned at: 1.9 cm + Indent at: 2.54 cm

Formatted: Font: (Default) Arial, Bold, Font colour: Accent 1

Formatted: Font: (Default) Arial, Bold, Font colour: Accent 1

Deleted: Metering Service

Deleted: Metering Service

Deleted: Metering Services

Deleted: to the Data Providers

7.11 Test Data – Suppliers

Supplier shall pre-load the test environment with test data taken from the Data Cut Production Backup.

1. Pre-load MPAN and Meter/Data service association:

- a. The SI Test Data lead will provide a list/CSV file (load mechanism #4 – See section 7.3) containing the pairing between MPAN, Meter Service and Data Service. The list will contain the new augmented MHHS data. The SI Data Lead will ensure the alignment with Registration Service.

2. Mechanism #2 – D message:

- a. SI Data Lead to provide text files containing DTS data flow D0217 (without using the DTS).
- b. The Programme Participant shall load the information to the test environment.

Deleted: 03

3. BAU:

- a. A set of MPANs will be reserved/allocated to be used for Testing Scenarios involving the registration business process and messages.

7.12 Test Data – Network Operators

Network Operators shall pre-load the test environment with test data taken from the Data Cut Production Backup.

For service providers allocations, the mechanisms below will be required (See section 7.3):

1. Mechanism #3 – BAU:

- a. A set of MPANs will be reserved/allocated for Testing Scenarios involving the full business processes involving all registration messages.

7.13 Test Data – UMSO

For populating UMSO test data, the participant shall extract and load the data from the data cut. The data shall contain all inventory information required to generate D0388 – Unmetered Inventory Data message.

For Registration messages received from the DIP, the following load mechanism will be required (See section 7.3):

2. Mechanism #3 – BAU:

- a. A set of MPANs will be reserved/allocated for Testing Scenarios involving the full business processes involving all registration messages.

7.14 Test Data – UMSDS

For populating UMSDS test data, the following load mechanism will be required (See section 7.3):

3. Mechanism #3 – BAU:

- a. A set of MPANs will be reserved/allocated for Testing Scenarios involving the full business processes involving all registration messages.

7.15 Test Data – EES

EES will initially be populated in the test environment with test data from the data cut backup.

In order to populate the EES with the new MHHS data items, appointments of Meter and Data Service the following load mechanism will be required (See section 7.3):

- Mechanism #4 – Plain Text CSV

7.16 Test Data – DCC

7.16.1 Central Switching Service (CSS)

DCC shall pre-populate the CSS test environment with data extracted from the Data Cut/Backup.

- A full backup of all MPANs is not required for SIT Migration. However, it is required that the CSS contains information for all LDSO SIT Participant MPANs.

- CSS JSON messages to be used to change Registration Data and Agent Appointment data to align with other systems (this will only be required where the data cut does not contain the required Supplier and Agent MPID data).

7.16.2 Data Service Provider (DSP)

It is not envisioned that the DSP will be required for Migration Testing as there will be no additional functionality above that already tested within SIT Functional.

7.17 Smart metering Data

When required, the data shall be generated using Data Generators. See section 7.5.

Note: the programme won't require consumption history for Smart Meters to be included in the Data Cut.

8 Test Data Anonymisation

Each PP will be allocated a set of suitable test data for each test case in the scope for their role.

All MPANs records used in testing will be allocated unique reference ID that will be used in all communications, including test results and defect logging in ADO.

Due to the MPAN being considered Personal Identifiable Information (PII), it cannot be shared outside of the System Test Environment. Ie: While the Real MPAN can be used in the IF/PUB or DTS messages transferred and processed in the test environment, it cannot be shared in communication means like email, test reports, bug triage, etc.

The programme will provide a table to all participants with Unique Ref ID for the allocated MPANs to be used in communication. For example:

- MPAN Core: 20 1234 1234 123

- Ref ID (For communications and reports): dfa4aba971c132ae07014206e6abb1c6

- Note:
- The same anonymisation/obfuscation approach shall be used for Domestic and Non-Domestic participants.
 - **NO real domestic consumption data will be used for SIT Tests.**
 - Participants may use real non-Domestic consumption/generation to check their processes.
 - It is the responsibility of the participant to analyse the risks and impact of using real non-domestic consumption data in the test environment. The real consumption data may expose participants' business-sensitive information.

8.1 Test Data Anonymisation for Testing Reports and Test Evidence

As the MPAN is considered Personal Identifiable Information (PII) and cannot be shared in Test Reports and any evidence, logs or images attached to Azure DevOps. The participant needs to obfuscate the MPAN while keeping the ability of assurance teams to verify the content.

For Reports and Test evidences:

1. The participant shall remove or obfuscate the unique identifier digits of the MPAN – Digits 11 to 18 of the full MPAN (see Figure 6).
2. For image files, the participants can blur or overlay the unique identifier with any colour graphic shape (e.g.: a white rectangle covering the unique identifier digits).
3. The same obfuscation approach shall be applied for Domestic and Non-Domestic MPANs

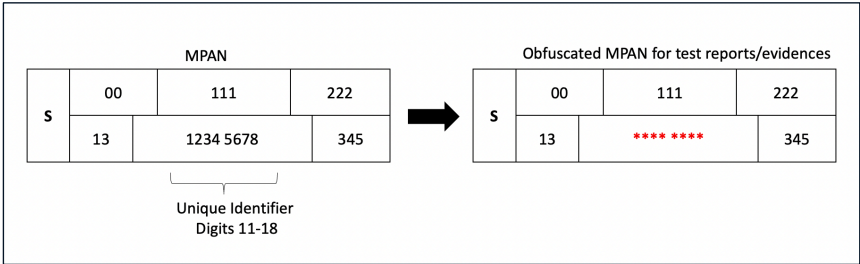


Figure 6 – MPAN obfuscation for Test Reports and evidence (diagram shows the S-Number with the MPAN component being the bottom row).

9 Draft Test Data Schedule – *to be confirmed on completion of Migration test plan*

Please refer to [REF-02] MHHS-DEL1781 - SIT Migration Test Approach & Plan, which can be found on the [SIT Migration Test & Test Data Approaches & Plans page](#) of the MHHS Website, for the SIT Migration Test Schedule. Based on SIT Migration test start of 10-Jun-24, Test Data will made available to Participants 4 weeks prior and loaded into their systems 2 weeks prior.