



MHHS Data Integration Platform (DIP) Simulator Demo Webinar Q&A

1 December 2022

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Change Record

Date	Author	Version	Change Detail
14 Dec 2022	MHHS PPC	0.1	Initial Draft

Reviewers

Reviewer	Role
Rebecca Farooq	Simulators & Emulators Project Manager
Martin Freeman	Simulator Team Lead Developer
Kate Goodman	Test Architect
Smitha Pichrikat	Client Delivery Programme Manager

1. DIP Simulator specification

1.1 Will the Simulator cover interactions with all service types, including metering services?

We have identified a set of 15 standard DIP interfaces to be included in the initial release of the DIP Simulator. Please see the accompanying webinar slides on the Events page of the [MHHS Website](#) for this full list (slide 16).

Release 1 (early 2023) will support the following interfaces:

- MHHSP-IF-009, IF-013, IF-014, IF-018, IF-021, IF-022, IF-023, IF-024, IF-026, IF-036, IF-040, IF-041, IF-043, IF-044, and IF-047.

Release 2 (expected end of May 2023) is currently in planning. It is likely we will support the following additional interfaces, but this will be confirmed:

- IF-001, IF-002, IF-005, IF-006, IF-007, IF-008, IF-015, IF-016, IF-025, IF-027, IF-028, IF-031, IF-032, IF-033, IF-034, IF-035, IF-037, IF-038, IF-038, and IF-045.

1.2 Will example Interface (IF) /Publication (PUB) messages be provided alongside the DIP Simulator?

IF messages will be provided via the Postman Collections. PUB messages will be generated by the DIP Simulator when the participant sends in an IF message.

1.3 Will the error messages returned by the DIP Simulator be representative of what we would expect to receive from the 'real' DIP?

Yes, these error messages conform with the specification as it currently stands.

1.4 Are the DIP Application Programming Interface (API)/Webhook specifications currently available or will these be published alongside the DIP Simulator?

There is already some documentation relating to the DIP Simulator available. The source code contains several README files, and there are also several video demonstrations. Please email Testing@mhhsprogramme.co.uk for more information.

Interface specifications are already available as part of the MHHS End-to-End Design. You can find links and documents on the [Design Artefacts webpage](#) of the Programme website. The Interface Catalogue is available by selecting *Meter to Bank Library* and then searching for document number "DES138".

1.5 Is there a feature list showing the differences between the DIP Simulator and the actual DIP?

We have an in-progress high-level DIP Simulator Requirements Specification that refers to the End-to-end solution architecture. It highlights features of the DIP that we are implementing, and those that we are not. Once this document has been finalised and signed off, it will be circulated with participants.

1.6 Will the Simulator encrypt the payloads?

The payloads are sent over HTTPS but are not individually encrypted. Further work on security is anticipated within the specification, which will then be incorporated into Release 2, which is expected at the end of May 2023 and this may include encryption but needs to be confirmed.

1.7 Why is the Simulator sending lowercase first characters (e.g. commonBlock), but JSON Schema uses uppercase first characters (e.g. CommonBlock)?

The JSON deserialisation is case-insensitive in the DIP Simulator, so the case of the Postman payload does not matter.

1.8 As JSON is case-sensitive, have you considered ensuring that the deserialiser is configured for consistency?

The specification itself is not consistent in its field casing at the moment which is why we are not enforcing it. As the specification develops, we will continue to consider the value introducing case sensitivity.

1.9 Will these Postman Collections be made available?

Yes, they will.

1.10 Will any client-side Software Development Kits (SDKs) or tools be made available along with the Simulators?

No, we are not providing any client-side SDKs. We will provide the necessary information, guides and training you will need to understand the available tools and configure them to suit your requirements.

Regarding the scope of the DIP Simulator, it will take in a message and go through Level 1 and Level 2 validation and reject the message if there is an issue. If you have configured a Recipient, the DIP Simulator will pass a correct message through to the Recipient. As part of your test, if you want to mimic Level 3 or Level 4 validation, you may construct a message to suit your testing and send it back in using the DIP Simulator.

We will provide templated interface messages for you to use as the basis for your testing requirements.

1.11 When a single message contains multiple payloads, is it valid to have different environments and schema values across the messages? Also, when you have a single message containing multiple payloads, can the environment and schema version be different across each individual message?

A single message can only contain a single payload. The schema version can be different (different messages will have different version numbers) but the environment must correspond to the environment it is submitted on.

1.12 Will the Simulators have the production data added to it for the various validations?

The DIP Simulator will not have production data. The data you use with the DIP Simulator is up to you to define.

1.13 Where an inbound message has multiple errors, will it fail on the first one or will it go through each error so the sender can see which parts failed?

It depends on the severity of the first error. For a message with many minor errors, you will receive a response describing all the errors. For a message with an error so serious that the payload can't be deserialised, or the interface message code cannot be found, you will just get back a single error.

2. Webhooks

2.1 What are the requirements for publishing a webhook? Can these connections be made private and secure?

There are no requirements for publishing a webhook. Security will be added later in the development process.

2.2 Are webhooks/callbacks validated by the DIP to ensure genuine calls are made?

Webhooks/callbacks are provided by participant components. The calls to register those callbacks are made using API calls that will be authenticated using mutual Transport Layer Security (mTLS) which will be implemented in the Simulator.

2.3 How should webhooks validate the caller being the DIP? Will network controls, like known white-label IP addresses, or a private Azure virtual network be used?

All communication will be over mTLS, so that would apply to the webhooks too.

3. Access to the DIP Simulator

3.1 How can we sign up to connect to and use the DIP Simulator API? How long will this process take and when is it available if not now?

To use the alpha version of the DIP Simulator, please email the development team at Testing@mhhsprogramme.co.uk for access to the Simulator and its source code. Participation will be on a first come, first served basis, so please reach out if you are ready to use the alpha version of the Simulator.

To use the DIP Simulator in its production version, there will be information published in The Clock signposting where to find it on the Collaboration Base.

3.2 Please publish the contact details for the development team so we can reach out once ready to connect.

Please contact the development team using the Testing mailbox: Testing@mhhsprogramme.co.uk and we will get back to you.

3.3 Does everyone use the single hosted DIP Simulator? When and how will the ability to use the Simulator locally or self-hosted be provided?

You may use the hosted Simulator (which will be a single instance) or you may build the source code and host on your own infrastructure. The code for hosting on your own infrastructure is available now. Please email the development team at Testing@mhhsprogramme.co.uk for access to the Simulator and its source code.

Participants will see what their organisation is configured to see.

4. Timelines & releases

4.1 How do we find out about new versions of the Simulator?

We expect releases to happen in early 2023 and at the end of May. We will communicate any interim releases via our Show & Tells that occur at the end of each sprint, which any participant can join. We will also communicate new versions of the Simulator via The Clock newsletter and on the Sims & Ems page of the Collaboration Base, with release notes to accompany any changes.

Please email Testing@mhhsprogramme.co.uk if you would like to join our Show & Tells.

4.2 What timeline do you have for the DIP Simulator in SIT Staging, SIT A, SIT B and User Interface Testing (UIT) phases, and is there a timeline for the testing stubs and emulators please?

The DIP Simulator will not be used in the SIT and UIT environments because the real DIP will be used instead.

We expect the Data Generators to be released at the end of May 2023. The Emulators will be less relevant for participants as they will be used internally within the MHHS Programme for SIT. Please see Replan Round 3 for more guidance on timelines.

4.3 How long will the Simulator be available for participants?

The primary use of the DIP Simulator is for the period until the real DIP is available. Beyond that, the Programme recognises that an ongoing test facility is needed but have yet to decide whether this is provided by a DIP test environment or by the DIP Simulator (or both).

Participants will be given access to the source code, so will be able to host the DIP Simulator internally for as long as they need.

4.4 If the documents and specifications are updated, will it still be possible to send older/newer versions of the interface messages?

No, we will in principle support the latest version of the interface definition only, to ensure that all participants are always testing against the latest version of Design Artefacts. Any upgrades to the Simulator will be undertaken in a planned manner and will be communicated if changes to the specifications are agreed via the current Design Work- Off Plan or future Change Requests.

The Simulator only targets one version of the specification at any time.

4.5 How is change control being managed?

The source code is in Azure Dev Ops repository. Regarding changes to requirements, we have a set of base requirements which are updated via Cloud Controls Matrix (CCM).

5. Miscellaneous

5.1 A demo of a specific scenario would be useful.

Please join us for our Show & Tell sessions held at the end of each development sprint. To do so, please email Testing@mhhsprogramme.co.uk and we will ensure you are on the distribution list.

5.2 What messaging platform is used for DIP?

The DIP procurement process is still in progress. Once the contract has formally been awarded this will be communicated in The Clock newsletter.

5.3 Will the slide deck and link to recording of the demonstration be provided after today's webinar?

The DIP Simulator webinar recording and slides can be found on the Events page of the [MHHS Website](#).

5.4 Is there a reference for what small suppliers are expected to do during the first half of 2023?

The Programme has issued an Interim Plan that charts out the Programme and participant activities until April 2023. The Interim Plan on a Page can be found on the Planning page of the [MHHS Website](#).

If you have specific questions, please contact the PPC team at PPC@mhhsprogramme.co.uk, and we are happy to discuss your specific queries.