

EMVS Backwards Compatibility Design Note

Table of Contents

1. Purpose	3
2. Scope.....	3
3. Underlying Approach	3
4. Implications for clients connecting post SR1.4 release.....	4
4.1 Clients using the 20161 Schema (SR1.3.02 version).....	4
4.2 Clients using the 20181 Schema (SR1.4 version).....	4
5. Cross Schema Implications.....	4
6. References.....	4

1. Purpose

Backwards compatibility is a mechanism which allows a hardware or software system to use the interface of an older version of the same product. I.e. A new standard product or model is considered backward compatible when it is able to read, write or view older formats.

In the context of the EMVS European Hub (Hub), this means that when a new version of the Hub is released, On-Boarding Partner (OBP) and National System (NS) clients which have not updated to the new version of the Application Public Interface (API) specification (the Hub Schema) will continue to function as if they are connected to the previous version of the Hub.

This design note addresses how backwards compatibility is achieved in the Hub Software Release 1.4 (SR1.4) between the new 20181 schema (supporting SR1.4 functionality) and the 20161 schema (supporting SR1.3.02 functionality).

2. Scope

The document covers;

- The underlying approach for backwards compatibility.
- What is meant by backwards compatibility for SR1.4.
- The implications of cross schema connections (see Section 5 for more details).

Note; details of the changes between SR1.4 and the previous release SR1.3.02 can be found at the end of the SDK documents (see section 6).

3. Underlying Approach

It is an operational and design principle for the Hub that the Hub will provide backwards compatibility for the previous version of the API only (i.e. only 2 Schema versions will be supported).

For the Hub, backwards compatibility is achieved by providing 2 connecting endpoints for the Hub service, one for each of the 2 schema versions.

A client wanting to connect using one of the schemas, subscribes to Hub services using the appropriate subscription endpoint for that schema. Having done this, all subsequent calls to the Hub by that client will be expected to conform to the relevant schema and all responses from the Hub to that client will conform to the same selected schema.

At any given point in time a connecting client can only point to one of the subscription endpoints. E.g.

- An OBP/NS client that is coded to use the 20161 Schema subscribes to the Hub using the 20161 subscription endpoint and then has to ensure that all messages delivered to the Hub conform to the 20161 Schema version.
- An OBP/NS client that is coded to use the 20181 Schema subscribes to the Hub using the 20181 subscription endpoint and then has to ensure that all messages delivered to the Hub conform to the 20181 Schema version.

The subscription endpoint for the previous version of the schema will remain unchanged in the new release.

4. Implications for clients connecting post SR1.4 release

The underlying approach has the following implications for clients wanting to connect to the Hub after the SR1.4 deployment:

4.1 Clients using the 20161 Schema (SR1.3.02 version)

- The subscription endpoint for the 20161 Schema is unchanged from SR1.3.02 Hub.
- Clients using the 20161 schema can continue to subscribe and connect to the SR1.4 Hub by subscribing to the 20161 subscription endpoint.
- Any calls used by a client using the 20161 schema are unchanged for the SR1.4 release.
- Any transaction messages will be processed to give the same callbacks as per the SR1.3.02 Hub.

4.2 Clients using the 20181 Schema (SR1.4 version)

- Any connecting Clients that are using the 20181 Schema must subscribe using the 20181 subscription endpoint published in the SDK which can be viewed at the 'Technical Info Pack' Step 4.1 on the On-boarding Partner Portal.

5. Cross Schema Implications

It is possible for an OBP client and a NS client that are exchanging data to be connected using different schemas. This results in a cross schema communication. The following points need to be considered in these cases:-

- A mapping between the 20161 and 20181 Schemas is implemented within the Hub when an OBP client is using one schema and a National System is using the other schema. This should have no material effect other than to populate schema fields with default values where required.
 - E.g. A Product Pack Data (PPD) transaction from an OBP client using the 20181 Schema, which no longer supports the serialisation flag, will be distributed with a Serialisation Flag value of "False" to a NS client using the 20161 Schema.
- Data delivered in 20161 Schema transactions will be stored internally in 20181 Schema compatible data structures. This has no impact to clients using the 20161 schema directly but may change data that is present in a report depending on the report.
 - E.g. Product Master Data Stakeholder reports will now display a simplified version number. The version number will have been assigned by the Hub.
- Data originally provided to the Hub under the 20161 Schema will be migrated to the data structures required for the 20181 Schema. This will have no material effect, other than some of the data in reports might now be changed (see previous bullet).

6. References

Ref	ID	Version	Document Title
1.	EMVS0713	5.0	EMVS SDK for National Systems
2.	EMVS0714	7.0	EMVS SDK for OBPs