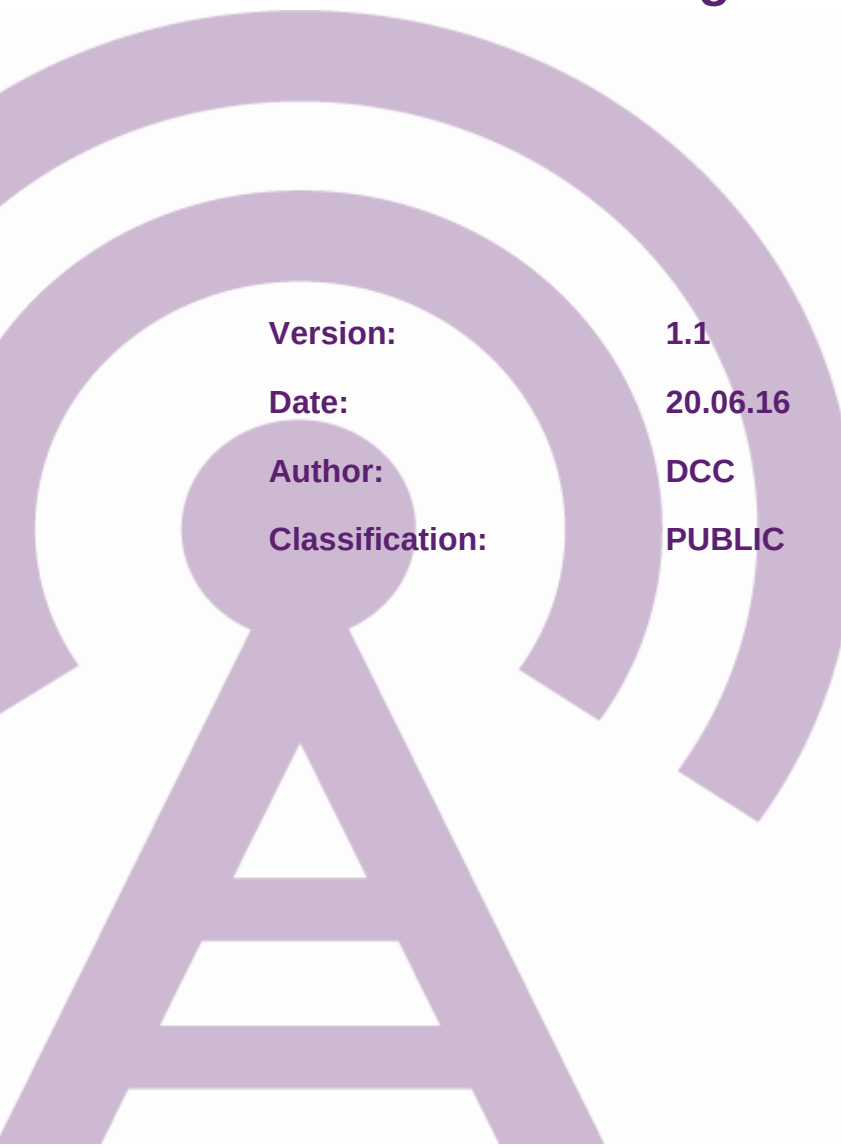


SEC Modifications

- **DCC Preliminary Assessment (PA)**
- **SECMP0004**
- **Inclusion of Meter Serial Number data item in the Smart Metering Inventory**



Version:

1.1

Date:

20.06.16

Author:

DCC

Classification:

PUBLIC

SECMP0004 - CR178

Timescales to implement change

Subject to Authority Determination being made with sufficient time for DCC to carry out the required implementation and release activities, DCC is able to implement this change for the June 2017 release.*

**DCC's Impact Assessment will inform the date by which Authority Determination is required, in order for DCC to implement this change as part of the release stated above.*

Preliminary ROM cost range

The table below details the ROM cost information for the changes required to facilitate changes to the DCC solution relating to this SEC Modification proposal.

	Lower	Upper
Base Option Cost	£430,000	£661,000
Cost Addition 1 Includes Options A - support for IHD & PPMID Devices in addition to ESME & GSME <i>(additional cost on top of base option if selected)</i>	£30,000	£46,000
Cost Addition 2 Options B - support for all Devices in SMI (additional cost on top of base option <u>and</u> Cost Addition 1 - option A, if selected)	£30,000	£46,000
Fixed price for Full Impact Assessment	£10,500	

Please note that all ROM information provided above may change, subject to detailed Impact Assessments (IA) being carried out, ongoing refinement of the SEC Modification's requirements, the allocation of a SEC Modification into an actual Release and DCCs commercial negotiation process with its Service Providers to ensure all change represent value for money.

<i>Estimated costs are exclusive of VAT.</i>

Proposed High Level Solution

In summary, the change is to add Meter Serial Number (MSN) as an optional field to the Device table in the Smart Meter Inventory.

Unless an optional extension is applied (known as Option A; see below), this new field will be applicable only to ESME & GSME devices, and has been requested by suppliers because the information is used in some existing industry processes. As other SMIP devices do not feature in existing industry processes, and Device ID will continue to be the master ID for devices within the SMIP, there is significantly less of a case for recording a separate serial number for other device types, however see Option A below for the possible extension to other device types.

The data will be supplied (for new devices) via SRV 12.2 Device Pre-notification, and can be read and updated for existing devices via SRVs 8.2 Read Inventory and 8.4 Update Inventory respectively. Validation checks will be applied according to device type such that serial numbers will not be permitted for CHF, GPF and type 2 devices, and whether or not they are permitted for IHD and PPMID depends on whether or not Option A is taken.

Content validation of incoming values for the MSN will be on length only, and will be limited to 14 characters. Note that 14 is the expected length of gas MSNs, while 10 is the expected length of electricity MSNs, however the DSP will not apply fuel-specific validation to the field.

SSI screens and reports concerned with inventory data will be updated to include the new data item, and this will be dependent on device type as above.

The Meter Serial Number will not be added to ESI reports or the Service Management System, on the grounds that Device ID will continue to be the master ID for devices within the SMIP, and MSN is just an additional piece of data for the convenience of Service Users.

As the change will be deployed as a new release to an already-live system, ESME & GSME devices added prior to the release (and IHD & PPMID if applicable according to Option A) will not have the new field populated. There will be no bulk upload data acquisition for this, and suppliers will be able to use SRV 8.4 Update Inventory to update individual devices.

Affected components

DUIS:

Add Meter Serial Number, with validation rules defined for all device types, and population allowed only for ESME & GSME (this is base case; see Option A), as an optional parameter to the following SRVs:

8.2 Read Inventory

8.4 Update Inventory

12.2 Device Pre-notification

There will be restrictions on the Eligible Users able to update the MSN, as defined in the CR, which will be the same restrictions as currently applied when updating MPxN, i.e. only the registered supplier.

The change to SRV 8.2 is to display the MSN in the returned data, however, there is no change to the input data, which will continue to be specified by device ID (i.e. MSN cannot be used to request inventory data; if a Service User knows only the MSN then the SSI must be used to look up the device ID).

Note there will be no change to the authorisation of SRV 12.2, which will continue to be capable of being submitted by any User type.

There will be changes to these SRVs in a system which is live by then, and although a Working Group clarification in the CR requests a “big bang” approach rather than backwards compatibility, DSP is required to support one previous version of the DUIS interface when a change has been made, so we assume this will need to be provided. This is expected to be implemented by following the agreed design pattern for introducing separately named versions of the affected Service Requests, although the precise details will need to be agreed as part of the Full Impact Assessment.

The cost for developing and testing both versions of the Service Requests will be covered by this CR.

As these are DCC-only Service Requests there is no impact on Transform code or MMC.

Request Management:

Request Management will need to handle the changes to the affected SRVs.

This will include support for both the new and previous versions of the SRVs.

Validation will be applied to the field to check that the field is not present unless the device type is ESME or GSME (see Option A) and to check that the length does not exceed 14 characters. The field will be optional.

SSI:

Add Meter Serial Number to display of inventory data for ESME & GSME devices (see Option A) in the SSI inventory screens (UC_Inventory_001 & the subsidiary UC_Inventory_002) and all relevant SSI reports, which are 10 reports (essentially all those which feature Device ID) as follows:

- RSMI_001 Installation Status Smart Meter Report
- RSMI_002 Smart Metering Devices Status and Firmware Report
- RSMI_003 Smart Metering Devices Status and Model Report
- RSMI_004 Communications with No Attached Devices Report
- RSMI_005 Scheduled Service Requests Report
- RSMI_007 Device Certificate Report
- RSAT_002 Smart Metering Device Transaction Report
- RSAT_003 Firmware Deployment Report
- RSAT_004 Firmware Activations Service Request Report
- RSAT_005 Firmware Update over SLA Report

The MSN will be enabled as an additional inventory details search criterion in the SSI inventory search function (UC_Inventory_001), however note that other functions will not enable requests by MSN; the intention is that the SSI will provide the facility to use an MSN to look up the corresponding Device ID, and the user can then use the Device ID to access other facilities. Note that there is no guarantee that MSNs will be unique across manufacturers so a search may return more than one Device ID.

Data Management:

Add Meter Serial Number to the Device data entity. The field will contain up to 14 characters and will be optional. An index should be added in order to support lookup from MSN to Device ID for the SSI. Note that there is no guarantee that MSNs will be unique across manufacturers.

There will be an increase in storage size in the region of 20Gb in total over the production (including reporting) & DR databases at full rollout in the base case, 50Gb if Option B is taken, and 30Gb for Option A.

Infrastructure:

The only material impact on infrastructure will be on the amount of storage due to the additional data item, which will be approximately as below for production & DR, taking into account indexing and history:

- Base: 20Gb
- Option A: 50Gb
- Option B: 30Gb

Options and Clarifications Identified in the CR:

Clarification requested in SECMP0004-BR0020: DSP recommends that MSN is made optional. If it is mandatory in the database then the cutover of the production database to Release 2.0 would require a pre-live data load which is not part of the requirements and could be expensive to provide. If it is made mandatory in Service Requests then Service Users would be forced to use MSN, and some of their processes might not support it.

Clarification re potential demand spike (see 7, Regulatory Design Query 5 in SECMP0004_DCC_Early_IA v1.3.docx): We are making the assumption that the DSP will not need to provide any special handling for a potential demand spike as suppliers use SRV 8.4 to update MSNs for their devices after go-live, and that expectations will be managed by the DCC & SECAS in order to spread out the load voluntarily. We presume that if deemed appropriate there will be SEC wording regarding obligations about fair use in this area.

Options:

This covers any additional cost as a result of serial number being supported for IHD & PPMID as well as ESME & GSME device types, which is referred to in SECMP0004-BR0110.

This is subdivided to:

Option A: Extend to IHD & PPMID only

Option B: Extend to all device types.

In all cases device type-specific behaviour will need to be applied in validation when updating the data and when displaying the data. The main implementation differences will be potential additional testing if more device types support the data being updated, in SSI as well as DUIS, and impact of additional storage.

Note that if one of these options is applied then an alternative name may be chosen instead of Meter Serial Number, such as just "Serial Number". The name chosen will have no impact on the cost provided that the decision is made early on in the design process and is not subsequently changed.

Clarification re the options identified in SECMP0004-BR0120:

These build on the options above to include the ability to specify additional device types when searching in the SSI inventory search screen. We have not itemised these as separate options because we believe that implementation of the SSI search screen should correspond to the device types included in the database according to the options above. It could cause more work rather than less if the device types supported by SSI search screen options are different from the ones supported by the database & core DSP.

The estimates in this document have been prepared on the assumption that the SSI search screens are consistent with the device type options chosen.