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MP170 ‘Firmware updates to Point to Point Alt HAN Devices’

Annex B

Legal text – version 0.1

About this document

This document contains the redlined changes to the SEC that would be required to deliver this Modification Proposal.

This document contains the changes required to deliver the Proposed Solution.

Appendix AD 'DCC User Interface Specification'

These changes have been redlined against Appendix AD 'DCC User Interface Specification' version 5.0.

Amend Section 3.8.104 as follows:

3.8.104 Read Inventory

| 3.8.104.1 | Service Description | |
|---|--|-----|
| Service Request Name | ReadInventory | |
| Service Reference | 8.2 | |
| Service Reference Variant | 8.2 | |
| Eligible Users | Import Supplier (IS) Export Supplier (ES) Gas Supplier (GS) Registered Supplier Agent (RSA) Electricity Distributor (ED) Gas Transporter (GT) Other User (OU) | |
| Security Classification | Non Critical | |
| BusinessTargetID - Device applicable to this request Type | DCC Access Control Broker | |
| Can be future dated? | No | |
| On Demand? | No | |
| Capable of being DCC Scheduled? | No | |
| Command Variants applicable to this Request (Only one populated) | 8 – DCC Only | |
| Common Header Data Items | See clause 3.4.1.1 | |
| Data Items Specific to this Service Request | See Specific Data Items Below | |
| Possible responses from this Service Request | These are the possible responses applicable to this Service Request. Please see clause 3.5 for more details on processing patterns <ul style="list-style-type: none"> Response to a Non-Device Service Request Also see Response Section below for details specific to this request | |
| Response Codes possible from this Service Request | See clause 3.5.10 for Common Response Codes | |
| GBCS Cross Reference | Electricity | Gas |
| GBCS MessageCode | N/A | N/A |
| GBCS Use Case | N/A | N/A |

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3.8.104.2 Specific Data Items for this Request

ReadInventory Definition

| Data Item | Description / Values | Type | Mandatory | Default | Units |
|----------------|---|--|-----------|---------|-------|
| UPRN | Unique Property Reference Number | sr:UPRN (Restriction of xs:positiveInteger (totalDigits = 12)) | No | None | N/A |
| DeviceID | Device ID of a device in the premises | sr:EUI (See clause 3.10.1.3) | No | None | N/A |
| MPxN | MPAN or MPRN associated to a Device in the premises | sr:ImportMPxN (Restriction of xs:string (minLength = 1 maxLength = 13)) | No | None | N/A |
| PropertyFilter | PostCode and Address identifier that uniquely identify an address | sr:PropertyFilter | No | None | N/A |

Table 225: ReadInventory (sr:ReadInventory) data items

PropertyFilter Definition

| Data Item | Description / Values | Type | Mandatory | Default | Units |
|-------------------|--|---|-----------|---------|-------|
| PostCode | Post Code of Metering Point This search criteria is case insensitive | sr:PostCode (Restriction of xs:string (minLength = 6 maxLength = 8)) | Yes | None | N/A |
| AddressIdentifier | Address Identifier (house number or house name), that combined with the Post Code, allows the identification of the premises This search criteria is case insensitive | sr:AddressIdentifier (Restriction of xs:string (maxLength = 30)) | Yes | None | N/A |

Table 226: PropertyFilter (sr:PropertyFilter) data items

3.8.104.3 Specific Validation for this Request

See clause 3.2.5 for general validation applied to all Requests and clause 3.10.2 for Device Existence validation.

For this Request, the general Authorisation Checks as defined below shall not be carried out.

- a Response Code of E4 as defined in clause 3.2.4 “Verify that the User, in the User Role defined in the Service Request is a Eligible User for the Device” or
- a Response Code of E5 as defined in clause 3.2.4 “Verify that the Service Request or Signed Pre-Command is applicable to the Device status”

| Response Code | Response Code Description |
|---------------|---|
| E080201 | The Request does not uniquely identify a Premises |
| E080202 | The Premises do not contain any Devices |

3.8.104.4 Specific Data Items in the Response

This Service Response is defined in the XSD ResponseMessage DSPInventory XML element, which contains the DSP Inventory details applicable to a single premises or Device.

The DCC shall return the following data items which are specific to this Service Response:

| Data Item | Description / Values | Type | Mandatory | Default | Units |
|--|--|--|---|---------|-------|
| Device | Minimum 1 and maximum 17 Devices | sr:Device maxOccurs = 17 | Yes | None | N/A |
| Per Device (complex type sr:Device) found at that Smart Metering System: | | | | | |
| DeviceID | Device ID of a Device in the Smart Metering System | sr:EUI (See clause 3.10.1.3) | Yes | None | N/A |
| DeviceType | The Type of device Valid set: <ul style="list-style-type: none"> • ESME • GSME • GPF • CHF • HCALCS • PPMID • IHD • CAD | sr:DeviceType (Restriction of xs:string (Enumeration)) | Yes | None | N/A |
| DeviceStatus | An indicator giving the status of the device Valid set: <ul style="list-style-type: none"> • Pending • Whitelisted • InstalledNotCommissioned • Commissioned • Decommissioned • Withdrawn • Suspended • Recovery • Recovered Device Status is not applicable to Type 2 Devices, i.e. IHD and CAD | sr:DeviceStatus (Restriction of xs:string (Enumeration)) | Device Type = Type 2(IHD, CAD): N/A Otherwise: Yes | None | N/A |

| Data Item | Description / Values | Type | Mandatory | Default | Units |
|--------------------|--|---|-----------|---------|-------|
| DeviceManufacturer | <p>The name of the Device's Manufacturer</p> <p>With the exception of IHD and CAD:</p> <ul style="list-style-type: none"> The Device Manufacturer is the <device_model_manufacturer_identifier> from the CPL and presented in the format XXXX where each X is one of the characters 0 to 9 or A to F This data item matches the value on the CPL <p>For IHD and CAD this data item is free text</p> | sr:DeviceManufacturer (Restriction of xs:string (maxLength = 30)) | Yes | None | N/A |
| DeviceModel | <p>The specific model of the device, as used by the manufacturer.</p> <p>With the exception of IHD and CAD:</p> <ul style="list-style-type: none"> The Device Model is the concatenation of <device_model.model_identifier><device_model.hardware_version.version><device_model.hardware_version.revision> from the CPL and presented in the format XXXXXXXX where each X is one of the characters 0 to 9 or A to F <p>Where:</p> <ul style="list-style-type: none"> the first 4 characters are the model identifier the next 2 characters are the hardware version.version the final 2 characters are the hardware version.revision This data item matches the value on the CPL <p>For IHD and CAD this data item is free text</p> | sr:DeviceModel (Restriction of xs:string (maxLength = 30)) | Yes | None | N/A |

| Data Item | Description / Values | Type | Mandatory | Default | Units |
|-----------------------------|--|---|---|---------|-------|
| SMETSCHTSVersion | The version of SMETS or CHTS that the device complies with. This should align with the SMETS_CHTS version version_number value contained on the CPL. | sr:SMETSCHYSVersion (Restriction of xs:string (minLength = 1, maxLength = 20)) | Device Type = CAD: N/A Otherwise: Yes | None | N/A |
| DeviceFirmwareVersion | The operational version of Firmware of the Device The Firmware version as held in the CPL and presented in the format XXXXXXXX where each X is one of the characters 0 to 9 or A to F. This data item matches the value on the CPLA The binary value shall be four octets in length and shall correspond to the File Version field in the ZSE OTA Header structure. | Restriction of xs:string (minLength = 1, maxLength = 8) | Device includes Firmware: Yes Otherwise: N/A | None | N/A |
| DeviceFirmwareVersionStatus | The status of the Firmware Version Valid set: <ul style="list-style-type: none"> Active Cancelled Expired Withdrawn The status displayed in DeviceFirmwareVersionStatus maps to the status on the Central Products List as per the Data Item values to CPL values Mapping table below: | sr:FirmwareVersionStatus (Restriction of xs:string (Enumeration)) | Device includes Firmware: Yes Otherwise: N/A | None | N/A |
| CPLStatus | The CPL Assurance Certificate Status Valid set: <ul style="list-style-type: none"> Active Cancelled Expired Withdrawn The status displayed in CPL Status maps to the status on the Central Products List as per the Data Item values to CPL values Mapping table below: | sr:CPLStatus (Restriction of xs:string (Enumeration)) | Device includes Firmware: Yes Otherwise: N/A | None | N/A |

| Data Item | Description / Values | Type | Mandatory | Default | Units |
|---------------------|--|---|--|---------|----------|
| DateCommissioned | Where applicable, the date when the Device was commissioned | xs:date | Device Type = IHD,CAD: N/A Device has been commissioned: Yes Otherwise: No | None | UTC Date |
| ImportMPxN | The reference number identifying an import electricity or a gas metering point | sr:ImportMPxN Restriction of xs:string (minLength = 1, maxLength = 13) | Device Type = ESME, GSME: No Otherwise: N/A | None | N/A |
| SecondaryImportMPAN | The reference number identifying a Twin Element Import electricity secondary metering point | sr:MPAN Restriction of xs:string (minLength = 13, maxLength = 13) | Device Type = ESME and ESME Variant = B: No Otherwise: N/A | None | N/A |
| ExportMPAN | The reference number identifying an export electricity metering point | sr:MPAN Restriction of xs:string (minLength = 13, maxLength = 13) | Device Type = ESME and includes Export capability: No Otherwise: N/A | None | N/A |
| ESMEVariant | See Table 5 for mapping and valid set. Values including F or G are not applicable to Devices prior to GBCS v4.0 | sr:ESMEVariant Restriction of xs:string (Enumeration) | Device Type = ESME Yes Otherwise: N/A | None | N/A |

| Data Item | Description / Values | Type | Mandatory | Default | Units |
|------------------------------|--|--|---|----------------------|---------------------|
| PPMIDVariant | Se Table 229a for mapping and valid set. | sr:PPMIDVariant Restriction of xs:string (Enumeration) | Device Type = PPMID Yes Otherwise: N/A | None | N/A |
| UPRN | Unique Property Reference Number | sr:URPN (Restriction of xs:positiveInteger (totalDigits = 12)) | No | None | N/A |
| PropertyFilter | Post Code and Address Identifier that uniquely identifies an address | sr:PropertyFilter | No | None | N/A |
| CSPRegion | The CSP Region the Smart Meter System is associated with Valid set: <ul style="list-style-type: none"> North Central South Unknown | sr:CSPRegion (Restriction of xs:string (Enumeration)) | No | None | N/A |
| DeviceGBCSVersion | The operational version of GBCS as recorded in the SMI for the Device. The version number format will align with the CPL. For example 1.0 or 2.0 | xs:string | Device includes Firmware: Yes Otherwise: N/A | None | N/A |
| HANVariant | The Device's HAN Variant. Valid Set: <ul style="list-style-type: none"> Single Band (2.4GHz only) Dual Band (868MHz and 2.4GHz) Unknown HAN Variant (The CPL CHF Device Manufacturer and Device Model define its HAN Variant and the DCC Systems hold this relationship. When a CH is pre-notified to the DCC, its CHF HAN Variant is set based on its Device Manufacturer and Device Model) | xs:string | DeviceType = CHF: Yes Otherwise: N/A | None | N/A |

Table 227: Device (sr:Device) data items

Data Item values to CPL values mapping.

| Status value on the Central Products List (CPL) | DeviceFirmwareVersionStatus value | CPLStatus value |
|---|-----------------------------------|-----------------------------------|
| Current | Active | Active |
| Removed | Cancelled | Cancelled |
| No value defined | Expired (not currently used) | Expired (not currently used) |
| No value defined | Withdrawn (not currently used) | Withdrawn (not currently used) |

Table 228: Data Item values to CPL values Mapping

DUIS device type values to CPL values mapping.

| Central Products List (CPL) device type | DUIS device type | DUIS ESMEVariant Valid set |
|--|------------------|---|
| Single Element Electricity Metering Equipment | ESME | <ul style="list-style-type: none"> • A. Single Element ESME • AD. Single Element ESME with ALCS • ADE. Single Element ESME with ALCS and Boost Function • ADF. Single Element ESME with ALCS and APC • ADEF. Single Element ESME with ALCS, Boost Function and APC • AEF. Single Element ESME with Boost Function and APC • AF. Single Element ESME with APC • AG. SAPC • AEG. SAPC with Boost Function • ADG. SAPC with ALCS • ADEG. SAPC with ALCS and Boost Function ¹ |
| Twin Element Electricity Metering Equipment | ESME | <ul style="list-style-type: none"> • B. Twin Element ESME • BD. Twin Element ESME with ALCS • BDE. Twin Element ESME with ALCS and Boost Function • BF. Twin Element ESME with APC • BDF. Twin Element ESME with ALCS and APC • BDEF. Twin Element ESME with ALCS, Boost Function and APC • BEF. Twin Element ESME with Boost Function and APC |
| Polyphase Element Electricity Metering Equipment | ESME | <ul style="list-style-type: none"> • C. Polyphase ESME • CD. Polyphase ESME with ALCS • CDE. Polyphase ESME with ALCS and Boost Function • CDEF. Polyphase with ALCS, Boost Function and APC • CF. Polyphase with APC • CDF. Polyphase with ALCS and APC • CEF. Polyphase with Boost Function and APC |
| Gas Smart Meter | GSME | N/A |
| Prepayment Interface Device | PPMID | N/A |
| HAN Connected Auxiliary Load Control Switch | HCALCS | N/A |

¹ 'SAPC is defined in SMETS2 Section 9 Part G1; an ALCS forming part of an SAPC is defined in SMETS2 Section 9 Part G2 and a Boost Function forming part of an SAPC is defined in SMETS2 Section 9 Part G3.

Table 229: Device type to CPL values mapping

DUIS PPMID device type values to CPL values mapping.

| <u>Central Products List (CPL) device type</u> | <u>DUIS device type</u> | <u>DUIS PPMIDVariant Valid set</u> |
|---|-------------------------|--|
| <u>Single Element Electricity Metering Equipment</u> | <u>ESME</u> | <u>N/A</u> |
| <u>Twin Element Electricity Metering Equipment</u> | <u>ESME</u> | <u>N/A</u> |
| <u>Polyphase Element Electricity Metering Equipment</u> | <u>ESME</u> | <u>N/A</u> |
| <u>Gas Smart Meter</u> | <u>GSME</u> | <u>N/A</u> |
| <u>Prepayment Interface Device</u> | <u>PPMID</u> | <ul style="list-style-type: none"> <u>PPMID</u> <u>AltHAN Bridge 1</u> <u>AltHAN Bridge 2</u> <u>AltHAN Bridge 3</u> <u>AltHAN Bridge 4</u> |
| <u>HAN Connected Auxiliary Load Control Switch</u> | <u>HICALCS</u> | <u>N/A</u> |

Table 229a: PPMID type to CPL values mapping

Amend Section 3.8.106 as follows:

3.8.106.1 Update Inventory

| 3.8.106.1 | Service Description |
|----------------------------------|--|
| Service Request Name | UpdateInventory |
| Service Reference | 8.4 |
| Service Reference Variant | 8.4 |
| Eligible Users | <p>Import Supplier (IS) Export Supplier (ES) Gas Supplier (GS) Registered Supplier Agent (RSA) Electricity Distributor (ED) Gas Transporter (GT) Other User (OU)</p> <p>Where a Device has a status of 'Pending' only the User who added the Device to the Smart Metering Inventory may either update the details of that Device; or delete that Device from the Smart Metering Inventory. For</p> |

| | | |
|---|--|-----|
| | Devices with SMI Statuses other than 'Pending', only the Responsible Supplier may amend the SMI Status of that Device. | |
| Security Classification | Non Critical | |
| BusinessTargetID - Device Type applicable to this request | DCC Access Control Broker | |
| Can be future dated? | No | |
| On Demand? | No | |
| Capable of being DCC Scheduled? | No | |
| Command Variants applicable to this Request (Only one populated) | 8 – DCC Only | |
| Common Header Data Items | See clause 3.4.1.1 | |
| Data Items Specific to this Service Request | See Specific Data Items Below | |
| Possible responses from this Service Request | <p>These are the possible responses applicable to this Service Request. Please see clause 3.5. for more details on processing patterns</p> <ul style="list-style-type: none"> Acknowledgement <p>Also see Response Section below for details specific to this request</p> | |
| Response Codes possible from this Service Request | See clause 3.5.10 for Common Response Codes | |
| GBCS Cross Reference | Electricity | Gas |
| GBCS MessageCode | N/A | N/A |
| GBCS Use Case | N/A | N/A |

3.8.106.2 Specific Data Items for this Request

UpdateInventory Definition

| Data Item | Description / Values | Type | Mandatory | Default | Units |
|----------------------------|---|---|---|---------|-------|
| DeviceID | Device ID of the Device to be updated (status or details) or deleted. | sr:EUI (See clause 3.10.1.3) | Yes | None | N/A |
| UpdateDeviceStatusExceptCH | An indicator giving the status to be recorded for the Device (Not applicable to CHF, GPF or Type 2 Devices) Valid set <ul style="list-style-type: none"> Pending InstalledNotCommissioned | sr:UpdateDeviceStatusExceptCH Restriction of xs:string (Enumeration) | One and only one of these items must be set | None | N/A |
| UpdateDeviceStatusCH | An indicator giving the SMI Status to be recorded for the CHF and its associated GPF Valid set <ul style="list-style-type: none"> Commissioned InstalledNotCommissioned Withdrawn | sr:UpdateDeviceStatusCH Restriction of xs:string (Enumeration) | | None | N/A |
| UpdateDeviceDetails | Details to be updated, for a Device in a status of 'Pending' | sr:UpdateDeviceDetails | | None | N/A |
| DeleteDevice | Device, in a status of 'Pending', is to be deleted | sr>DeleteDevice | | None | N/A |
| UpdateMPxN | The MPxN to be associated with the device within the Smart Metering Inventory to be updated | sr:UpdateMPxN | | None | N/A |

Table 231: UpdateInventory (sr:UpdateInventory) data items

UpdateDeviceDetails Definition

| Data Item | Description / Values | Type | Mandatory | Default | Units |
|--------------------|--|--|------------------------------------|---------|-------|
| DeviceManufacturer | The name of the Device's manufacturer With the exception of IHD and CAD: <ul style="list-style-type: none"> The Device Manufacturer is the <device_model_manufacturer_identifier> from the CPL and presented in the format XXXX where each X is one of the characters 0 to 9 or A to F This data item should match the value on the CPL For IHD and CAD this data item is free text | sr:DeviceManufacturer (Restriction of xs:string (maxLength = 30)) | At least one data item must be set | None | N/A |

| | | | | | |
|-------------------|---|--|------------------------------------|------|-----|
| DeviceModel | <p>The model of the Device With the exception of IHD and CAD:</p> <ul style="list-style-type: none"> The Device Model is the concatenation of <device_model.model_identifier><device_model.hardware_version.version><device_model.hardware_version.revision> from the CPL and presented in the format XXXXXXXX where each X is one of the characters 0 to 9 or A to F <p>Where:</p> <ul style="list-style-type: none"> the first 4 characters are the model identifier the next 2 characters are the hardware version.version the final 2 characters are the hardware version.revision This data item matches the value on the CPL <p>For IHD and CAD this data item is free text device</p> | sr:DeviceModel (Restriction of xs:string (maxLength = 30)) | At least one data item must be set | None | N/A |
| SMETSCHTS Version | <p>The version of SMETS or CHTS that the Device complies with.</p> <p>This should align with the SMETS_CHTS version version_number value contained on the CPL.</p> | sr:SMETSCHTSVersion (Restriction of xs:string (minLength = 1, maxLength = 20)) | At least one data item must be set | None | N/A |
| FirmwareVersion | <p>The operational version of Firmware of the Device</p> <p>The Firmware version as held in the CPL and presented in the format XXXXXXXX where each X is one of the characters 0 to 9 or A to F.</p> <p>This data item should match the value on the CPL</p> <p>The value shall be four octets in length</p> | sr:FirmwareVersion Restriction of xs:string (minLength = 1, maxLength = 8) | At least one data item must be set | None | N/A |
| ESMEVariant | <p>See Table 5 for mapping and valid set.</p> <p>Values including F or G are not applicable to Devices prior to GBCS v4.0</p> | sr:ESMEVariant Restriction of xs:string (Enumeration) | At least one data item must be set | None | N/A |

| | | | | | |
|---------------------|--|---|---|-------------|------------|
| <u>PPMIDVariant</u> | <u>See Table 229a for mapping and valid set.</u> | <u>sr:PPMIDVariant</u> <u>Restriction of xs:string</u> <u>(Enumeration)</u> | <u>At least one</u> <u>data item</u> <u>must be set</u> | <u>None</u> | <u>N/A</u> |
|---------------------|--|---|---|-------------|------------|

Table 232: UpdateDeviceDetails (sr:UpdateDeviceDetails) data items

UpdateMPxN Definition

| Data Item | Description / Values | Type | Mandatory | Default | Units |
|---------------------|--|--|--|---------|-------|
| ImportMPxN | The primary MPAN or MPRN for the device | sr:ImportMPxN (restriction on xs:String, minimum length = 1, maximum length = 13) | No The UpdateMPxN element is a choice so it must contain only one of these 3 elements | None | N/A |
| SecondaryImportMPAN | The Secondary MPAN for the device - only applicable to twin element meters | sr:MPAN (restriction on xs:String, minimum length = 13, maximum length = 13) | | None | N/A |
| ExportMPAN | The Export MPAN for the device | sr:MPAN (restriction on xs:String, minimum length = 13, maximum length = 13) | | None | N/A |

Table 233: UpdateMPxN (sr:UpdateMPxN) data items

3.8.106.3

Specific Validation for this Request

See clause 3.2.5 for general validation applied to all Requests and clause 3.10.2 for Device Existence validation.

| Response Code | Response Code Description |
|---------------|---|
| E080405 | The Device Status is not applicable to the Device Type |
| E080406 | The Device Status transition is not valid |
| E080407 | The Device ID does not exist in the Smart Metering Inventory or its status is not 'Pending' |
| E080408 | The Request does not include any details to be updated |
| E080409 | The Device Type / Manufacturer / Model / Firmware Version data resulting from the changes specified by the User does not match the DCC list of equipment that has been approved for use |
| E080410 | The User is not authorised to execute the Service Request to update the detail specified |
| E080411 | Request to update Device Status not applicable to the Device Type |
| E080412 | The Device Status transition is not valid |
| E080413 | The requested MPxN update isn't suitable for the specified Device. |
| E080414 | The Device Status does not allow the MPxN to be updated. The Device Status must be one of "Whitelisted", "Installed Not Commissioned" or "Commissioned" if the MPxN update is to succeed. |
| E080415 | The User is not the Registered Supplier Party for the new MPxN specified within the UpdateMPxN part of the Service Request. |

3.8.106.4 Additional DCC System Processing

When a User sends an Update Inventory Service Request to the DCC in respect of a Communications Hub, the DeviceId specified within the Service Request shall be that of the Communications Hub Function and not the Gas Proxy Function.

Note that where a Device has an SMI Status of ‘Recovered’ the Device’s SMI Status immediately prior to it having the SMI Status of ‘Recovery’ shall be used in validation.

This Service Request can be used by Users to perform the following four functions;

1. Update Device details within the Smart Metering Inventory provided via Pre-Notification
 - a. This functionality of the Service Request is available to all the Eligible User Roles associated with this Service Request.
 - b. Only the User who originally added the Device to the Smart Metering Inventory may update these device details whilst the Device has a status of ‘Pending’.
 - c. For Devices that have SMI Status values, only Devices in a status of ‘Pending’ can be updated.
 - d. Type 2 (IHD and CAD) Devices can be updated at any time.
 - e. Update most of the Device details that were initially provided to the DCC via Service Request 12.2 – Device Pre-notification (see clause 3.8.122)
 - f. It isn’t possible to update a Device ID (including the GPF Device ID associated to a CHF). If it has been entered in error it has to be deleted via this Service Request and re-added via Service Request 12.2 – Device Pre-notification (see clause 3.8.122).
 - g. It isn’t possible to update a Device Type. If it has been entered in error it has to be deleted via this Service Request and re-added via Service Request 12.2 – Device Pre-notification (see clause 3.8.122).
 - h. Any updates to the details shared between a CHF and a GPF will be applied to both. The Device ID in the Service Request has to be that of the CHF.
2. Delete Device details from the Smart Metering Inventory provided via Pre-Notification which have not been installed.
 - a. This functionality of the Service Request is available to all the Eligible User Roles associated with this Service Request.
 - b. Only the User who originally added the Device to the Smart Metering Inventory may delete these device details.

- c. For Devices that have SMI Status values, only Devices in a status of 'Pending' can be deleted.
 - d. Type 2 (IHD and CAD) Devices can be deleted at any time.
 - e. Deleting a CHF will also delete its associated GPF.
3. Update SMI Status within the Smart Metering Inventory
- a. This functionality of the Service Request is **ONLY** available to the Eligible User Roles of Import Supplier and Gas Supplier who are the Responsible Supplier to the Device being updated.
 - b. Different options exist for which device SMI Status values can be updated by Users depending on Device type. Functionality allows,
 - i. Update the Device status for all Device Types, other than the CHF and the GPF and where the old and new status apply to the Device Type
 - 1. From 'Pending' to 'InstalledNotCommissioned'
 - 2. From 'Whitelisted' to 'Pending'
 - c. Update the Device SMI Status for a CHF (and its associated GPF)
 - i. To support the Install & Leave process and / or Install & Commission after Decommissioning or Withdrawal:
 - 1. From 'Pending' to 'InstalledNotCommissioned' (GPF from 'Pending' to 'InstalledNotCommissioned')
 - 2. From 'InstalledNotCommissioned' to 'Commissioned' (GPF no status transition)
 - 3. From 'Pending' to 'Commissioned' (GPF from 'Pending' to 'InstalledNotCommissioned')
 - ii. From 'Commissioned' to 'Withdrawn' (GPF from 'Commissioned' to 'Withdrawn' or from 'Installed Not Commissioned' to 'Withdrawn'). This is the equivalent of Service Request 8.5 – Service Opt Out (see clause 3.8.102) for other Device Types. On successful completion of the Service Request, the DCC Systems will:
 - 1. automatically delete all active DSP Schedules on all Devices in the CHF Whitelist. For each deleted DSP Schedule a DCC Alert N37 will be sent to the User that owned it.

2. automatically cancel all Future Dated (DSP) requests not yet sent to the Device for that CHF and all the Devices in its Whitelist. For each cancelled request a DCC Alert N36 will be sent to the sender of the Future Dated request.
- 4) Update MPxN associated with the Device (or add a new association) within the Smart Metering Inventory
 - a. This functionality of the Service Request shall ONLY be available to either:
 - a. the Registered Supplier Party for the MPxN of the type specified in UpdateMPxN, as recorded in the Smart Metering Inventory against the DeviceID; or
 - b. where no such MPxN is recorded in the Smart Metering Inventory against the DeviceID, any Supplier Party
 - b. The new MPxN must be consistent with the type of Device, for example if the Secondary MPAN is updated then the device must be a twin element ESME.
 - c. ONLY a single MPxN association change be changed per Service Request call
 - d. If the MPxN is successfully updated in the Smart Metering Inventory, then a DCC Alert N16 is sent to the Meter's Network Operator.

3.8.106.5 Additional Information

Where a User wishes to decommission a Device and re-use the Device at another premise then the User must not use the Update Inventory Service Request to perform this activity. Instead, a Service Request 8.3 Decommission Device (see clause 3.8.100) should be used to update the Device's SMI Status to 'Decommissioned' followed by a subsequent Service Request 12.2 Device Pre-notification (see clause 3.8.122) to update the Device's SMI Status to 'Pending'. The Device can then be commissioned as per normal process.

Amend Section 3.8.109 as follows:

3.8.109 Join Service (Critical)

| 3.8.109.1 | Service Description |
|----------------------------------|---|
| Service Request Name | JoinService(Critical) |
| Service Reference | 8.7 |
| Service Reference Variant | 8.7.1 |
| Eligible Users | Import Supplier (IS) Gas Supplier (GS) |

| | | | |
|--|--|------------------------|--------------------|
| Security Classification | Critical | | |
| BusinessTargetID - Device Type applicable to this request | Electricity Smart Meter (ESME) Gas Smart Meter (GSME) HAN Connected Auxiliary Load Control Switch (HCALCS) | | |
| Can be future dated? | No | | |
| On Demand? | Yes | | |
| Capable of being DCC Scheduled? | No | | |
| Command Variants applicable to this Request (Only one populated) | For Service Request 4 – Transform For Signed Pre-Commands, choice of 5 – Send (Critical) 6 – Return for local delivery (Critical) 7 – Send and Return for local delivery (Critical) | | |
| Common Header Data Items | See clause 3.4.1.1 | | |
| Data Items Specific to this Service Request | See Specific Data Items Below | | |
| Possible responses from this Service Request | These are the possible responses applicable to this Service Request. Please see clause 3.5 for more details on processing patterns <ul style="list-style-type: none"> • Acknowledgement • Response to Transform Request - PreCommand Format • Service Response from Device – GBCSPayload Format • Response to a Command for Local Delivery Request – LocalCommand Format | | |
| Response Codes possible from this Service Request | See clause 3.5.10 for Common Response Codes | | |
| GBCS Cross Reference | ESME join to HCALCS or PPMID | HCALCS join to ESME | GSME join to PPMID |
| GBCS MessageCode | 0x000D | 0x00AB | 0x00AF |
| GBCS Use Case | CS03A1 | CS03A2 | CS03C |

3.8.109.2 Specific Data Items for this Request

JoinServiceCritical Definition

| Data Item | Description / Values | Type | Mandatory | Default | Units |
|---------------|---|---------------------------------|-----------|---------|-------|
| OtherDeviceID | Device ID of the Device to be joined to (paired with) the BusinessTargetID Device | sr:EUI (See clause 3.10.1.3) | Yes | None | N/A |

Table 239: JoinServiceCritical (sr:JoinOrUnjoinDevice) data items

3.8.109.3 Specific Validation for this Request

See clause 3.2.5 for general validation applied to all Requests and clause 3.10.2 for ‘Other Device’ Existence validation.

| Response Code | Response Code Description |
|---------------|--|
| E080702 | The ‘Other Device’ Type is not valid for this Join Service |

3.8.109.4 Additional DCC System Processing

Where a GSME is to be joined to a PPMID then the DCC shall add the Key Agreement Certificate (currently in use by the PPMID specified within the Service Request) to the Pre-Command to be sent back to the User. The Key Agreement Certificate shall be retrieved by the DCC from the Public Key Repository where the “In Use” flag is set.

Upon successful execution of a JoinService(Critical) Service Request to join a HCALC or a PPMID Device, and where the associated Communication Hub Function and the associated Electricity Smart Meter or Gas Smart Meter SMI Status are ‘Commissioned’, the DCC shall update the Smart Metering Inventory and set the SMI Status of the HCALC or PPMID to ‘Commissioned’.

If the ‘Other Device’ is a PPMID and the PPMIDVariant recorded in the Smart Meter Intentry is different from PPMIDVariant ‘PPMID’, a Response Code of E080702 shall be returned to the User.

Amend Section 3.8.110 as follows:

3.8.110 Join Service (Non-Critical)

3.8.110.1 Service Description

| | |
|---------------------------|---|
| Service Request Name | JoinService(Non-Critical) |
| Service Reference | 8.7 |
| Service Reference Variant | 8.7.2 |
| Eligible Users | Import Supplier (IS) Gas Supplier (GS) |

| | | | | | |
|---|--|------------------|--------------------|--------------------|------------------------------------|
| | <p>Other User (OU) (Type 2 CAD Only)</p> <ol style="list-style-type: none"> 1) The only Devices that Other Users may join are Type 2 Devices that are not IHDs 2) Where a Gas Proxy Function is to be joined to a Gas Smart Meter, any Gas Supplier or Import Supplier who is a Responsible Supplier for any Device which is associated with the same Communications Hub Function as the Gas Proxy Function may request this Join Service Request. | | | | |
| Security Classification | Non Critical | | | | |
| BusinessTargetID - Device applicable to this request | <p>Electricity Smart Meter (ESME) Gas Smart Meter (GSME) Gas Proxy Function (GPF) PrePayment Interface Device (PPMID)</p> | | | | |
| Can be future dated? | No | | | | |
| On Demand? | Yes | | | | |
| Capable of being DCC Scheduled? | No | | | | |
| Command Variants applicable to this Request (Only one populated) | <p>1 – Send (Non-Critical) 2 – Return for local delivery (Non-Critical) 3 – Send and Return for local delivery (Non-Critical)</p> | | | | |
| Common Header Data Items | See clause 3.4.1.1 | | | | |
| Data Items Specific to this Service Request | See Specific Data Items Below | | | | |
| Possible responses from this Service Request | <p>These are the possible responses applicable to this Service Request. Please see clause 3.5 for more details on processing patterns</p> <ul style="list-style-type: none"> • Acknowledgement • Service Response from Device – GBCSPayload Format • Response to a Command for Local Delivery – LocalCommand Format <p>Also see Response Section below for details specific to this request</p> | | | | |
| Response Codes possible from this Service Request | See clause 3.5.10 for Common Response Codes | | | | |
| GBCS Cross Reference | ESME join to Type 2 device | GSME join to GPF | PPMID join to ESME | PPMID join to GSME | GPF join to PPMID or Type 2 device |
| GBCS MessageCode | 0x000E | 0x000E | 0x00AB | 0x00AF | 0x000E |
| GBCS Use Case | CS03B | CS03B | CS03A2 | CS03C | CS03B |

3.8.110.2 Specific Data Items for this Request

JoinServiceNonCritical Definition

| Data Item | Description / Values | Type | Mandatory | Default | Units |
|---------------|--|---------------------------------|-----------|---------|-------|
| OtherDeviceID | Device ID of the Device to be joined to (paired with) the BusinessTargetID Device. | sr:EUI (See clause 3.10.1.3) | Yes | None | N/A |

Table 240: JoinServiceNonCritical (sr:JoinOrUnjoinDevice) data items

3.8.110.3 Specific Validation for this Request

See clause 3.2.5 for general validation applied to all Requests and clause 3.10.2 for ‘Other Device’ Existence validation.

| Response Code | Response Code Description |
|---------------|---|
| E080721 | The ‘Other Device’ Type is not valid for this Join Service |
| E080722 | The User Role is not authorised to Join this Device Type |
| E080723 | The User is not authorised to Join these Gas Smart Meter / Gas Proxy Function |

3.8.110.4 Additional DCC System Processing

Where a PPMID is to be joined to a GSME then the DCC shall add the Key Agreement Certificate (currently in use by the GSME specified within the Service Request) to the Command. The Key Agreement Certificate shall be retrieved by the DCC from the Public Key Repository where the “In Use” flag is set.

Upon successful execution of a JoinService(Non-Critical) Service Request for a Gas Proxy Function (GPF) Device, and where the associated Communication Hub Function and the associated Gas Smart Meter SMI Status are ‘Commissioned’, the DCC shall update the Smart Metering Inventory and set the SMI Status of Gas Proxy Function (GPF) to ‘Commissioned’.

If the BusinessTargetID Device Type is a PPMID and the PPMIDVariant recorded in the Smart Meter Intentry is different from PPMIDVariant ‘PPMID’, a Response Code of E080721 shall be returned to the User.

Amend Section 3.8.128 as follows:

3.8.128 Device Pre-notification

| 3.8.128.1 | | Service Description | |
|--|--|---|-----|
| Service Request Name | | DevicePrenotification | |
| Service Reference | | 12.2 | |
| Service Reference Variant | | 12.2 | |
| Eligible Users | | Import Supplier (IS) Export Supplier (ES) Gas Supplier (GS) Registered Supplier Agent (RSA) Electricity Distributor (ED) Gas Transporter (GT) Other User (OU) | |
| Security Classification | | Non Critical | |
| BusinessTargetID - Device applicable to this request | | DCC Access Control Broker | |
| Can be future dated? | | No | |
| On Demand? | | No | |
| Capable of being DCC Scheduled? | | No | |
| Command Variants applicable to this request (Only one populated) | | 8 - DCC Only | |
| Common Header Data Items | | See clause 3.4.1.1 | |
| Data Items Specific to this Service Request | | See Specific Data Items Below | |
| Possible responses from this Service Request | | These are the possible responses applicable to this Service Request. Please see clause 3.5 for more details on processing patterns <ul style="list-style-type: none">Acknowledgement Also see Response Section below for details specific to this request | |
| Response Codes possible from this Service Request | | See clause 3.5.10 for Common Response Codes | |
| GBCS Cross Reference | | Electricity | Gas |
| GBCS MessageCode | | N/A | N/A |
| GBCS Use Case | | N/A | N/A |

3.8.128.2 Specific Data Items for this Request

DevicePrenotification Definition

| Data Item | Description / Allowable values | Type | Mandatory | Default | Units |
|--------------------|---|---|-----------|---------|-------|
| DeviceID | A unique ID for the Device | sr:EUI (See clause 3.10.1.3) | Yes | None | N/A |
| DeviceManufacturer | <p>The name of the Device's manufacturer.</p> <p>With the exception of IHD and CAD:</p> <ul style="list-style-type: none"> The Device Manufacturer is the <device_model_manufacturer_identifier> from the CPL and presented in the format XXXX where each X is one of the characters 0 to 9 or A to F This data item should be aligned with the value on the CPL otherwise a validation error is raised, see E120203. <p>Note that the DUIS data item removes the colon punctuation that exists in the CPL definition between octet values.</p> <p>For IHD and CAD this data item is free text and is not validated by the DCC.</p> | sr:DeviceManufacturer (Restriction of xs:string (maxLength = 30)) | Yes | None | N/A |

| Data Item | Description / Allowable values | Type | Mandatory | Default | Units |
|-------------|--|---|-----------|---------|-------|
| DeviceModel | <p>The specific model of the Device, as used by the manufacturer.</p> <p>With the exception of IHD and CAD:</p> <ul style="list-style-type: none"> The Device Model is the concatenation of <device_model.model_identifier> < device_model.hardware_version.v ersion>< device_model.hardware_version.r evision> from the CPL and presented in the format XXXXXXXXXX where each X is one of the characters 0 to 9 or A to F <p>Where:</p> <ul style="list-style-type: none"> the first 4 characters are the model identifier the next 2 characters are the hardware version.version the final 2 characters are the hardware version.revision This data item must be aligned with the value on the CPL otherwise a validation error is raised, see E120203. <p>Note that the DUIS data item removes the colon punctuation that exists in the CPL definition between octet values.</p> <p>For IHD and CAD this data item is free text and is not validated by the DCC.</p> | <p>sr:DeviceModel (Restriction of xs:string (maxLength = 30))</p> | Yes | None | N/A |

| Data Item | Description / Allowable values | Type | Mandatory | Default | Units |
|------------------|--|---|---|---------|-------|
| DeviceType | <p>The Type of Device</p> <p>Valid set:</p> <ul style="list-style-type: none"> • ESME • GSME • CHF • HCALCS • PPMID • IHD • CAD <p>With the exception of IHD and CAD, which are not validated by the DCC, this data item must be aligned with the value on the Central Products List otherwise a validation error is raised, see E120203.</p> <p>See Table below for mapping between XML enumeration valid set values and CPL values.</p> | sr:DeviceType (Restriction of xs:string (Enumeration)) | Yes | None | N/A |
| SMETSCHTSVersion | <p>The version of SMETS or CHTS that the Device complies with e.g. V1.58</p> <p>This should align with the SMETS_CHTS version_number value contained on the CPL.</p> | sr:SMETSCHTSVersion (Restriction of xs:string (minLength = 1, maxLength = 20)) | Device Type = CAD: N/A Otherwise: Yes | None | N/A |
| FirmwareVersion | <p>The operational version of Firmware of the Device</p> <p>The Firmware version as held in the CPL and presented in the format XXXXXXXX where each X is one of the characters 0 to 9 or A to FA</p> <p>This data item must be aligned with the value on the Central Products List otherwise a validation error is raised, see E120203.</p> <p>Note that the DUIS data item removes the colon punctuation that exists in the CPL definition between octet values.</p> | sr:FirmwareVersion (Restriction of xs:string (minLength = 1, maxLength = 8)) | All Devices except Type 2: Yes Type 2: N/A | None | N/A |

| Data Item | Description / Allowable values | Type | Mandatory | Default | Units |
|------------------------|--|---|---|-------------|------------|
| ESMEVariant | See Table 5 for mapping and valid set. Values including F or G are not applicable to Devices prior to GBCS v4.0 | sr:ESMEVariant Restriction of xs:string (Enumeration) | DeviceType = ESME: Yes Otherwise: N/A | None | N/A |
| AssociatedGPFDDeviceID | A unique ID for the Gas Proxy Function Device associated with the Communications Hub Function | sr:EUI (See clause 3.10.1.3) | DeviceType = CommunicationsHubFunction: Yes Otherwise: N/A | None | N/A |
| <u>PPMIDVariant</u> | <u>See Table 229a for mapping and valid set.</u> | <u>sr:PPMIDVariant</u> <u>Restriction of xs:string</u> <u>(Enumeration)</u> | <u>DeviceType = PPMID:</u> <u>Yes</u> <u>Otherwise:</u> <u>N/A</u> | <u>None</u> | <u>N/A</u> |

Table 261: DevicePrenotification (sr DevicePrenotification) data items

3.8.128.3 Specific Validation for this Request

See clause 3.2.5 for general validation applied to all Requests.

For this Request, the general Authorisation Checks as defined below shall not be carried out.

- a Response Code of E4 as defined in clause 3.2.4 “Verify that the User, in the User Role defined in the Service Request is a Eligible User for the Device” or
- a Response Code of E5 as defined in clause 3.2.4 “Verify that the Service Request or Signed Pre-Command is applicable to the Device status”

| Response Code | Response Code Description |
|---------------|--|
| E120201 | The Device ID already existed in Smart Metering Inventory and its Status was not ‘Decommissioned’ or ‘Withdrawn’ |
| E120203 | The Device Type / Manufacturer / Model / Firmware Version data specified by the User do not match the values contained on the Central Products List (CPL) that have been approved for use. |
| E120204 | Not all the applicable optional data items are included in the Request or not applicable data items are included in the Request |

| | |
|---------|--|
| E120207 | This Device Type (GPF) can't be Pre-notified |
|---------|--|

Additional Obligations

A User must ensure that all Devices that are required to be displayed via the Smart Metering Inventory and/or required to be connected into the Home Area Network (HAN) must have an associated Device Pre-notification Service Request sent to the DCC.

The DCC shall ensure that the Communication Hub Function and Gas Proxy Function Devices are pre-notified and associated details are updated into the Smart Metering Inventory on behalf of Users.

Additional DCC System Processing

Upon successful execution of a DevicePrenotification Service Request, the DCC shall update the Smart Metering Inventory and set the SMI Status of the DeviceId to 'Pending' where the Device Type is one that has an SMI Status recorded within the Smart Metering Inventory.