MP105 'Sending SR11.2 to Devices in Suspended State'

Annex B

Legal text – version 1.0

About this document

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

Appendix AD 'DCC User Interface Specification'

These changes have been redlined against Appendix AD version 4.0.

Amend Table 22 'Authorisation checks' as follows:

3.2.4 Authorisation

The DCC shall verify that the User has permission to send the Service Request or Pre-Command as per the following steps and where authorisation checks are failed the following Response Code shall be added by the DCC to the Service Response that is sent to the sending User;

Authorisation Check	Process	Response Code
Validate the User Role	The sending organisation (User) as determined from the Business Originator ID and their associated User Role are checked to confirm it is a valid SEC party / User Role combination	E1
Verify that the User Role is allowed to use the Service Request or Signed Pre-Command	This is a User Role based check for the mapping between Service Requests and User Roles (see clause 3.1 – Service Request Matrix) i.e. that the User Role is that of a User within an Eligible User Role for that Request.	E2
Verify the status of the User	This is a status based check to find out if the User is suspended (not allowed to run that Service Request or Signed Pre-Command) at the time when the Service Request or Signed Pre-Command is received	E3
Verify that the User, in the User Role defined in the Service Request is an Eligible User for the Device	This check is based on the Registration Data associated with the Device via MPxN lookup. Check that the User is an Eligible User in respect for that Device for the period that the Service Request pertains to. The checks for eligibility are as follows : - Confirm (using the Registration Data) that the User ID used to send the Request is that of a User that is an Eligible User for the Request. - Authorisation is performed using the Device specified in the BusinessTargetID except for Non-Device Service Requests, where the BusinessTargetID is specified in the Service Request itself. Note that this check is not applied for Critical Service Requests or Critical Signed Pre-Commands or for a limited number of specific Service Requests as documented in the Service Request Processing Document and stated explicitly within each Service Request definition in clause 3.8. Requests from a User that had ceased to be a registered Party more than 24 months ago will be rejected by the DCC Systems.	E4

Authorisation Check	Process	Response Code
Verify that the Service Request or Signed Pre-Command is applicable to the Device status	This is a check to confirm that the target Device has a status within the Smart Metering Inventory that enables the User to send it the particular Service Request or Signed Pre-Command This check is not applicable to Service Requests 8.2 (Read Inventory) and 12.1 (Request WAN Matrix) or to Critical Service Requests or Signed Pre-Commands. With the exception that it is applied for Signed Pre-Commands when the Device Status is 'Recovery'. Devices can only be communicated with in response to a Request if they are in a status of 'Commissioned', 'InstalledNotCommissioned', 'Whitelisted', 'Pending' or 'Recovered' in the Smart Metering Inventory. The DCC shall, where the Device has a Smart Metering Inventory (SMI) Status of 'Suspended' prevent any Non-Critical Service Requests from being processed with the exception of, Service Requests 11.1 (Update Firmware), 11.2 (Read Firmware Version) and 6.23 (Update Security Credentials (CoS)). The DCC shall, where a Device has a Smart Metering Inventory (SMI) Status of 'Recovery' prevent any Service Requests relating to that Device from being processed with the exception of Non-Device Service Requests (subject to their specific validation).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.	E5

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Authorisation Check	Process	Response Code

Verify that the Service Request or Signed Pre-Command is available for Local Command Services	This is a check to confirm that a Service Request or Signed Pre-Command is available to Users for local delivery to a Device using Local Command Services including additional reference to the requesting User Role and SMI Status combination.
	
	A Service Request or Signed Pre-Command is not available to Users for local delivery using Local Command Services where the Service Request or Signed Pre-Command is one of the following;
	   • A Service Reference Variant of 8.1.1 – Commission Device
	   • A Future Dated Service as defined by clause 2.6.3
	
	In addition, a Service Request or Signed Pre-Command can only be delivered locally in the following combinations of requesting User Role and SMI Status of the target Device:
	   • Where the User Role of the sender is either IS, ES or GS, the target Device within the request must have an SMI Status of either "Pending", "Whitelisted", "InstalledNotCommissioned" or "Commissioned".
	   • Where the User Role of the sender is either ED, GT, RSA or OU, the target Device within the request must have an SMI Status of either "InstalledNotCommissioned" or "Commissioned".
	
	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.
		E17

Verify that the Device exists	This is a check to confirm that the target Device within the Service Request or Signed Pre-Command exists Note that this check is only applicable to Service Requests and Signed Pre-Commands that are addressed to a specified Device. For Non-Device Service Requests this Response Code (E19) shall be returned if the BusinessTargetID is not the DCC Access Control Broker ID.	E19

Table 22 : Authorisation checks

If any of these checks fails at the point the Service Request or Signed Pre-Command is received by the DCC Systems or prior to execution for DCC Scheduled Services, the Service Request or Signed Pre-Command is rejected, no further checks are carried out and a Service Response is generated with the appropriate Response Code to inform the User of the issue identified. See clause 3.5.10 for Response Code details.

3.6.3.4 DCC Alert Codes

DCC Alert Code	Alert Name	Event	Trigger	DCC Alert Recipient	SMETS Version Applicability
N50	Firmware Version no longer valid on the CPL	Device's Firmware Version updated in the Smart Metering Inventory, but Device Status not set to 'Suspended'	Upon successful completion of Service Request 11.2 Read Firmware Version where the target Device is an ESME, GSME, CHF or SMETS1 PPMID and the Firmware Version returned by the Device is different from that in the SMI and it matches an entry on the CPL with a status of "Removed" OR Upon ~~successful~~ completion of Service Request 11.3 Activate Firmware where the Firmware Version returned by the Device is different from that in the SMI and it matches an entry on the CPL with a status of "Removed" OR Future Dated Firmware Activation Alert (Alert Code 0x8F66 or 0x8F67 and Message Code 0x00CA) received by the DCC Systems where the Firmware Version returned by the Device is different from that in the SMI and it matches an entry on the CPL with a status of "Removed"	IS GS	All
N51	Invalid Firmware Version	Device's Firmware Version is unknown (not in the CPL) Device's Firmware Version not updated in the Smart Metering Inventory	Upon successful completion of Service Request 11.2 Read Firmware Version where the target Device is an ESME, GSME, CHF or SMETS1 PPMID and the Firmware Version returned by the Device is different from that in the SMI and it doesn't match an entry on the CPL OR Upon ~~successful~~ completion of Service Request 11.3 Activate Firmware where the Firmware Version returned by the Device is different from that in the SMI	IS GS	All

			and it doesn't match an entry on the CPL		
			OR		
			Future Dated Firmware Activation Alert (Alert Code 0x8F66 or 0x8F67 and Message Code 0x00CA) received by the DCC Systems where the Firmware Version returned by the Device is different from that in the SMI and it doesn't match an entry on the CPL		

Amend Section 3.8.124 'Read Firmware Version':

3.8.124   Read Firmware Version

3.8.124.1   Service Description

Service Request Name	ReadFirmwareVersion
Service Reference	11.2
Service Reference Variant	11.2
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 Type applicable to this request**	Electricity Smart Meter(ESME) Gas Smart Meter (GSME) Gas Proxy Function (GPF) Communications Hub Function (CHF)
Can be future dated?	DSP
On Demand?	Yes
Capable of being DCC Scheduled?	No
Command Variants applicable to this Request (Only one populated	1 - Send (Non-Critical) 2 - Return for local delivery (Non-Critical) 3 - Send and Return for local delivery (Non-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 • Acknowledgement

	• Service Response from Device – GBCSPayload • Response to a Command for Local Delivery Request – LocalCommand Format 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 and Communications Hub	Gas
GBCS MessageCode	0x0059	0x0084
GBCS Use Case	ECS52	GCS38

3.8.124.2   Specific Data Items for this Request

ReadFirmwareVersion Definition

Data Item	Description / Allowable values	Type	Mandatory	Default	Units
ExecutionDateTime	A User shall only add this Data Item to the Service Request where they require the Service Request to be executed at a future date and time. The UTC date and time the User requires the command to be executed on the Device ID • Date-time in the future that is either <= current date + 30 days or the date = '3000-12-31T00:00:00Z'	xs:dateTime	No	None	UTC Date-Time

Table 256 : ReadFirmwareVersion (sr:ReadFirmwareVersion) data items

3.8.124.3   Specific Validation for this Request

No specific validation is applied for this Request, sSee clause 3.2.5 for general validation applied to all Requests and clause 3.10.2 for Execution Date Time validation.

For this Service Request and as an exception, the Authorisation Check associated to E5 allows the Device's SMI Status to be 'Suspended'.

3.8.124.4   Additional DCC System Processing

Upon receipt of a Response to this Service Request containing a Firmware Version value:

• if the Target Device Type is ESME, GSME or CHF and the Firmware Version returned by the Device matches an entry on the CPL for that Device Model, but is different from that stored in the SMI, the DCC Systems shall update the Firmware Version in the SMI to the value returned by the Device. Note that updating the Firmware Version may also update the Device's GBCS Version in the SMI.

  o If the target Device is CHF, the associated GPF Firmware Version shall also be updated.

- o If the Firmware Version entry on the CPL for that Device Model has a status of "Current" and the Read Firmware Version Service Request was not submitted by the Responsible Supplier, DCC Alert N49 shall be sent to the Responsible Supplier.

- o If the Firmware Version entry on the CPL for that Device Model has a status of "Removed", the SMI Firmware Version shall be updated, but the Device Status shall not be set to 'Suspended'. In this case DCC Alert N50 shall be sent to the Responsible Supplier as a warning.

- o Where the DeviceFirmwareVersion for the specified Device is now the current valid version, and the Device Status was 'Suspended' and the Firmware Version returned by the Device matches an entry on the CPL for that Device Model with a status of "Current", the DCC Systems shall update the Device Status to the status it held immediately prior to its "Suspension" and DCC Alert N29 will be sent to the Responsible Supplier and to the Electricity Distributor or Gas Transporter.

- if the Target Device Type is ESME, GSME or CHF and the Firmware Version returned by the Device does not match an entry on the CPL for that Device Model, DCC Alert N51 will be sent to the Responsible Supplier as a warning and the SMI Firmware Version will not be updated.

- if the Target Device Type is GPF and the GSME Firmware Version returned by the GPF is different from that stored in the SMI, DCC Alert N52 will be sent to the Responsible Supplier as a warning and the SMI Firmware Version will not be updated.

Amend Section 3.8.125 'Activate Firmware':

3.8.125   Activate Firmware

3.8.125.1   Service Description

Service Request Name	ActivateFirmware
Service Reference	11.3
Service Reference Variant	11.3
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)
Can be future dated?	Device
On Demand?	Yes

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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 • Acknowledgement • Response to Transform Request - PreCommand Format • Service Response from Device – GBCSPayload • Service Response (from Device) - FutureDatedDeviceAlertMessage • Response to a Command for Local Delivery Request – LocalCommand Format 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

	Electricity	Gas
GBCS Cross Reference	Electricity	Gas
GBCS MessageCode	0x0012	0x0012
GBCS Use Case	CS06	CS06

3.8.125.2 Specific Data Items for this Request

ActivateFirmware Definition

Data Item	Description / Allowable values	Type	Mandatory	Default	Units
ExecutionDateTime	A User shall only add this Data Item to the Service Request where they require the Service Request to be executed at a future date and time. The date and time at which the firmware will be activated • Date-time in the future that is either <= current date + 30 days or the date = '3000-12-31T00:00:00Z'	xs:dateTime	No	None	N.A
FirmwareHash	Hash calculated over the Manufacturer Image part of the FirmwareImage as defined by GBCS. The Firmware Hash as held in the CPL and presented in the format XX..XX (64 characters) where each X is one of the characters 0 to 9 or A to F. This data item must align with the value on the CPL (excluding the colon separator between octet values). Note that a hexBinary value of length 32 is defined as 32 octets; an octet is represented as 2 characters.	Restriction of xs:hexBinary (minLength = 32, maxLength = 32)	Yes	None	N/A

Table 257 : ActivateFirmware (sr:ActivateFirmware) data items

3.8.125.3 Specific Validation for this Request

No specific validation is applied for this Request, see clause 3.2.5 for general validation applied to all Requests and clause 3.10.2 for Execution Date Time validation.

3.8.125.4 Additional DCC System Processing

The DCC Systems shall monitor all Responses received to this Service Request.

Where the DCC identifies any Response ~~which indicates the sucesful processing of the activate firmware Command (executionOutcome = Success) on a Device and~~ where the current Firmware Version returned by the Device matches an entry on the CPL for that Device Model and that Firmware Version is different to the value currently held in the Smart Metering Inventory for that Device, an update to the Smart Metering Inventory shall be made by the DCC.

The DCC Systems shall update the DeviceFirmwareVersion data item within the Smart Metering Inventory to record the new DeviceFirmwareVersion value for the specified Device ID received in the Response. Where the DeviceFirmwareVersion for the specified Device is now the current valid version, and the Device Status was 'Suspended' and the Firmware Version returned by the Device matches an entry on the CPL for that Device Model with a status of "Current" the DCC Systems shall update the Device Status to the status it held immediately prior to its Suspension" and DCC Alert N29 will be sent to the Responsible Supplier and to the Electricity Distributor or Gas Transporter.

If the Firmware Version returned by the Device matches an entry on the CPL for that Device Model with a status of "Removed", the SMI Firmware Version will be updated, but the Device Status will not be set to 'Suspended'. In this case DCC Alert N50 will be sent to the Responsible Supplier as a warning.

Note that if the Firmware Version returned by the Device is invalid (doesn't match an entry on the CPL for that Device Model) DCC Alert N51 will be sent to the Responsible Supplier as a warning and the Smart Metering Inventory Firmware Version will not be updated.