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Paper Reference:	SECP_76_1701_22
Action:	For Decision

DP105 Problem Statement

1. Purpose

Draft Proposal [DP105 'Sending SR11.2 to Devices in Suspended State'](#) was raised by the Data Communications Company (DCC) and has undergone the Development Stage. The Change Sub-Committee believes this Draft Proposal is ready to be converted to a Modification Proposal. This paper sets out our proposed approach for progressing this modification for the Panel's approval. We are recommending that this modification be progressed to the Refinement Process, and that the Panel agrees the first package of work to be undertaken.

This paper provides a high-level summary of the key points. A copy of the problem statement submitted by the Proposer can be found in Appendix A.

2. Summary of the issue

Once a firmware entry is removed from the Central Products List (CPL), the Smart Metering Inventory (SMI) status for the impacted Devices will be set to be in a 'Suspended' state. While the Device is in a 'Suspended' state, only a Critical Service Request (SR) can be sent to those Devices, and any Non-Critical SRs will be rejected by Data Services Provider (DSP) with an E5¹ error.

As an exception, there are three Non-Critical SRs that will be allowed if the Device is 'Suspended'. However, SR11.2 'Read Firmware Version' is not one of these and will be rejected by the DSP if it is sent while the Device is 'Suspended'.

The scenario in which this causes an issue is if the SR11.3 'Activate Firmware' response for successful firmware activation is not received by the DSP. In this scenario the Device will remain in the 'Suspended' state even though the new firmware is now activated on the Device.

To get around this, SR11.2 would need to be added to the exception list. This would allow the SMI status to be updated based on the SR11.2 response while the Device is in the 'Suspended' state.

3. Proposed progression

The Change Sub-Committee has agreed that this Draft Proposal is ready to be converted to a Modification Proposal. We believe that this modification should be progressed to the Refinement Process to allow for the development and assessment of a solution to the agreed issue.

¹ Failed Authorisation – Invalid Device Status

A strawman solution is in place. This is to add SR11.2 to the exception list of Non-Critical SRs so that it can be sent while a Device is 'Suspended'.

This will require a DCC/DSP system change for the below two areas:

- Add SR11.2 into the exception list for E5 validation
- Allow the SMI status to be updated based on the SR11.2 response while the Device is in the 'Suspended' state

Work package and timetable

We propose the following first package of work to be undertaken during the Refinement Process:

Activity	Date
Prepare business requirements with the DCC	Jan 20
Discuss business requirements with the TABASC	6 Feb 20
Publish business requirements on the SEC Website and open these for industry comment	6 Feb 20
Request Preliminary Assessment	24 Feb 20
Discuss at the April Working Group meeting	1 Apr 20
Update Panel on progress	17 Apr 20

Areas of assessment

We do not believe there are any further questions that need to be considered in addition to the standard assessment areas.

4. Recommendations

The Panel is requested to:

- **AGREE** that DP105 is ready to be converted to a Modification Proposal;
- **AGREE** that MP105 should be progressed to the Refinement Process; and
- **AGREE** the first package of work and the timetable for MP105.

Joe Hehir

SECAS Team

10 January 2020

Attachments:

- **Appendix A:** DP105 problem statement

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DP105 ‘Sending SR11.2 to Devices in Suspended State’

Problem statement – version 1.0

About this document

This document provides a summary of this Draft Proposal, including the issue or problem identified, the impacts this is having, and the context of this issue within the Smart Energy Code (SEC).

Proposer

This Draft Proposal has been raised by Chun Chen from the Data Communications Company (DCC).

What is the issue or problem identified?

Background

Once a firmware entry is removed from the Central Products List (CPL), the Smart Metering Inventory (SMI) status for the impacted Devices will be set to be in a 'Suspended' state. While the Device is in a 'Suspended' state, only a Critical Service Request (SR) can be sent to those Devices, and any Non-Critical SRs will be rejected by Data Services Provider (DSP) with an E5¹ error.

As an exception, the following Non-Critical SRs will be allowed if the Device is 'Suspended':

- SR11.1 'Update Firmware'
- SR6.23 'Update Security Credentials (CoS)'; and
- SR2.2 'Top Up Device' with a Command Variant value of 2 (only for Smart Metering Equipment Technical Specifications (SMETS) 1 Devices).

This means SR11.2 'Read Firmware Version' will be rejected by the DSP E5 validation, when the Device is in a 'Suspended' state.

What is the issue?

The scenario in which this causes an issue is if the SR11.3 'Activate Firmware' response for successful firmware activation is not received by the DSP. In this scenario the Device will remain in the 'Suspended' state even though the new firmware is now activated on the Device. There is no other recoverable method unless another new firmware update takes place.

To get around this, SR11.2 would need to be added to the exception list. This would allow the SMI status to be updated based on the SR11.2 response while the Device is in the 'Suspended' state.

How does this issue relate to the SEC?

Any changes to how SR11.2 is handled would necessitate a change to the DCC User Interface Specification (DUIS) and to the DCC/DSP Systems, requiring a modification to do so.

¹ Failed Authorisation – Invalid Device Status

What is the impact this is having?

What is the impact of doing nothing?

Without the required addition of SR11.2 into the exception list, there will be a small percentage of Devices that cannot be recovered from the 'Suspended' state if the SR11.3 response is not received by the DSP.

Currently the only way to resolve this is for a Service User to carry out another firmware update, which is a waste of time and effort.

What Device types are impacted?

SECAS notes that Electricity Smart Metering Equipment (ESME), Gas Smart Metering Equipment (GSME), Prepayment Meter Interface Device (PPMIDs) and Home Area Network (HAN) Connected Auxiliary Load Control Switches (HCALCSs) could all be suspended on the CPL. However, SR11.2 is only applicable to ESME and GSME.

Should SR11.2 support be required for PPMIDs and HCALCSs, a separate Draft Proposal would be needed. Or alternatively, this added functionality to SR11.2 could be provided via [SECMP0007 'Firmware updates to IHDs and PPMIDs'](#). However, this Draft Proposal is not dependant on SR11.2 being expanded to include PPMIDs and HCALCSs.

This proposal will not apply to In-Home Displays (IHDs) as they are not listed on the CPL.

What are the views of the industry?

Views of SEC Parties

A Large Supplier expressed its support for the proposed change as this will enable better management of Devices to avoid unnecessary removal and/or inconvenience to the customer.

Views of the Change Sub-Committee

The Change Sub-Committee agreed that the issue identified under this proposal is clearly defined and understood. It recommended that this Draft Proposal is ready to be converted to a Modification Proposal and that it should proceed to the Refinement Process.

The Change Sub-Committee had no other comments.