

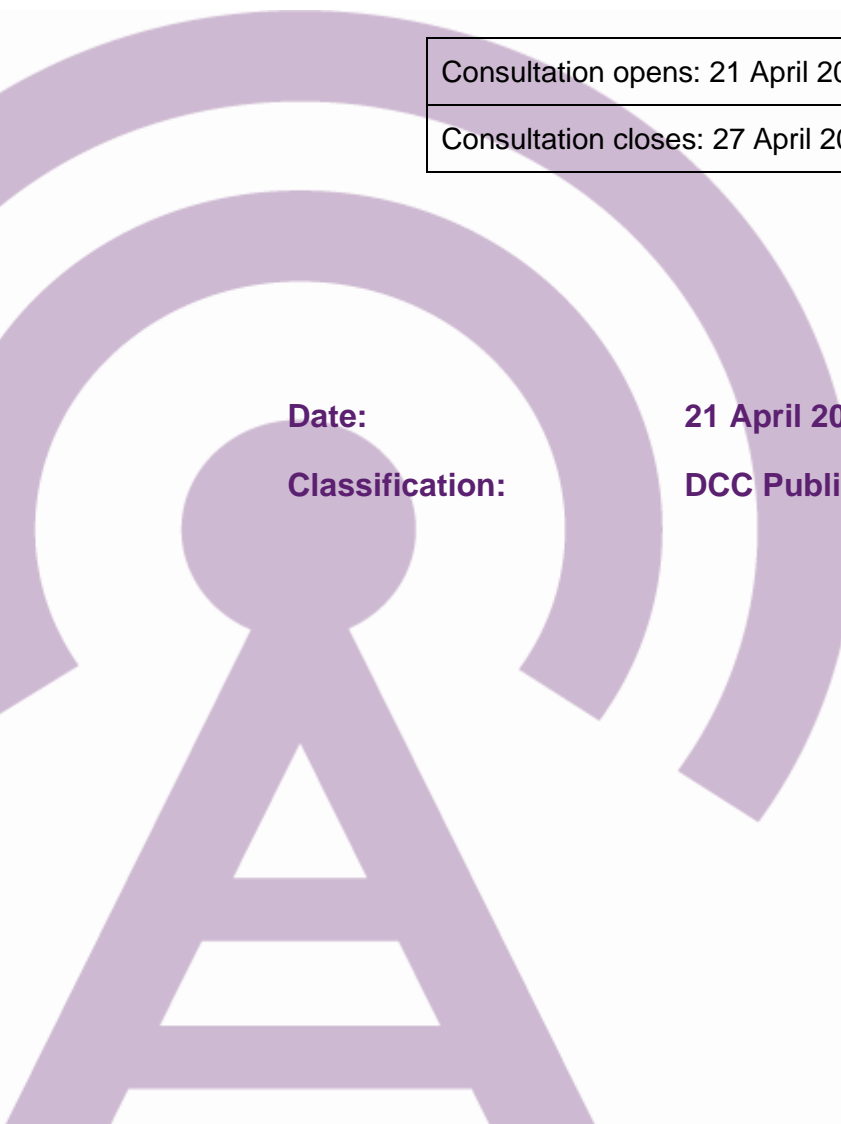
Consultation

Addition of the Device Alert 8F12 to the Exclusion List of SECMP00062

Consultation opens: 21 April 2020
Consultation closes: 27 April 2020

Date: 21 April 2020

Classification: DCC Public



1 Background

SECMP0062 'Northbound Application Traffic Management – Alert Storm Protection' was approved by the Change Board under Self-Governance on 07 February 2020. Part 1 will be implemented on 06 May 2020 (June 2020 SEC Release) and Part 2 will be implemented on 05 November 2020 (November 2020 SEC Release).

The proposed solution is to provide Alert Storm Protection through a DCC designed mechanism which will count the number of Alerts originating from a specific device within a designated timeframe. If the device sends Alerts above a pre-determined threshold value, the mechanism will consolidate excess Alerts from the device, and only forward one per configurable number of Alerts (n) per designated period on to the intended Users. Consolidated Alerts will be counted for Anomaly Detection purposes and Service Users will be notified ahead of time for the exact actions being taken.

As part of the solution, the Traffic Management Mechanism Document (TMMD) was developed to include a list of Alerts that would be exempt from this mechanism. Any Alert Code in the exclusion list will not be subject to Alert Storm Protection. A full list was agreed during the modification process with Service Users, and any future changes would be managed by the Panel who may delegate the responsibility to the Operations Group (OPSG) or any other sub-committee.

On 07 April 2020, DCC presented at the OPSG to propose including a new Alert 8F12 to the TMMD prior to Go Live on 06 May 2020. The OPSG expressed concerns about changing the exclusion list because the governance process had yet to be implemented as part of the implementation of SECMP0062.

At the SEC Panel meeting on 17 April 2020, the Panel determined to retain ownership of the TMMD at least until the process for updating it had been followed once. A recommendation from OPSG would be sought ahead of a Panel decision. Following this, the Panel will consider whether the task involved is a formality or if more effort is required. After that, the Panel will decide whether to delegate, but for now this document is NOT delegated to OPSG.

The purpose of this consultation is to consult on the proposed addition of the Alert 8F12 to the exclusion list.

The closing date for this consultation is 27 April 2020.

2 Issue and Impact

8F12 Alert, CHF Device Log Changed, is an Alert that confirms connection of a new device to the Communication Hub (CH).

There is an existing problem with certain Pre-Payment Meter Interface Devices (PPMID) and CH combinations whereby the CH generates 8F12 Alerts every minute. This would trigger Alert Storm Protection – which means that subsequent attempts to install other devices on that CH will fail because the 8F12 Alert that confirms connection of the new device to the CH will not be processed and the DSP and User will think that device connection has failed.

It was proposed at TABASC on 19 March 2020 that the device Alert 8F12 should be added to the exclusion list of the Alert Storm Protection mechanism because the failure to do so will impact on:

- the completion of installation and commission activities, and
- prevent devices from joining with the CH during the CH replacement process.

To address this above, DCC is proposing to add 8F12 to the exclusion list.

2.1 Impact of 8F12 not being on the exclusion list

Installation and Commission

During the Installation and Commission (I&C) process up to 3% of PPMID installations start to generate 8F12s in volumes that would trigger the consolidation of these Alerts. After the consolidation is triggered, the I&C process relies on receiving the Alert N24 triggered by the 8F12 Alert. The I&C process will not be completed as the DSP will not process the 8F12 Alert even after the device is successfully joined with the CH.

If 8F12 is not on the exclusion list, this could lead to complications, the need for work arounds, longer time on site, resulting in higher costs and lower productivity as less appointments can be met in any one day. An exception process must be triggered by the Service User to resume the I&C process which may involve incident management and triage activity, incurring additional cost.

There is a higher risk for dual fuel installations when the GSME is joined with CH after PPMID. For example, on a typical day of installations, this could impact 300 installations. To avoid the need for additional work around and associated costs, DCC is proposing to add the Alert to the exclusion list.

New Firmware 2.0 will significantly reduce these alerts from occurring. This is likely to coincide with the recommencement of installations following government-imposed coronavirus lock down.

Communication Hub Replacement

There are existing meters already installed and connected to a CH generating 8F12s above the Alert consolidation threshold that could not be swapped out due to the

consolidation of these Alerts. This means the DSP will not have the latest TC Link Key details for any connected devices.

In March circa 10,000 CHs generated volumes of 8F12s that would lead to the consolidation of their Alerts and prevent the re-joining of devices to the new CH after the CH is swapped out.

Again, this this could lead to complications, the need for work arounds, longer time on site, resulting in higher costs and poor customer experience.

2.2 Impact of adding 8F12 to the exclusion list

If 8F12 is added to the exclusion list, the Alert will be exempted from the Alert Storm Protection mechanism and the issues highlighted above would be avoided.

At the OPSG on 07 April 2020, members stated that the anticipated number of I&C activity would be extremely low for the immediate future, and therefore the risk of impact on installations identified by DCC would not crystallise immediately.

The timing of the Firmware 2.0 update will mitigate the risk of placing the 8F12 on the exclusion list, coinciding with the anticipated increase in installations.

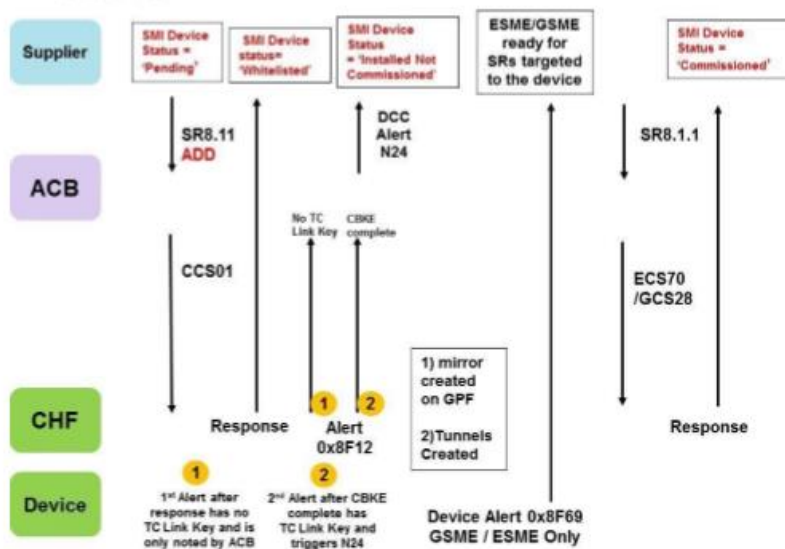
3 Further information on why 8F12s are generated

Installation and Commission

Service Request 8.11 UpdateHANDeviceLog with a Request Type of "Add" is sent to the CHF to add the device to the Device Log (i.e. to Whitelist the device) to allow a connection to be established between the CHF and the requested device on the ZigBee HAN.

As part of this process, the CHF sends two Alerts with code 8F12 to the Access Control Broker (ACB = DSP) remote Party. The DSP sends an N24 Alert after receiving and processing the 2nd 0x8F12 Alert which contains the TC Link Key. N24 is used by the Service User to move the I&C orchestration forward to the next step.

Figure 1: Establishing the HAN - Success



Communication Hub Replacement

The CH replacement process relies on the new CH knowing which device is allowed to re-join and the security credentials of that device – the TC Link Key. The TC Link Key is initially generated during the I&C process and then updated each time the device performs a Trust Centre Re-join. Trust Centre Re-join is one method the device uses to re-establish communication if it drops off the HAN. Each time a Trust Centre Re-join happens, the CHF will send an 8F12 Alert back to DSP, which contains the latest TC Link Key. The DSP must maintain the TC Link Key in the CHF Device Log for CH replacement purposes.

4 Question for respondents

We are seeking Parties' views on the addition of 8F12 to the list of excluded Alerts that will not be consolidated by the Alert Storm Protection mechanism:

Q1.	Do you agree with adding 8F12 to the exclusion list? Please state rationale.

5 Next Steps

The consultation will close on 27 April 2020. DCC will collate the responses and submit a paper to the Panel so that the Panel can determine on 5 May 2020 whether 8F12 Alert should be included in the exclusion list of the TMMD.

6 How to respond

Please provide responses by **17:00 on Monday 27 April 2020** to DCC at:
Graeme.liggett@smartdcc.co.uk

Consultation responses may be published on our website www.smartdcc.co.uk. Please state clearly in writing whether you want all or any part, of your consultation to be treated as confidential. It would be helpful if you could explain to us why you regard the information you have provided as confidential. Please note that responses in their entirety (including any text marked confidential) may be made available to the Department of Business, Energy and Industrial Strategy (BEIS) and the Gas and Electricity Markets Authority (the Authority). Information provided to BEIS or the Authority, including personal information, may be subject to publication or disclosure in accordance with the access to information legislation (primarily the Freedom of Information Act 2000, the Data Protection Act 2018 and the Environmental Information Regulations 2004). If BEIS or the Authority receive a request for disclosure of the information we/they will take full account of your explanation (to the extent provided to them), but we/they cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded by us as a confidentiality request.