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SECMP0067 'Service Request Traffic Management'

Annex B

Business Requirements – version 2.0

About this document

This document contains the detailed context and business requirements to deliver SECMP0067.

Context

The DCC System has a finite capacity. Even with communication with Service Users to meet forecasted demand and making the most efficient use of the System's current capacity, it may be unable to cover accidental or unanticipated large bursts of Service Requests. Currently all Service Users are impacted whether they are responsible for the overload or not, and this may result in critical messages to their customers, such as prepayment top-ups, being delayed with potentially serious consequences.

This proposal is designed to:

- provide reliable and predictable System behaviour under extreme load conditions;
- ensure Service Requests identified as priority are delivered in a timely fashion even under extreme load; and
- control the Service Requests of only those Service Users whose use of the service exceeds their allotted capacity.

As part of the DCC's Impact Assessment, they will be asked to define key elements of the proposed solution's operating model, which will include but not be limited to:

- The expected duration of how long the solution will be active when triggered;
- Provide a "layman's terms" version of the solution's allocation formula and explain every variable element; and
- How frequently they expect the solution to be triggered (how many times in a month).

Business Requirements

SECMP0067 business requirements

The following business requirements have been agreed for SECMP0067:

Requirement 1: The DCC will clearly define a formula/calculation and operating model that will be used to allocate individual Service User capacity in the event of the DSP capacity threshold being breached.

The DCC Systems will use a clearly stated formula/calculation and operating model to allocate Service User capacity to each Data Service Provider (DSP) Service User in the event of the DSP capacity threshold being exceeded. The result of this formula/calculation will be a percentage of the total capacity allocated to each Service User. This formula will be measured against a Service User's current portfolio rather than number of initial installations, unless a Service User has no current portfolio.

Requirement 2: The DCC System will include a clearly defined and configurable list of Priority Service Requests for when the solution's mechanism is operational.

The DCC Systems will contain a fully configurable list (see Appendix A) which explicitly states the Service Request Variants which are listed as Priority requests when the capacity allocation mechanism is operational. These Service Requests will not be throttled by the mechanism, therefore all submitted Service Requests will be counted but all Priority requests will not be subjected to capping.

The Priority Service Requests to be included on this list upon SECMP0067's implementation are recorded in Appendix A. This list may be revised from time-to-time by TABASC.

Requirement 3: Service user capacity allocations will be updated monthly.

The DCC will update the individual DSP Service User allocations on a timely basis agreed by industry (initially one month but may be revised if industry agrees) in order to keep an updated and accurate account of Service User capacity that aligns to their portfolio size. This list will only show the individual capacity allocation to that specific User and the DCC will ensure this updated list is made available to all Service Users in advance of the revised allocations taking effect.

Any reallocation of capacity between Suppliers as a result of a Supplier of Last Resort event is to take effect as soon as the process would allow.

Requirement 4: The solution will consider the effects of outages of the DSP systems, including (but not limited to) system maintenance and unexpected circumstances, on any subsequent traffic through the DCC Systems.

The DCC will provide clear analysis and state the courses of action that will be taken when outages of the DSP systems take place due to maintenance and or other unanticipated circumstances. In particular, this should assess the impact on traffic immediately following the end of the outage period.

This will include a process for what Service Users should do between the DSP's outage and it being fully operational.

Requirement 5: The DCC will provide a transparent reporting process to update Service Users on when throttling has taken place.

The DCC will provide reports on a monthly basis (subject to being revised if another timescale is preferred) to inform Service Users on when throttling has been used by DCC Systems and which Service Users have regularly exceeded their determined capacity allocation. This report including Service Users will not be made public, instead being brought to Panel and/or subcommittee confidentially and will be subject to independent audit, if necessary. This report should also specify how many seconds in a day is throttling is required, along with an explanation for any trends or particular events. The report will include the service allocation formula, what the variable elements are set to and state what changes have been made if any. As part of the Impact Assessment, the DCC will provide a copy of what they expect the reporting to look like so the Sub-Committee of the SEC Panel's choosing can agree what they will provide governance on.

The DCC will also provide a means of notifying Service Users when they are having any Service Requests being throttled in the event of the DSP capacity threshold being breached. This will be done via HTTP 503 response to the inbound request.

The DCC will investigate whether it can provide an early warning system to notify Service Users before capacity allocations are breached so that a User can't exceed their defined capacity unknowingly.

Appendix A – Priority Service Request List

DUIS Reference	Service Reference	Service Ref Variant	Service Request Name
3.8.5	1.5		Update meter balance
3.8.9	2.2		Top up device
3.8.10	2.3		Update debt
3.8.11	2.5		Activate emergency credit
3.8.78	6.25		Set electricity supply tamper state
3.8.86	7.1		Enable supply
3.8.87	7.2		Disable supply
3.8.88	7.3		Arm supply
3.8.81	7.4		Read supply status
3.8.98	8.1		Commission device
3.8.104	8.7		Join service (critical)
3.8.106	8.8		Unjoin service (critical)
3.8.113	8.14	8.14.1	Comms hub status update - install success
3.8.114	8.14	8.14.2	Comms hub status update - Install no sm wan
3.8.120	11.3		Activate firmware