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SECMP0067 ‘Service Request Traffic Management’

March 2020 ad hoc Working Group Meeting summary

Monday 16 March 2020

Progress to date

A recap of the issue and solution and progress so far was given by SECAS. The Impact Assessment and Refinement Consultation were identified as the main points to be discussed.

Impact Assessment

The Impact Assessment was covered extensively throughout the meeting, most notably drawing on the changes and additions to the Preliminary Assessment.

The Mechanism

The DCC explained that Users would be given a Capacity Allocation as per the Capacity Allocation Formula. If they then breached this capacity allocation no action would be taken provided the DCC System was not at capacity. If the DCC System was at Capacity the mechanism would be activated which would allow the Users Allocated Capacity of Service Requests through but send back the additional Requests with the HTTP message. This HTTP header would contain a ‘re-try after’ header to allow Users to identify when to resend the request.

HTTP Responses

The DCC noted the change of the HTTP 503 ‘Service Unavailable’ response to a HTTP 429 ‘Too Many Requests’ The rationale for this was that the suggestion for an alternative HTTP response came in a previous Working Group and that the DCC felt that this was the one best suited to notifying Users for retrying to submit Service Requests. Additionally, the DCC stated that it would add a ‘Retry-After’ header to the HTTP response with a static time value. The DCC confirmed this would be configurable but not in a real time way so it could not be changed as the event occurred but would be a configuration parameter that could be updated under the agreed governance framework. This would be under the vires of SEC Panel or a delegated Sub-Committee. The Working Group suggested this would most likely be OPSG. The other Working Group members agreed with this approach. It was noted that this would cause a change to DUIS and would need to be added to the legal text to note where a HTTP 429 would be used although this would not be a change to the schema. A Working Group member questioned how the static values had been set. The DCC said that currently this was their estimate, but this could be refined during test and once the mechanism was in operation.

One Working Group member asked about how their process of batching Service Requests would be affected by this method of retry attempts. The DCC agreed some guidance could be issued and also

that the DCC would be happy to work bi-laterally with Users to ensure the strategy worked for both Parties.

A Working Group member asked how this would be managed by them if the DSP was also attempting re-tries. The DCC and SP explained that the DSP will not be attempting re-tries, so Users will only have to manage their own re-tries.

Working Group members were concerned that if the retry after 1 minute and everyone else retries after 1 minute they could all get stuck in a retry loop.

One Working Group member stated that this was all new for DNOs and they were not sure themselves how their SR allocations would work. They stated that it was also likely the way they work will change over the next 12 months and that the DCC should be proactive in reviewing the situation and the mechanism. The DCC agreed they should be doing this through Service Management.

The Working Group suggested that Capacity Allocation should be reviewed monthly or bi-monthly. In addition, they wanted to see their Capacity Allocation well in advance of this mechanism going live.

A Working Group member asked how this will be affected by DP116 'Service Request Forecasting'. This Draft Proposal aims to remove the requirement on Users to provide SR Volume Forecasts, instead using DCC historical data to forecast forward volumes. The DCC said this will not be affected as the historical data would not be affected.

In terms of the Capacity Allocation Formula, the DCC confirmed that this is allocated by MPxN number and then by weighting within the charging service statement (how many SRs the User was expected to send)

Configuration Settings

The Working Group discussed the configuration settings for the solution's parameters as set out in the Impact Assessment. The DCC explained the various settings such as thresholds, deadband periods and incident creations, they stated these were for illustrative purposes only. This prompted some Working Group members to ask if there could be any modelled examples so show how they solution's mechanism would work in reality. One Working Group member added that there had to be a non-illustrative and fixed version of these parameters that would have to be approved at Panel, Modification Report Consultation and Change Board in order to get agreement from industry on the Modification Proposal. SECAS confirmed that any configuration settings for the solution's parameters would be included in the Modification Report. These values would be added to Annex C which contains the capacity allocation formula, the Priority Service Request list and the solution parameters for throttling Service Requests.

Reporting

Reporting was also widely covered in the Impact Assessment discussions. The Working Group members wanted to see a physical example of how the reporting would come across before any approval took place at Panel. An initial idea was that the Modification Proposal's reporting could be based on an outage report, given the solution would follow a similar issue. The Working Group members expressed a desire to see in the reporting the User's capacity allocation, their usage within that allocation and how close at any point they come to exceeding their allocated capacity. Any report should include date and time of event, duration of event, number of times over a period the

mechanism had been activated, the number of Service Requests sent back (by SR category) and which Users were affected.

A Working Group member added that these reports should include the frequency of any outages or Service Requests throttling incidents which take place, as this could provide indication that the values for the solution's parameters would need amendment. The DCC stated that this was outside usual process given that reporting would usually be developed at a later stage of the process following approval of the modification, but that in this case they would work to ensure a reporting model could be given to Working Group members to indicate how it would work if approved. SECAS agreed to organise another meeting to discuss the reporting and specifics on what it should include. It was agreed that communications would be sent out as soon as possible for any such meeting following the DCC confirmation of being able to create a reporting example.

A Working Group member enquired into how the DCC would identify and deal with Users who repeatedly breach their allocated capacity or continually sent re-tries before the stated time in the HTTP header. The DCC agreed that guidance could be issued, and the matter would then be dealt with by DCC Service Management. The Working Group asked if this was outside the scope of the modification. SECAS agreed this was outside the scope of the Modification but could be a recommendation within the Modification Report.

A Working Group member questioned the ability of the TOC to produce these reports as they are currently under resourced. The DCC stated they were aware of the problem and were scaling up the TOC resourcing to manage current and future workload.

Planned/Unplanned Outages

A brief mention was given to the difference between planned and unplanned outages covering how the DCC would respond. With a planned outage, DCC explained they would expect Users to manage their submissions of Service Requests during the notified outage period as part of their business processes. With an unplanned outage, the DCC recommended an approach of short retry sequences set out in the Impact Assessment. This prompted the question from Working Group members about SEC Parties who have a batching process for submitting their Service Requests, rather than manually submitting them individually and how this would fit in. The DCC took note of this and stated that any such guidance for helping Users with retry strategies would be logged in DUGIDS.

A Working Group member asked if the DCC have any visibility currently on when the mechanism might be activated. The DCC stated the highest volumes of SRs were seen at between midnight-06.00 and there were spikes within that. Some of these are DSP schedules activities which will be scales back in the first instance before the mechanism is activated. The Working Group member pointed out that this would then mean those scheduled activities would extend into the working day to be completed.

Another member pointed out that there is likely to be increased scheduled tasks in future due to the Half Hourly Settlement that is being introduced. There will be more traffic travelling over the network at night and are the DCC ready for this.

The Working Group questioned how much capacity the DCC systems had. The DCC confirmed that the System is running within ISFT volumes for SRs and will be up to 2024.

Business Case

The Impact Assessment confirmed that the cost of the solution would be approximately £1.6 million. Some Working Group members asked about the cost of alternatives, specifically the cost of expanding the existing infrastructure. Whilst the Working Group members acknowledged that the Modification Proposal had some merit and could be useful, they were in agreement that they wanted to see how it compared to the equivalent of additional system capacity and relying on the existing disaster recovery processes. The DCC stated that they had provided a business case (see the embedded document at the end of the summary) that looked at the lost productivity and additional costs that would be incurred across industry in the case of a systems outage. The Working Group members stated that they wanted a calculation of placing the equivalent funds into infrastructure improvements included in the Modification Report as part of any cost benefit analysis.

Refinement Consultation responses

The Refinement Consultation had returned multiple concerns and queries which the DCC had provided comments on to ensure these points were addressed. Of these responses, most had comprehensively covered these queries through the Impact Assessment – for example concerns over the HTTP 503 response being the most appropriate and that Service Request throttling would only take place in the event of network capacity being exceeded.

Concerns raised over capacity issues being caused by repeated Alerts – where it was noted this related more to SECMP0062 than something that this Modification Proposal would directly fix. This led to a confirmation from DCC that the Service Request and Alerts traffic operate independently of one another.

The Priority Service Request list was further scrutinised following queries from the consultation. The Working Group questioned why the Service Requests for Communications Hub status updates (8.14.1 and 8.14.2) were deemed as priorities. SECAS took an action to note where these were added, whether from the list's initial creation in an earlier Working Group or if it was added by a Panel Sub-Committee and to find the rationale as to why. The Working Group noted the Chair of the TABASC had previously stated he did not believe there should be any Priority Service Request list as it defeated the point of the mechanism. This was reiterated by the Working Group who stated that if the mechanism was activated yet a User continued to send vast numbers of Priority Service Requests the DSP could still 'break' and the mechanism would therefore have no benefit.

There was some discussion around whether SR 4.3 was required for install along with SR 2.2 and whether any installs should be considered critical. There was also a suggestion that anything relating to load control should be considered critical. The DCC pointed out that SECMP0046 is currently at PA stage and is unlikely to go live before this Modification. Proposed changes will go through OPSG for review and approval.

During the meeting the DCC confirmed that the current list of Priority Service Requests made up less than 5% of SRs sent per day but agreed to confirm this following the meeting.

One Refinement Consultation response asked whether an Amber Alert could be issued when the System is reaching Capacity.

A question was raised regarding how the DCC would identify PPMs. This would be done by identifying any PPM SRs sent within the previous two weeks. One Working Group member questioned if this was enough as some PPM customers only top up once a month, although this was rare. The Working Group agreed that two weeks is appropriate.

Next Steps

It was suggested that the Modification Report be taken to the next available Panel, subject to the DCC as Proposer agreeing the report and respective annexes accurately describe the solution and captured details of the discussions. From there it would enter Modification Report Consultation and a Change Board meeting in order to ensure it can be implemented in time for the November 2020 SEC Release. The Working Group members disagreed with this approach. They felt that this would lead to rushing the report and that it wouldn't be giving effective scrutiny to a modification that brings in significant changes and at great industry cost. The Working Group members instead wanted to see when the next available time for a meeting could take place for discussing the reporting examples and then to check whether the business case, configurable parameter values and a modelled example would be fit for purpose before progressing to Panel. They also stated that they required 6 weeks for UIT. One of the Working Group members confirmed that they would lobby to halt the Modification Proposal being accepted at Panel if it didn't include time to discuss these crucial parts of the report. SECAS acknowledged the actions that would need to be taken, including organising a new meeting for discussing these points and investigating how the Communications Hubs Service Requests 8.14.1 and 8.14.2 were included to the Priority Service Request list.

Actions

- SECAS to correct published documents so that numbering and cross-references don't appear incorrectly. DCC suggested publishing a Word document rather than converting to PDF.
- DCC to provide a business case for why this is the best solution rather than increased infrastructure for the same price
- DCC to provide a workable example of how the mechanism would affect users
- DCC to provide an example of the reporting
- SECAS to organise another Working Group to discuss the reporting and Priority Service Request list
- SECAS to ensure any SR developed as part of SECMP0046 is considered for inclusion on the Priority Service Request list for this mechanism.



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