NANC 347

**CMIP Interface Enhancements – abort behavior**

**Origination Date :**03/06/2002

**Originator:**Neustar

**Description:**

**Business Need:**

Note:  During the Nov ‘02 LNPAWG meeting, it was decided by the industry to consolidate NANC 347 and 350 into a single change order that would capture abort behavior.  All parties will also consider how these changes relate to the elimination of aborts (all or just time-related) and outbound flow control.  The expectation is that Service Providers would implement similar abort processes/procedures on their systems, such that “*sender”*  and “*receiver* ” can be used to indicate either NPAC or SOA/LSMS for abort behavior.

15 minute abort behavior.

The NPAC SMS and Service Provider SOA/LSMS exchange messages and a response is required for each message.  The current NPAC architecture requires a response to every message within a 15 minute window, or the requestor will abort the association.

If a Service Provider fails to respond to an NPAC message, the NPAC aborts that specific association and the Service Provider must re-associate in recovery mode, request, receive and process all missed messages, then start processing in normal mode until they are totally caught up with any backlog of messages.  During the recovery timeframe, the NPAC must “hold” all messages destined for that Service Provider, and only send them once the Service Provider has completed the recovery process.  This only further delays the desired processing of messages by both the NPAC and the Service Provider.  Additionally, any SV operations except range activate will remain in a sending status until the Service Provider has competed recovery.

With the current NPAC implementation based on the requirements, especially during periods of high demand with large porting activity, a Service Provider that falls more than 15 minutes behind will get aborted by the NPAC, thus exacerbating the problem of timely processing of messages.  This occurs even though that Service Provider is still processing messages from the NPAC, albeit more than 15 minutes later.

With this change order, the audit behavior in the 15 minute window of the NPAC would not adversely impact a Service Provider that falls behind, but is still processing messages.

The business need for efficient transmission of messages will only increase as porting volumes increase.

**Final Resolution:**

Interface and Functional Backwards Compatible:  YES

15 minute abort behavior.

Change the 15-minute abort timer (tunable by region, defaulted to 15 minutes) to “credit” the Service Provider for responding to some traffic, even if they don’t respond to a specific message within the 15 minute window.

1. This would allow Service Providers that have fallen behind to keep processing the backlog, instead of getting aborted and having to re-associate to the NPAC in recovery mode, which in turn increases workload for both the NPAC and the Service Provider.
2. If the Service Provider fails to respond to ANY of the outstanding message during that 15 minute window, the NPAC would abort the association as is currently done (i.e., at the end of the 15 minute window).
3. If the SP is responding to messages at a slower pace, the NPAC using new timers, would “roll-up” the downloaded data (e.g., SV activate to LSMS with a slow SP) at the end of 15 minutes, to obtain closure on this porting activity.  In this example, the SV would be in partial-failure status, and a notification would be sent to both the activating SOA and old SOA.  The new timer allows the NPAC to separate association abort/monitoring and event completion.

This change applies to a single SV broadcast.  The flow for SV ranges is a response to the range event (M-EVENT-REPORT response) within 60 minutes (same as today).

60 minute abort behavior.

Create a new “60” minute window (tunable by region, defaulted to 60 minutes).  Use this new window the same way that the 15 minute window is used in Release 3.1 (i.e., abort the association for a lack of a response to an individual message from the NPAC).

1. This would allow Service Providers that have fallen behind to keep processing the backlog, instead of getting aborted and having to re-associate to the NPAC in recovery mode, but would put a limit on the amount of time allotted for slower Service Providers.
2. If the Service Provider fails to respond to a given outstanding message during that new 60 minute window, the NPAC would abort the association.  So with this change the Service Provider gets an additional 45 minutes to respond beyond the current 15 minute window.

The logic representation is shown below:
IF the slow Service Provider responds to this message within 60 minutes:
    NPAC updates the appropriate data
    NPAC sends appropriate notification to the SOAs
*(in an example of a partial failure activate request, the SV would go from*
*PF to active status and the Service Provider would be removed from*
*the failed list)*
ELSE,
    NPAC aborts the association
    the Service Provider must re-associate to the NPAC
    the Service Provider goes through recovery processing.

This change applies to both single and range SV broadcasts.  The SP will have 60 minutes to respond to the LSMS download message from NPAC, and in the case of an ACTION, the response to the event (M-EVENT-REPORT response) as well, or rollup at the NPAC will occur.  This new timer will separate the activities, but they will both be defaulted to 60 minutes.

**Oct ’02 LNPAWG**, discussed Major points/processing flow/high-level requirements.

**Nov ’02 LNPAWG**, upon approval of the merged version of 347/350, this will be move to the accepted category.

**Jan ’03 LNPAWG**, approved, move to accepted category.

Implemented in FRS 3.3.0a and IIS 3.3.0a.

**Related Release:**

Implemented in FRS 3.3.0a and IIS 3.3.0a.

**Status:** Implemented