**Origination Date:** 6/15/2011

**Originator:** Neustar

### Change Order Number: NANC 446

**Description:** Pending SV Interference when Creating Pooled Block

**Functionally Backward Compatible:** Yes

## IMPACT/CHANGE ASSESSMENT

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| FRS | IIS | GDMO | ASN.1 | NPAC | SOA | LSMS |
| Y | Y | Y | N | Y | N | N |

**Business Need:**

The NPAC design provides that a pooled block cannot be created if a pending SV exists. (*This rule applies only when the pending SV is for a telephone number that is not already an active SV record within that 1K block*.) If the Service Provider donating the block has created intra-SP ports for its working numbers in the block, this problem does not occur.

The dynamic nature of number porting activities and the rigid requirements that "pending blocks" cannot be created if pending SVs exist cause unnecessary churn and introduce unnecessary service risk. [*In this Change Order, the term "pending block" refers to the NPA-NXX-X (aka "DashX") that is created in preparation for the subsequent activation of a pooled block. The "pending block" record is network-level data item and has no SV-level records associated with it*.]

This change order eliminates the unnecessary churn/service risk and improves operational efficiency.

**Description of Change:**

The proposed change order modifies the NPAC to allow pending pooled blocks to be created even when pending SVs exist (without an underlying active SV) within that 1K block, but only for the case where the code-owner and block-owner SPIDs are the same (an internal review of NPAC data indicates the problem overwhelmingly occurs for the case code-owner SPID and the block-owner SPID are the same).

Where the code-owner's SPID and the block-owner's SPID are the same, and thus the block may have far more than 10% of its numbers working, it may not be feasible to cancel pending SVs, intra-SP port those numbers, and only then recreate the pending SV. Alternatively, NPAC personnel must work with the SPs involved in those pending ports to request that the pending SVs be either activated or cancelled in order to permit creation of the pending block. Thus the interference of pending SVs with the creation of pooled blocks introduces delay and creates unnecessary work for the NPAC and the Service Provider community.

Additionally, the reverse functionality will also be supported, that is the NPAC will be modified to allow a pending SV (without an underlying active SV) to be created for a TN within that 1K block, where a pending pooled block exists.

For the scenario where the code-owner SPID and the block-owner SPID are NOT the same, NPAC rules and edits for that scenario will not be modified as a result of this change order. Nor will NPAC rules and edits that apply to NPA-NXX-X modification or de-pool scenarios be modified as a result of this change order.

Since all regions that participate in pooling have all LSMSs that support EDR, the feature will be toggled on in all regions.

**FRS:**

RR3-83.1 Number Pool NPA-NXX-X Holder Information – Error Message for Pending-Like No-Active SVs during Block Create

NPAC SMS shall provide an error dialog that displays the unique error message described in RR3-147, and provides an option for the NPAC Personnel to either, exit the Block Create request, or generate the Pending-Like No-Active Subscription Version(s) report, in the report format listed in RR9-11, RR9-12, RR9-13, and RR9-14, to the screen on the NPAC Administrative Interface, when NPAC Personnel are re-scheduling a Block Creation request for immediate execution. (Previously N-79.1) (this requirement will not change, but is included in this document for reference purposes, since it references RR3-147 which is being modified. However, this requirement will only display the error dialog when the updated version of RR3-147 generates the error message.

RR3-86 Addition of Number Pooling NPA-NXX-X Holder Information – Check for Pending-Like No-Active SVs

NPAC SMS shall reject the request and issue an error message to the NPAC personnel at the time of NPA-NXX-X Creation, if there are any TNs within the 1K Block of that NPA-NXX-X, or in a 1K Block of the corresponding old/new NPA-NXX-X belonging to an NPA-NXX scheduled for or currently in an NPA split, that contain an SV, with a status of pending/conflict/cancel-pending/failed, and where a currently active SV does NOT exist, for the given TN in cases where the Code Holder SPID and the Block Holder SPID are NOT the same value. (Previously N-100)

RR3-87 Addition of Number Pooling NPA-NXX-X Holder Information – Check for Pending-Like Port-To-Original SVs

NPAC SMS shall reject the request and issue an error message to the NPAC personnel at the time of NPA-NXX-X Creation, if there are any TNs within the 1K Block, that contain an SV, with a status of pending/conflict/cancel-pending/failed, and where the SV is a Port-To-Original port, for the given TN in cases where the Code Holder SPID and the Block Holder SPID are NOT the same value. (Previously N-110)

RR3-88.1 Addition of Number Pooling NPA-NXX-X Holder Information – Error Message for Pending-Like No-Active SVs and Pending-Like Port-To-Original SVs

NPAC SMS shall provide an error dialog that displays the unique error message described in RR3-86 and RR3-87, and provides an option for the NPAC Personnel to either, exit the NPA-NXX-X Create request, or generate the Pending-Like No-Active Subscription Version(s) and Pending-Like Port-to-Original Subscription Version(s) Report, in the report format listed in RR9-11, RR9-12, RR9-13, and RR9-14, to the screen on the NPAC Administrative Interface. (Previously N-130.1) (this requirement will not change, but is included in this document for reference purposes, since it references RR3-86 and RR3-87 which are being modified. However, this requirement will only display the error dialog when the updated version of RR3-86 and RR3-87 generate the error message.

RR3-147 Addition of Number Pooling Block Holder Information – Check for pending-like SVs for NPAC Personnel

NPAC SMS shall reject the request and issue a unique alarmable error message to the **NPAC** **personnel** at the time of Block Creation for an NPAC initiated request, from the NPAC Administrative Interface, if there are any TNs within the 1K Block, that contain an SV, with a status of pending/conflict/cancel-pending/failed, and where a currently active SV does NOT exist, for the given TN in cases where the Code Holder SPID and the Block Holder SPID are NOT the same value. (Previously B-190)

RR3-148 Addition of Number Pooling Block Holder Information – Error Message to SOA for pending-like SVs

NPAC SMS shall reject the request and issue an error message to the **SOA** at the time of Block Creation from the SOA via the SOA to NPAC SMS Interface, if there are any TNs within the 1K Block, that contain an SV, for a given TN in the 1K Block, with a status of pending/conflict/cancel-pending/failed, and where a currently active SV does NOT exist, for the given TN in cases where the Code Holder SPID and the Block Holder SPID are NOT the same value. (Previously B-210)

RN5-1 Subscription Version Status - Only One Per Subscription

NPAC SMS shall allow only one pending, cancel pending, conflict, disconnect pending, failed or partial failure Subscription Version per subscription. (this requirement will not change, but is included in this document for reference purposes to reiterate that even with the new allowance of pending-like, no-active SV to exist at the time of NPA-NXX-X creation, only one SV of the listed types will continue to exist at any one point in time.

RR5-55 Create Pending Port – NPAC Personnel or Service Provider After Block Activation

NPAC SMS shall allow NPAC personnel, a Service Provider SOA via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to create inter-service provider ports or intra-service provider ports for a TN within the 1K Block, when the currently active Subscription Version(s) is LNP Type POOL, and the Block’s status is active, with an empty Failed SP List. (Previously SV-195) (this requirement will not change, but is included in this document for reference purposes to reiterate that SV Create behaviour **after block activation** will remain the same.

RR5-56 Create Inter-Service Provider Regular Port and Port-to-Original Port – NPAC and SOA After NPA-NXX-X Creation

NPAC SMS shall reject an inter-service provider Subscription Version Create message, in cases where the Code Holder SPID and the Block Holder SPID are NOT the same value and where there is no active subscription version for the requested TN in the NPAC SMS , or an inter-service provider Port-to-Original Subscription Version Create message, for a TN within the 1K Block, from NPAC Personnel, a Service Provider SOA via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, after the Creation of the NPA-NXX-X, and prior to the existence of the Block in the NPAC SMS. (Previously SV-180)

RR5-57 Create Intra- or Inter-Service Provider Port-to-Original Subscription Version – After Block Activation

NPAC SMS shall validate that the New Service Provider is the Block Holder, in an intra-service provider port-to-original subscription version create message or inter-service provider port-to-original port for a TN within the 1K Block, once the Block exists in the NPAC SMS. (Previously SV-190) (this requirement will not change, but is included in this document for reference purposes to reiterate that SV Create behaviour **after block activation** will remain the same.

RR5-59 Create Intra-Service Provider Port – SOA After NPA-NXX-X Creation

NPAC SMS shall reject an intra-service provider Subscription Version Create message for a TN within the 1K Block, from a Service Provider SOA via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, after the Creation of the NPA-NXX-X Information, and a previously active SV does NOT exist in the NPAC SMS in cases where the Code Holder SPID and the Block Holder SPID are NOT the same value. (Previously SV-170)

RR5-121 Create Intra-Service Provider Port-to-Original Port – NPAC and SOA After NPA-NXX-X Creation

NPAC SMS shall reject an intra-service provider Port-to-Original Subscription Version Create message for a TN within the 1K Block, from NPAC Personnel, a Service Provider SOA via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, after the Creation of the NPA-NXX-X, and prior to the existence of the Block in the NPAC SMS in cases where the Code Holder SPID and the Block Holder SPID are NOT the same value. (previously NANC 230 Req 2)

RR5‑new1 Activate Subscription Version - Pending SV with no underlying Pooled or Ported SV

NPAC SMS shall allow NPAC personnel, a Service Provider SOA via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to activate an inter-service provider port or intra-service provider port for a TN within the 1K Block, without an underlying pooled or ported Subscription Version.

Note: This requirement allows the activate of a pending port (regular or PTO) within a 1K Block, regardless of the status of the Number Pool Block (“pending”, sending, failed, partial failure, active with a failed SP list).

RR5-new2 No Create for Non-Active TN – NPAC Personnel or Service Provider while Block contains a Failed SP List

NPAC SMS shall reject an inter-service provider or intra-service provider Subscription Version Create message for a TN within the 1K Block, from NPAC Personnel, a Service Provider SOA via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, when no currently active Subscription Version exists for the TN and the Block contains a Failed SP List.

Note: This requirement includes create for a TN that does not contain an associated pooled SV or a previously ported and still active SV (for that same TN). Other activities (modify-pending, conflict, cancel, or activate) are allowed. A Block will contain a Failed SP List when the status is Sending, Failed, Partial Failure, Active with a Failed List, or Old with a Failed List.

RR5-90 Addition of Number Pooling Subscription Version Information – Subscription Data

NPAC SMS shall create individual subscription versions, with LNP Type of POOL, for each TN within the 1K Block, that does not already exist with a status of pending/conflict/cancel-pending/active/partial failure/disconnect pending/old with a Failed SP List/sending, immediately after successfully creating Number Pooling Block Holder Information in the NPAC SMS. (Previously SV-10)

RR5-92 Addition of Number Pooling Subscription Version Information – Create “Pooled Number” Subscription Version – Bypass of Existing Subscription Versions

NPAC SMS shall upon finding an existing subscription version with a~~n~~ pending/conflict/cancel-pending/active, partial failure, disconnect pending, old with a failed SP list, or sending status for any TNs within the 1K Block, will bypass and not alter that TN/subscription version, log an information message, and continue processing. (Previously SV-30)

RR5-new3 Addition of Number Pooling Subscription Version Information – Create “Pooled Number” Subscription Version – Status Rollup to Active with empty Failed SP List

NPAC SMS shall, upon finding any TNs with no active-like or sending Subscription Version (pooled or ported) in the 1K Block, while performing the Block status rollup to Active with an empty Failed SP List for the first time, create a Subscription Version with LNP Type of POOL in the NPAC SMS using the routing data in the Block, and set the status to active for the Subscription Version.

Note: Block status rollup that contains a Failed SP List will not perform this operation.

RR5-98 Block Create Validation of Subscription Versions – Subscription Version Create for Missing TNs

NPAC SMS shall, upon finding any missing TNs with a status of Old without a Failed SP List, in the 1K Block, upon performing the Subscription Version Completion Check defined in RR5-96, log an information message, create a Subscription Version with LNP Type of POOL in the NPAC SMS using the routing data in the Block, and set the status to sending for the Subscription Version. (Previously SV-133) (this requirement will not change, but is included in this document for reference purposes to reiterate that the Block Verification Process will remain the same.

RR9-11 Pooled Number Reports – Pending-Like No-Active and Pending-Like Port-to-Original Subscription Versions Report

NPAC SMS shall support a report, used for NPA-NXX-X and Block Creation, that contains a list of all numbers in a 1K Block, in cases where the Code Holder SPID and the Block Holder SPID are NOT the same value, that currently have a Subscription Version with a status of pending/conflict/cancel-pending/failure, and where no active Subscription Version exists, or have a Subscription Version with a status of pending/conflict/cancel-pending/failure, and where the Subscription Version is a Port-to-Original port, for NPAC personnel using the NPAC Administrative Interface. (Previously R-70)

RR9-12 Pooled Number Reports – Pending-Like No-Active and Pending-Like Port-to-Original Subscription Versions Report Data Elements

NPAC SMS shall support a report, used for NPA-NXX-X and Block Creation, that contains a list of all numbers in a 1K Block, in cases where the Code Holder SPID and the Block Holder SPID are NOT the same value, that currently have a Subscription Version with a status of pending/conflict/cancel-pending/failure, and where no active Subscription Version exists, or have a Subscription Version with a status of pending/conflict/cancel-pending/failure, and where the Subscription Version is a Port-to-Original port, that contains the following data elements: (Previously R-80)  
 TN  
 Old Service Provider SPID  
 New Service Provider SPID  
 Due Date  
 Status

**IIS:**

Modify B.4.3.1, Service Provider NPA-NXX-X Create by NPAC SMS, last paragraph of step 1.

The NPAC SMS rejects the request if any subscriptionVersionNPAC objects exist with a status of pending, conflict, cancel-pending or failed for a TN specified by the serviceProvNPA-NXX-X-value and an active subscriptionVersionNPAC object does not exist for that TN in cases where the Code Holder SPID and the Block Holder SPID are NOT the same value, or the subscription version is a Port-To-Original request.

Modify B.4.3.5, Service Provider NPA-NXX-X Create by NPAC SMS for Pseudo-LRN, last paragraph of step 1.

The NPAC SMS rejects the request if any subscriptionVersionNPAC objects exist for a TN specified by the serviceProvNPA-NXX-X-value in cases where the Code Holder SPID and the Block Holder SPID are NOT the same value.

Modify B.4.4.1, Number Pool Block Create/Activate by SOA, last bullet of second-to-last paragraph of step 1.

There are no subscription version objects within the given TN range with a status of pending, conflict, cancel-pending or failed (“pending-like”) and no active subscription version for that TN in cases where the Code Holder SPID and the Block Holder SPID are NOT the same value. If the condition fails, error returned is ‘invalid-subscription-versions’.

Modify B.4.4.2, Number Pool Block Create by NPAC SMS, last bullet of second-to-last paragraph of step 1.

There are no subscription version objects within the given TN range with a status of pending, conflict, cancel-pending or failed (“pending-like”) and no active subscription version for that TN in cases where the Code Holder SPID and the Block Holder SPID are NOT the same value. If the condition fails, error returned is ‘invalid-subscription-versions’.

**GDMO:**

Behavior description for Number Pool Block and NPA-NXX-X. (modified in yellow).

-- 30.0 Number Pool Block NPAC Data Managed Object Class

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numberPoolBlockNPAC MANAGED OBJECT CLASS

numberPoolBlockNPAC-Behavior BEHAVIOUR

DEFINED AS !

An object creation attempt will be rejected by the NPAC SMS if

any subscription versions exist with a status of pending,

conflict, cancel-pending or failed ("pending-like") for a TN implied

by the NPA-NXX-X value and an active subscription version object does

not exist for that TN in cases where the Code Holder SPID and the

Block Holder SPID are NOT the same value.

-- 31.0 Service Provider NPA-NXX-X Data Managed Object Class

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serviceProvNPA-NXX-X MANAGED OBJECT CLASS

serviceProvNPA-NXX-X-Behavior BEHAVIOUR

DEFINED AS !

An object creation attempt will be rejected by the NPAC SMS if any

subscription versions exist with a status of pending, conflict,

cancel-pending or failed ("pending-like") for a TN implied by the

NPA-NXX-X value and an active subscription version object does not

exist for that TN in cases where the Code Holder SPID and the Block

Holder SPID are NOT the same value, or the subscription version is

a port-to-original request. Additionally, an object creation attempt

will be rejected by the NPAC SMS if, the date of the

serviceProvNPA-NXX-X-EffectiveTimeStamp is NOT greater than or

equal to BOTH current date AND the NPA-NXX Live Timestamp.

**ASN.1:**

No change required.

**M&P:**

TBD