**Origination Date:** 04/30/14

**Originator:** LNPAWG

### Change Order Number: NANC 458

**Description:** Service Provider-requested Notification Suppression

**Functional Backwards Compatible:** Yes

**IMPACT/CHANGE ASSESSMENT**

|  |  |  |
| --- | --- | --- |
| DOC | FRS | IIS |
| Y | Y |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CMIP | GDMO | ASN.1 | **NPAC** | SOA | LSMS |
| N | N | N | N | N |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XML | XIS | XSD | **NPAC** | SOA | LSMS |
| Y | Y | Y | Y | N |

**Business Need**

With the XML interface, Service Providers need the ability to suppress notifications on a per request basis. The current NPAC functionality has a notification priority category table which contains an entry for every SOA. For each of the 45 categories, the Service Provider SOA can designate a priority of High, Medium, Low, or None. However, this one-size-fits-all-notifications-of-that-type approach does not always work for the Service Provider SOA. For some of these notification categories, flexibility in receiving/suppressing is desired. As an example, one of the notifications is L-11.0 type F, *Subscription Version Status Attribute Value Change Notification – Modify Active*, which has a default value of Medium. Two scenarios demonstrate this desired flexibility:

* When the current SOA performs a modify-active on LRN, it is important to know the entries on the failed list as this would affect call routing. Therefore, the SOA desires to receive these SAVC modify-active notifications.
* However, when the current SOA performs a modify-active of the Alternative SPID optional data, it is not necessary to know the failed list as this would not affect call routing and the current SOA does not want to receive the extra SOA messages associated with these SAVC modify-active notifications.

With the current implementation, a SOA is not able to receive the notifications in the LRN scenario, and suppress the notifications in the Alternative SPID scenario. As Service Providers begin to explore the functional and operational items associated with the development of an XML interface, this type of flexibility is desired.

Another need occurs when two SPIDs within the same company are moving TNs from one of their SPIDs to the other SPID. For example, Company 1 has SPID A and SPID B, and for some intra-company inter-SPID port requests it wants to allow SPID A to suppress for both A and B. Then when A is moving TNs from B, it can send a Create SV Request and indicate that notifications for this request should be suppressed to both A and B.

**Description of Change:**

This change order is being created to allow a Service Provider to suppress notifications on a per request basis. It also allows a SPID to link together with another SPID for notification suppression. Any SPID desiring this linking functionality would be required to explicitly authorize the other SPID (e.g., SPID A could send a request for suppression to both A and B only after B authorized A to suppress, which would be contained in the NPAC Customer Profile information. However, even though SPID C is also part of the same company, no explicit authorization has been provided, so there is no suppression relationship between A and C, or B and C).

These changes will allow the Service Provider SOA to have a new level of flexibility when sending transaction requests to the NPAC.

May ’14 LNPA WG meeting:

The group accepted this change order. Requirements detail will be provided for review during the Jul ’14 LNPA WG meeting.

Jul ’14 LNPA WG meeting:

The detailed requirements and data model updates were discussed. It was agreed that the NPB data model and the NPB Create message should be included.

Sep ’14 LNPA WG meeting:

Updates were discussed. XML LSMS impact was changed from Y to N. No other changes at this time.

Jan ’15 LNPA WG meeting:

Final changes accepted. LNPA WG agreed to send this change order forward to the NAPM LLC.

Requirements:

Section 1.2, NPAC SMS Functional Overview

Add a new section that describes the functionality of the Notification Suppression scenario. See Description of Change above.

Section 3.1, NPAC SMS Data Models

Add new attributes for the Notification Suppression options in an SV or NPB Request. See below:

| **SubscriPTION VERSION Data MODEL** | | | |
| --- | --- | --- | --- |
| **Attribute Name** | **Type (Size)** | **Required** | **Description** | |
| [snip] |  |  |  | |
| Suppress Initiator SPID | B |  | A Boolean that indicates whether the Initiator SPID wishes to suppress notifications to itself. | |
| Suppress Grantor SPID | B |  | A Boolean that indicates whether the Initiator SPID (as a Delegate) wishes to suppress notifications to its Grantor. | |
| Suppress Delegate SPID | B |  | A Boolean that indicates whether the Initiator SPID (as a Grantor or another Delegate) wishes to suppress notifications to related Delegate(s). | |
| Suppress Other SPID | B |  | A Boolean that indicates whether the Initiator SPID wishes to suppress notifications to the Other SPID. | |
| Suppress Other SPID Delegates | B |  | A Boolean that indicates whether the Initiator SPID wishes to suppress notifications to the Other SPID’s Delegate(s). | |
| [snip] |  |  |  | |

Table ‑ Subscription Version Data Model

| **Number Pooling Block holder Information Data MODEL** | | | |
| --- | --- | --- | --- |
| **Attribute Name** | **Type (Size)** | **Required** | **Description** | |
| [snip] |  |  |  | |
| Suppress Initiator SPID | B |  | A Boolean that indicates whether the Initiator SPID wishes to suppress notifications to itself. | |
| Suppress Grantor SPID | B |  | A Boolean that indicates whether the Initiator SPID (as a Delegate) wishes to suppress notifications to its Grantor. | |
| Suppress Delegate SPID | B |  | A Boolean that indicates whether the Initiator SPID (as a Grantor or another Delegate) wishes to suppress notifications to related Delegate(s). | |
| [snip] |  |  |  | |

Table 3‑9 Number Pooling Block Holder Information Data Model

| **NPAC CUSTOMER NOTIFICATION SUPPRESSION AUTHORIZED SPID LIST DATA MODEL** | | | |
| --- | --- | --- | --- |
| **Attribute Name** | **Type (Size)** | **Required** | **Description** | |
| NPAC Customer ID | C (4) | √ | An alphanumeric code which uniquely identifies an NPAC Customer (SPID that is allowing the Authorized SPID to indicate on a request whether or not to suppress notifications). | |
| Authorized SPID | C(4) | √ | The Service Provider ID of the Authorized SP (Initiator SPID that can suppress notifications to the NPAC Customer). | |
| Authorized SP Name | C(40) | √ | The NPAC Customer Name of the Authorized SP. | |

Table 3-x NPAC Customer Notification Suppression Authorized SPID List Data Model

Section 3.8, Notifications

Add a new sub-section (3.8.x) that describes the functionality of the Notification Suppression requirements. Add a note that this functionality applies to the XML Interface, the NPAC Administrative GUI Interface, and the Service Provider Low-Tech Interface.

Req 1 Notification Suppression – Types of Requests

NPAC SMS shall allow the NPAC Administrative interface, NPAC Service Provider Low-Tech Interface, and the XML interface to suppress notifications for the following requests:

* SV Create
* SV Activate
* SV Cancel
* SV Cancel Concurrence
* SV Disconnect (includes notifications for active SV that is disconnected, does not include Donor Disconnect Notification)
* SV Modify
* SV Conflict Resolution
* Pooled Block Create
* Pooled Block Modify
* Pooled Block Disconnect (NPAC Administrative Interface only)

Req 2 Notification Suppression – Types of Options

The following notification suppression options shall be available when an NPAC user specifies notification suppression in a request:

* suppress to self (Initiator SPID)
* suppress to parent Grantor (if Initiator SPID is a Delegate)
* suppress to Delegates(s) (if Initiator SPID is a Grantor or one of several Delegates related to a parent Grantor)
* suppress to the Other SPID
* suppress to the Other SPID’s Delegate(s)

Req 3 Notification Suppression –Suppression Options as Non-Delegate

NPAC SMS shall provide a Service Provider with the option to suppress notifications to self, related Delegate(s), the Other SPID, and the Other SPID’s Delegate(s) on a per request basis.

Req 4 Notification Suppression –Suppression Options as Delegate

NPAC SMS shall provide a Service Provider with the option to suppress notifications to self, parent Grantor, other related Delegate(s), the Other SPID, and the Other SPID’s Delegate(s) on a per request basis.

Req 5 Notification Suppression – Service Provider Authorization List

NPAC SMS shall provide a Service Provider Notification Suppression Authorization List which defines the list of other Service Providers that can suppress notifications to this Service Provider on a per request basis.

Note: The Authorization List maintains a 1:1 relationship between an Initiator SPID and a Suppressed SPID, whether each of those SPIDs is a Regular SPID, Grantor SPID, or Delegate SPID.

Req 6 Notification Suppression – Add SPID to Notification Suppression Authorization List by NPAC Personnel on behalf of a Service Provider

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to add a SPID to the Notification Suppression Authorization List, which results in the SPID not receiving notifications based on the suppression indicators in a request from an Initiator SPID, in subscription versions and Number Pool Blocks.

Note: A Service Provider (whether regular SPID, Grantor SPID, or Delegate SPID) is responsible for establishing their own list of Authorized Service Providers, while working with NPAC Personnel.

Req 7 Notification Suppression – Delete SPID from Notification Suppression Authorization List by NPAC Personnel on behalf of a Service Provider

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, on behalf of a Service Provider, to delete a SPID from the Notification Suppression Authorization List for a given Service Provider.

Req 8 Notification Suppression – Query SPID from Notification Suppression Authorization List by NPAC Personnel on behalf of a Service Provider

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to query the Notification Suppression Authorization List for a given Service Provider.

Req 9 Notification Suppression – Persisting Notification Suppression

NPAC SMS shall, in cases where a subscription version or Number Pool Block action results in LSMS messages or activity, persist notification suppression until the corresponding subscription version or Number Pool Block has an empty failed SP List.

Note: A Failed SP List can be cleared by a resend, resend exclusion, or audit.

Req 10 Notification Suppression – Service Provider Authorization List – NPAC Personnel Behavior

NPAC SMS shall maintain the same behavior for NPAC Personnel to suppress notifications on a per request basis as Service Providers.

Req 11 Notification Suppression – Service Provider Authorization List – No Entry – XML Interface Behavior

NPAC SMS shall accept and process an XML message from an Initiator SPID that includes notification suppression indicators for Grantor/Delegate/Other SPIDs, even if there is no entry in the Service Provider Authorization List for the Grantor/Delegate/Other SPIDs, and send notifications using normal processing.

Req 12 Notification Suppression – Service Provider Authorization List – No Entry – Administrative Interface and Low-Tech Interface Behavior

NPAC SMS shall accept and process a request from the NPAC Administrative Interface or Service Provider Low-Tech Interface from an Initiator SPID that includes notification suppression indicators for Grantor/Delegate/Other SPIDs, even if there is no entry in the Service Provider Authorization List for the Grantor/Delegate/Other SPIDs, and send notifications using normal processing.

Req 13 Notification Suppression – Service Provider Authorization List – No Entry – Administrative Interface and Low-Tech Interface Behavior – Exception and Rejection

NPAC SMS shall reject a request from the NPAC Administrative Interface or Service Provider Low-Tech Interface from an Initiator SPID that includes notification suppression indicators for Grantor/Delegate/Other SPIDs, when there is no entry in the Service Provider Authorization List for the Grantor/Delegate/Other SPIDs, and the request is for an SV/NPB Create/Release.

Section 3.13, Block Information

Add requirements for suppression options in Number Pool Block Requests.

RR3-132 Number Pooling Block Holder Information –Update Notification

NPAC SMS shall ***send*** all SOA notifications to the current SP (the block holder) for updates on Blocks, when the Block SOA Origination is TRUE. (Previously B-120)

Note: The SOA Orignation indicator and the per-request notification suppression indicators are combined together to determine notification sending or notification suppression.

Req 14 Notification Suppression – Number Pool Block Request Indicators determine Suppression

NPAC SMS shall suppress notifications on a per-request basis based on the values in the request and the table below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Suppress Notifications Options:** | | | | |
| **Role of SPID Sending Request** | **Self (Initiator)** | **Grantor** | **Delegate(s)** | **Other SPID** | **Delegate(s) of Other SPID** |
|  |  |  |  |  |  |
| **BAU SPID** | Y | N/A | N/A | N/A | N/A |
| **Delegate** | Y | Y | Y | N/A | N/A |
| **Grantor** | Y | N/A | Y | N/A | N/A |
|  |  |  |  |  |  |
| (shading) | = Authorization required from the SPID being suppressed | | | | |

Section 5, Subscription Management

Add requirements for suppression options in SV Requests.

Req 15 Notification Suppression – SV Request Indicators determine Suppression

NPAC SMS shall suppress notifications on a per-request basis based on the values in the request and the table below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Suppress Notifications Options:** | | | | |
| **Role of SPID Sending Request** | **Self (Initiator)** | **Grantor** | **Delegate(s)** | **Other SPID** | **Delegate(s) of Other SPID** |
|  |  |  |  |  |  |
| **BAU SPID** | Y | N/A | N/A | Y | Y |
| **Delegate** | Y | Y | Y | Y | Y |
| **Grantor** | Y | N/A | Y | Y | Y |
|  |  |  |  |  |  |
| (shading) | = Authorization required from the SPID being suppressed | | | | |

Appendix C

**SOA Notification Priority Tunables**

Many notifications are sent to both the Old Service Provider and the New Service Provider. As indicated in the table below, some of these notifications can have different priorities based on whether the Service Provider is acting as the Old Service Provider or the New Service Provider for the port. During the notification evaluation process this option was not given to all notifications that are sent to both the Old Service Provider and the New Service Provider for one or more reasons. Some of those reasons were:

* volume of the particular notification was very small
* importance of the particular notification was determined to be equal whether a Service Provider was acting as the Old Service Provider or the New Service Provider for the port

Notification priorities are applied to the XML interface, however, all attributes in the StatusAttributeValueChange notification have been merged into the AttributeValueChange notification as indicated in the XML Schema. Only the AttributeValueChange notification is used in the XML interface (business rules applying priority are the same except where noted in the table).

Notification suppression on requests will be processed according to the results of notification suppression options on a request, along with notification suppression authorization list data.

IIS:

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Add a note to section B.1, Overview, stating that notifications are not sent when valid notification suppression indicators to suppress are include in a request from an Initiator SPID.

XIS:

See separate document.

GDMO:

No change required.

ASN.1:

No change required.

XML:

See separate document.