CHANGE ORDER SUMMARY POST TRANSITION – IMPLEMENTED COs

FOR

NPAC SMS FUNCTIONALITY

**Rev: 12**

**June 7, 2022**

**(Tampa, Fl)**

CHANGE ORDER SUMMARY – IMPLEMENTED COs

# Preface

*Originally commissioned as a working group under the NANC (North American Numbering Council) the LNPA WG (Local Number Portability Administration Working Group) dealt with Number Portability issues, processes/procedures and changes to the NPAC SMS. In December 2018 it was renamed the TOSC (Transition Oversight Sub Committee) and managed issue/changes related to the transition of NPAC from the previous vendor to iconectiv.*

*After the re-chartering of the NANC, the group became The Informal LNP Team until November of 2020 when the group restructured into the NPIF (Number Portability Industry Forum). The NPIF works with the NAOWG (Number Administration Oversight Working Group) on any issues that require the involvement of NANC and continues its mission to manage processes/procedures, changes to the NPAC SMS and issues related to Number Portability.*

*This Change Order Summary document tracks the status of all Change Orders that were Implemented or Closed as part of, or after NPAC Transition (5-25-18). Information on Change Orders Implemented/Closed prior to Transition (5-25-18) and not part of Release 3.4.8 baseline, can be found in the Change Order Summary Pre Transition – Implemented COs document located on the numberportability.com website.*

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# Legend

* ***Release #/Target Date*** *– Number and date of development release in which changes will be made to support Change Order*
* ***CO # –*** *Change Order Number assigned by CMA after CO has been accepted.*
* ***Originator –*** *Company that created the Change Order*
* ***Date Accepted –*** *Date the Change Order was accepted by NPIF (Number Portability Industry Forum)*
* ***Description*** *– Name of the Change Order and the Business Need as defined in the Change Order itself*
* ***Status –*** *Status of Change Order. There are only 2 status’ for Implemented COs. They are:*
  + *Closed – The change order was considered and rejected.*
  + *Implemented – The change order was adopted and has been implemented in the NPAC system. It will remain in the NANC CO Summary – Open COs for 1 cycle then be moved to the NANC CO Summary – Implemented COs document*
* ***Notes –*** *Additional detail on the Change Order status*
* ***NPAC Level Of Effort*** *– This field defines the Level of Effort to implement the Change Order (Low, Medium or High)*
* ***Systems Impacted*** *– CMIP or XML –This field indicates if there is an impact to the Local System (SOA or LSMS). Choices are: Yes or No*

| Release 4.1 | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CO #** | **Originator** | **Date Accepted** | **Description** | **Notes** | **NPAC Level**  **Of**  **Effort** | **Systems Impacted** | | | |
| **CMIP** | | **XML** | |
| **SOA** | **LSMS** | **SOA** | **LSMS** |
| NANC 453 | Verizon | 5/08/13 | **Name:**  Change Definition and Disallow use of Inactive SPID  **Business Need:**  Refer to separate document. | Change Order was approved and accepted.  This Change Order has been sent to the NAPM LLC  Func Backward Compatible: Yes  Jun ’13 LNPAWG, discussion:  A walk-thru of the proposed short-term solution took place, and an action item was assigned to determine the viability of a SPID Delete when active SVs exist with that SPID as the Old SP value.  Jul ‘13 LNPAWG, discussion:  The group accepted the change order. Both the short-term and the long-term solution will be discussed in the Sep meeting.  **Sep ‘13 LNPAWG,** discussion**:**  The group accepted the short-term solution. It will be performed during the 9/15 maintenance window.  Oct. ’18 – This CO was implemented |  | No | No | No | No |
| NANC 454 | LNPA WG | 5/07/13 | **Name:**  Remove Unused Messages from the NPAC  **Business Need:**  Refer to separate document. | Change Order was approved and accepted.  This Change Order has been sent to the NAPM LLC  Func Backward Compatible: Yes  Jul ’13 LNPAWG, discussion:  During the discussion of messaging in NANC 372, XML Interface, it was recommended that the capability for service providers to manage their own NPA-NXX Filters not be included in the XML interface because Neustar has been unable to identify any instances where service providers used that feature in the CMIP interface in production. This item of unused messages also applies to the Operational-Info message for scheduled downtime (never used in production).  A walk-thru of the proposed solution took place, and the group accepted the change order. Details will be added to the document and it will be discussed in the Sep meeting.  Sep ‘13 LNPAWG, discussion:  The group accepted the change order. It is now available for a release.  Sept. ’18 TOSC mtg. – Document changes related to this CO were reviewed and accepted. Agreement was reached to change this CO to Implemented. |  | No | No | No | No |
| NANC 460 | LNPAWG | 7/7/15 | **Name:**  Sunset List items  **Business Need:**  Refer to separate document. | Change Order was approved and accepted.  This Change Order has been sent to the NAPM LLC  **Sept. ’18 TOSC mtg.** – Document changes related to this CO were reviewed and accepted. Agreement was reached to change this CO to Implemented. | Med | No | No | No | No |
| NANC 461 | LNPA WG | 7/7/15 | **Name:**  Sunset List Items – Local System Impact = Yes  **Business Need:**  From the NPAC sunset discussions, the list should be divided into two groups, those that have no local system impact, and those that have a local system impact.    This list contains the items that **do** have a local system impact:   * 1.1 – Sunset the ability for Service Providers to update their CMIP network data in their customer profile. Remove TCs 8.1.1.2.1.4 and 8.1.1.2.2.4 when this capability is removed from the NPAC. * 1.3 – Sunset unused Customer Contact information on NPAC Admin GUI and LTI | Change Order was approved and accepted.  This Change Order has been sent to the NAPM LLC  Func Backward Compatible: No  See details in Sunset List document.  Sept. ’18 TOSC mtg. – Document changes related to this CO were reviewed and accepted. Agreement was reached to change this CO to Implemented. | Med | No | No | No | No |
| NANC 481 | iconectiv | 1/21/16 | **Name:**  GDMO Behavior Doc-Only Clarifications  **Business Need:**  Documentation updates. See separate document. | Func Backward Compatible: Yes  Update the GDMO Behavior. |  | No | No | No | No |
| NANC 483 | 10x People | 3/31/16 | **Name:**  FRS – Doc-Only BDD Notification File  **Business Need:**  Documentation updates. See separate document. | Func Backward Compatible: Yes  Update the FRS.  March ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 488 | Neustar | 7/19/16 | **Name:**  XIS Doc-Only Clarifications  **Business Need:**  Documentation updates. See separate document. | Func Backward Compatible: Yes  Update the XIS.  March ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 489 | iconectiv | 3/8/17 | **Name:**  IIS/EFD Doc-Only Clarifications  **Business Need:**  Documentation updates. See separate document. | Func Backward Compatible: Yes  Update the IIS/EFD.  March ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 490 | iconectiv | 3/21/17 | **Name:**  FRS Doc-Only Clarifications  **Business Need:**  Documentation updates. See separate document. | Func Backward Compatible: Yes  Update the FRS.  March ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 491 | Iconectiv | 5/2/17 | **Name:**  Turn-Up Test Plan Doc-Only Clarifications  **Business Need:**  Documentation updates. See separate document. | Func Backward Compatible: Yes  Update the TUTP.  Jan. ’18 TOSC – Agreement was reached to change CO stat  us to Implemented |  | No | No | No | No |
| NANC 493 | Iconectiv | 5/2/17 | **Name:**  Recovery – Association Functions  **Business Need:** | May ’17 TOSC mtg. - Change Order was approved and accepted.  This Change Order has been sent to the NAPM LLC  Sept. ’18 TOSC mtg. – Document changes related to this CO were reviewed and accepted. Agreement was reached to change this CO to Implemented. |  | No | No | No | No |
| NANC 495 | iconectiv | 5/3/17 | **Name:**  Secure ftp site  **Business Need:**  Documentation updates. | Jul ’17 WG mtg - Change Order was discussed and accepted.  Needs to be included in next FRS doc only update (It is doc only for LNPA).  Will close Action Item: 8222017-01.  March ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | Yes | Yes | Yes | Yes |
| NANC 496 | iconectiv | 7/11/17 | **Name:**  Conflict Restriction Rules for Old Service Provider  **Business Need:**  iconectiv requests the following update to the FRS requirements to make clear the current implementation of the validation of Conflict Restriction for the Old Service Provider. | Aug ’17 WG mtg - Change Order was discussed and accepted.  This Change Order has been sent to the NAPM LLC  March ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | None | None | None | None |
| NANC 498 | iconectiv | 7/11/17 | **Name:**  Multiple associations  **Business Need:**  iconectiv proposes changes to the FRS, IIS, and GDMO to clarify and document the behavior for multiple simultaneous CMIP associations for a given SPID/system type (system type is SOA or LSMS), particularly with regard to recovery. | SOW to be requested. Action Item: 08222017-02  **August 22, ’17 LNPA WG mtg:**  Action item ‘Vendors and SPs to review NANC 498 to determine if there is any impact based on this CO.’ was closed and next steps to be discussed at upcoming WG mtg.  August 9, ’17 LNPA WG:  Action Item - Vendors and SPs to review NANC 498 to determine if there is any impact based on this CO.’    Recommendation is to not allow a 2nd association when system is in recovery mode  Sept. ’18 TOSC mtg. – Document changes related to this CO were reviewed and accepted. Agreement was reached to change CO status to Implemented. |  | No | No | No | No |
| NANC 499 | iconectiv | 7/11/17 | **Name:**  SV Modify of Due Date Validation Against NPA-NXX Effective Date  **Business Need:**  Current NPAC SMS FRS requirements for modifying SVs validate that the due date on a modify must be greater than or equal to the NPA-NXX Live Timestamp (the date/time the first SV is created or first NPA-NXX-X is created within the NPA-NXX plus the First Usage Effective Date Window tunable parameter). With the industry decision to modify the First Usage Effective Date Window tunable parameter to “0”, the FRS requirement for validating SV due date when the SV is created was changed from only validating the SV due date must be greater than or equal to the NPA-NXX Live Timestamp to validating against the NPA-NXX Live Timestamp as well as validating the SV due date must be greater than or equal to the NPA-NXX Effective Date. The similar FRS requirement for validating the due date on an SV modify should also have changed but was not. | Jul ’17 WG mtg - Change Order was discussed and accepted.  This Change Order has been sent to the NAPM LLC  March ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | None | None | None | None |
| NANC 500 | iconectiv | 7/27/17 | **Name:**  CMIP User ID Field Validation  **Business need:**  As part of the transition of LNPA Services, Vendors of local CMIP SOA and LSMS systems need to certify their local systems with the iconectiv NPAC. During certification testing of some local systems, it was discovered that the User ID field in the access control structure of messages being sent from the CMIP local system to the iconectiv NPAC contained a User ID field that did not conform to the CMIP Interoperable Interface Specification (IIS) (minimum length of 1) and the iconectiv NPAC failed the message. A resolution to this issue is needed so that CMIP local system messages to the iconectiv NPAC will not fail validations. | **Aug ’17 WG mtg** - Change Order was discussed and accepted.  This Change Order has been sent to the NAPM LLC  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 501 | iconectiv | 7/27/17 | **Name:**  CMIP Synchronization Field Validation  **Business Need:**  As part of the transition of LNPA Services, Vendors of local CMIP SOA and LSMS systems need to certify their local systems with the iconectiv NPAC. During certification testing of some local systems, it was discovered that these systems were not conforming to the Optional Data XML XSD when modifying an Optional Data field to have no value or when replying to an NPAC query with Optional Data XML fields that had no value. The Optional Data XSD indicates using the nillable attribute of elements (fields) should be used for this purpose, which some local systems were not using and caused requests to fail. A resolution to this issue is needed so that CMIP local system messages to the iconectiv NPAC will not fail validations. | Aug ’17 WG mtg - Change Order was discussed and accepted.  This Change Order has been sent to the NAPM LLC  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 502 | iconectiv | 7/27/17 | **Name:**  XML Optional Data Validation  **Business Need:**  As part of the transition of LNPA Services, Vendors of local CMIP SOA and LSMS systems need to certify their local systems with the iconectiv NPAC. During certification testing of some local systems, it was discovered that these systems were not conforming to the Optional Data XML XSD when modifying an Optional Data field to have no value or when replying to an NPAC query with Optional Data XML fields that had no value. The Optional Data XSD indicates using the nillable attribute of elements (fields) should be used for this purpose, which some local systems were not using and caused requests to fail. A resolution to this issue is needed so that CMIP local system messages to the iconectiv NPAC will not fail validations. | Aug ’17 WG mtg- Change Order was discussed and accepted.  This Change Order has been sent to the NAPM LLC  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 503 | iconectiv | 8/04/17 | **Name:**  Error Code File Clarification  **Business Need:**  Current NPAC SMS FRS requirements for providing the NPAC SMS Error Code file in “soft format” are not clear on the exact content of the file. Clarity is needed so that Mechanized SOA and LSMS Users can successfully retrieve and load the file in their local systems in order to properly identify the error encountered when a request to the NPAC results in an error response. | Aug. ’17 WG mtg **–** This CO was discussed and accepted.  Needs to be included in next document update.  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 505 | iconectiv | 9/12/17 | **Name:**  Date/Time Stamp Format  **Business Need:**  Some local systems provide a timestamp value in the format YYYYMMDDHHMMSS.0Z.0Z. This value is not in the format specified in the IIS, which is YYYYMMDDHHMMSS.0Z. In order to avoid changes to the local system, the NPAC will be modified to support a format of YYYYMMDDHHMMSS.0Z.0Z for the time-of-completion attribute value in the swimProcessing-RecoveryResults notification received from the local system.  Also see PIM 91. | Sept. ’17 WG mtg – This CO was discussed and accepted. Tri-Chairs have sent CO to NAPM LLC  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 506 | iconectiv | 9/12/17 | **Name:**  Not Filter  **Business Need:**  Some local systems expect the NPAC SMS to support the NOT operator in filtered CMIP requests. The IIS described this as optional functionality for the NPAC SMS.  Also see PIM 94. | Sept. ’17 WG mtg – This CO was discussed and accepted. Tri-Chairs have sent CO to NAPM LLC  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 507 | iconectiv | 9/12/17 | **Name:**  Effective Release Date Disc  **Business Need:**  The FRS and IIS (EFD) are not clear on the behavior of the NPAC SMS when the NPAC receives a disconnect request with an effective release date (ERD) that is in the past.  Also see PIM 95. | Sept. ’17 WG mtg – This CO was discussed and accepted. Tri-Chairs have sent CO to NAPM LLC  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | **No** | **No** | **No** | **No** |
| NANC 508 | iconectiv | 9/12/17 | **Name:**  Recovery SPName  **Business Need:**  When recovering network data – either using SWIM or time/record-based recovery – some local systems expect to receive a value for the optional service-prov-name (service provider name) attribute, even though the service provider name is not included in non-recovery download messages to create/modify/delete network data. Providing the service provider name in network recovery messages allows local systems to create a service provider object if they do not support recovery of service provider data (or prior to the implementation of service provider data recovery introduced in NANC 352).  Also see PIM 96. | Sept. ’17 WG mtg – This CO was discussed and accepted. Tri-Chairs have sent CO to NAPM LLC  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | **No** | **No** | **No** | **No** |
| NANC 509 | iconectiv | 9/12/17 | **Name:**  Network Data Delete Recovery  **Business Need:**  When recovering – either using SWIM or time-based recovery – network data that have a download reason indicating the object was deleted, some local systems expect to receive a value for the optional service-prov-npa-nxx-value/service-prov-lrn-value/service-prov-npa-nxx-x attribute, even though the attribute is not included in non-recovery download messages to delete network data.  Also see PIM 98. | Sept. ’17 WG mtg – This CO was discussed and accepted. Tri-Chairs have sent CO to NAPM LLC  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 510 | iconectiv | 9/12/17 | **Name:**  Network Data Delete Recovery  **Business Need:**  When recovering – either using SWIM or time-based recovery – network data that have a download reason indicating the object was deleted, some local systems expect to receive a value for the optional service-prov-npa-nxx-value/service-prov-lrn-value/service-prov-npa-nxx-x attribute, even though the attribute is not included in non-recovery download messages to delete network data.  Also see PIM 98. | Sept. ’17 WG mtg – This CO was discussed and accepted. Tri-Chairs have sent CO to NAPM LLC  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | **No** | **No** | **No** | **No** |
| NANC 511 | iconectiv | 9/12/17 | **Name:**  SV Query Response RDN  **Business Need:**  Some LSMS systems do not return any Managed Object Instance information or return incorrect Managed Object Instance data in M-GET (query) responses sent to the NPAC as part of audit processing. Additionally, some LSMS systems return incorrect Managed Object Class data in M-GET (query) responses containing subscription version or number pool block data. Relaxing the NPAC validations and modifying the processing in NPAC in order to allow incorrect/missing Managed Object Instance and incorrect Managed Object Class information would allow these local systems to remain unmodified while supporting general NPAC audit processing.  Also see PIM 99. | Sept. ’17 WG mtg – This CO was discussed and accepted. Tri-Chairs have sent CO to NAPM LLC  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | **No** | **No** | **No** | **No** |
| NANC 512 | iconectiv | 9/12/17 | **Name:**  SP Recovery Request RDN  **Business Need:**  Some local systems specify the incorrect base object instance in lnpDownload M-ACTION requests to the NPAC SMS. Rather than specifying the identifier of the lnpNetwork object when recovering network data, the local system specifies the identifier of a serviceProv object. The change modifies NPAC SMS process to allow for this specific exception to the expected base object instance.  Also see PIM 100. | Sept. ’17 WG mtg – This CO was discussed and accepted. Tri-Chairs have sent CO to NAPM LLC  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | **No** | **No** | **No** | **No** |
| NANC 513 | iconectiv | 9/12/17 | **Name:**  LSMS SV Query Response Attributes  **Business Need:**  Some LSMS systems return attributes that are applicable only to the NPAC SMS view of Subscription Versions and Number Pool Blocks when queried by the NPAC SMS as part of audit processing. To avoid changes to local systems, the NPAC SMS will permit these attributes to be present in M-GET replies received by the NPAC SMS during audit processing, but the NPAC SMS will not use such extra attributes during audit processing. Also see PIM 101. | Sept. ’17 WG mtg – This CO was discussed and accepted. Tri-Chairs have sent CO to NAPM LLC  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | **No** | **No** | **No** | **No** |
| NANC 514 | iconectiv | 1/9/18 | **Name:**  XML Query Requests – Double Quotes  **Business Need:**  The NPAC SMS XML Interface Specification (XIS) indicates that values for attributes in query expressions in query requests should not be enclosed in double quotes. Although the XIS is silent on enclosing the entire query expression in any type of delimiter (such as double quotes, single quotes, tilde, pound sign, etc), the iconectiv NPAC assumed that the entire query expression would not be enclosed in double quotes (nor any other delimiter). Some local systems surround the query expression in XML query requests to the NPAC SMS in double quotes. To avoid changes to local systems, the iconectiv NPAC SMS will provide an accommodation by allowing query expressions to be enclosed in double quotes in XML query requests to the NPAC SMS | Jan. ’18 TOSC mtg – This CO was discussed and accepted.  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 515 | Iconectiv | 1/9/18 | **Name:**  XML – Messages – Boolean Attributes  **Business Need:**  The NPAC SMS XML Interface Specification (XIS) is based on the W3C standards, which defines the Boolean data type to have allowed values of ‘false’ or ‘true’ or ‘0’ or ‘1’. The Boolean data type is used to represent the port-to-original indicator, the Old SP Authorization, and the Old and New SP Medium Timer Indicator in SV related requests and to represent the SOA Origination Indicator for Number Pool Block related requests on the NPAC SMS and in its mechanized interface messages. The iconectiv NPAC implemented sending ‘false’ or ‘true’ for Boolean attributes in XML interface messages to SOAs/LSMSs as allowed by the standards. To avoid changes to local systems, the iconectiv NPAC SMS will provide an accommodation by only sending a ‘0’ or ‘1’ for Boolean attributes in XML interface messages to SOAs and LSMSs (but will still support, per the standards, receiving ‘false’, ‘true’, ‘0’, or ‘1’ for Boolean attributes in XML interface messages from local systems). | Jan. ’18 TOSC mtg – This CO was discussed and accepted.  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 516 | Iconectiv | 1/9/18 | **Name:**  XML Messages – Extraneous SPIDs  **Business Need:**  The NPAC SMS XML Interface Specification (XIS) supports three types of service provider IDs in SOA to NPAC interface messages:   * sp\_id in the header of the message identifying the service provider originating the message (required), * secondary\_sp\_id in the message content – used by a service bureau when submitting a request on behalf of their secondary spid; the sp\_id in the message header is set to the primary spid, * request\_sp\_id in the message content – used by a delegate when they are submitting a request on behalf of a grantor spid. The value of the request\_sp\_id is set to the grantor spid. The sp\_id in the message header is set to the delegate spid.   The NPAC uses these fields to determine the service provider associated with the message request: request\_sp\_id if populated, secondary\_sp\_id if populated and request\_sp\_id not populated, or sp\_id in header if request\_sp\_id and secondary sp\_id not populated.  Some XML SOA systems are submitting requests where some or all of these fields are populated with the same SPID value, causing the iconectiv NPAC to fail the request during validation processing (for example, FRS requirement **RR6-238 XML Message Delegation – Relationship Establishment** indicates: The SOA delegation relationship can be from any one SPID to any other SPID).  To avoid changes to local systems, the iconectiv NPAC SMS will provide an accommodation by allowing extraneous SPIDs to be provided in requests, but the iconectiv NPAC will ignore the extraneous SPIDs, and process the request as if the extraneous SPIDs were not populated in the request (thus any replies or notifications associated with the request will not have extraneous SPIDs). | Jan. ’18 TOSC mtg – This CO was discussed and accepted.  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 517 | iconectiv | 2/14/18 | **Name:**  Turn-Up Test Plan Doc-Only Clarifications  **Business Need:**  Documentation updates. See separate document. | Feb. ’18 TOSC mtg – This CO was discussed and accepted.  Sept. ’18 TOSC mtg. – Version 4 of this CO was reviewed and accepted. Agreement was reached to change status of this CO to Requested. |  | No | No | No | No |
| NANC 518 | iconectiv | 2/14/18 | **Name:**  PTO SV Create FRS Doc-Only Clarifications  **Business Need:**  Documentation updates. See separate document. | Feb. ’18 TOSC mtg – This CO was discussed and accepted.  June ’18 TOSC mtg. – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 519 | iconectiv | 3/6/18 | **Name:**  BDD File Compression  **Business Need**: Based on feedback from current users of the Neustar NPAC and on iconectiv’s own experience with BDD files from Neustar, it appears as though full BDD files – though not delta BDD files – may be compressed using gzip. | Mar. ’18 TOSC mtg – This CO was discussed and accepted  Sept. ’18 TOSC mtg. – This CO was reviewed and agreement reached to change CO status to Implemented |  | No | No | No | No |
| NANC 520 | iconectiv | 3/6/18 | **Name:**  SIC-SMURF Naming Convention – Doc Only  **Business Need:** Documentation updates. See separate document. | Mar. ’18 TOSC mtg – This CO was discussed and accepted  Sept. ’18 TOSC mtg. – This CO was reviewed and agreement reached to change CO status to Implemented |  | No | No | No | No |
| NANC 521 | iconectiv | 3/6/18 | **Name:**  Group & RR Testing – Doc Only Changes  **Business Need:**  See Separate document | Mar. ’18 TOSC mtg – This CO was discussed and accepted  November ‘18 TOSC mtg – CO discussed and new SP Group Test Plan document discussed.  Jan. ’19 TOSC mtg. – v2 of this CO was discussed and changes to SP Group Test Plan were accepted.  Mar. ’19 TOSC mtg – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 522 | iconectiv | 3/6/18 | **Name:**  BDD File SSN Field  **Business Need:**  See Separate document | Mar. ’18 TOSC mtg – This CO was discussed and accepted  Oct. ’18 – This CO was implemented |  | No | No | No | No |
| NANC 523 | Iconectiv | 4/24/18 | **Name:**  Implicit NPAC SMS Requirements  **Business Need:**  See Separate document | April. ’18 TOSC mtg – This CO was discussed and accepted  Oct. ’18 – This CO was implemented |  | No | No | No | No |
| NANC 524 | iconectiv | 7/10/18 | **Name:**  MUMP File Layout – Near Term  **Business Need:**  See Separate document | July ’18 TOSC mtg – This CO was discussed and accepted  Sept. ’18 TOSC mtg – Agreement was reached to change CO status to Implemented |  | No | No | No | No |
| NANC 525 | iconectiv | 7-10-18 | Name:MUMP File Layout – Long TermBusiness Need: The FRS requirement concerning the layout of the Mass Update Mass Porting (MUMP) file template that can be used to upload MUMP data to be used as input for MUMP jobs is at a high level and does not accurately identify the file layout. This doc-only change order provides a longer term view with specific requirements for MUMP File formats. Also see change order NANC 524 for a near term view of MUMP File formats and PIM 107. | July ’18 TOSC mtg – This CO was discussed and acceptedNovember ’18 TOSC mtg – NANC 525 was discussed and agreement reached to break it into 3 separate COs . New COs will be NANC 536 & NANC 537 December ‘18 TOSC conference call – CO was discussed and agreement reached to move this to Status = Requested | High | No | No | No | No |
| NANC 526 | iconectiv | 6/5/18 | **Name:**  SIC SMURF File Production  **Business Need:**  See Separate document | June ’18 TOSC mtg – This CO was discussed and accepted  Sept. ’18 TOSC mtg – Agreement was reached to change this CO status to Implemented |  | No | No | No | No |
| NANC 527 | iconectiv | 6/5/18 | **Name:**  Modify SV No AVC  **Business Need:**  See Separate document | June ’18 TOSC mtg – This CO was discussed and accepted  Oct. ’18 – This CO was implemented |  | No | No | No | No |
| NANC 529 | iconectiv | 9/11/18 | **Name:**  Multiple SVs for TNs in BDD file  **Business Need:**  During the transition of the NPAC, it was identified that Subscription Version Bulk Data Download Files (SV BDDs) produced by iconectiv can have multiple records for a TN. This may cause issues for providers when they process the SV BDD File. It was determined that the NPAC SMS FRS requirement that identified how SV BDD files are produced will allow for this condition to exist. To eliminate impacts to SV BDD users, the NPAC SMS requirements and implementation should be updated to only allow for a single record per TN to be present in the file. Also see PIM 114. | Sept. ’18 TOSC mtg – This CO was discussed and accepted  Oct. ’18 – This CO was implemented |  | No | No | No | No |
| NANC 530 | iconectiv | 9/11/18 | **Name:**  Hold/Replay Clarifications  **Business Need:**  iconectiv developed Hold / Replay capabilities based on NPAC SMS FRS requirements, to enable the transition of service providers from using CMIP-based local system implementations to using XML-based local system implementations. During industry discussions of the transition of LNPA services from Neustar to iconectiv, some industry participants expressed a need for additional capabilities including having local systems on hold for long durations as well as using hold / replay capabilities for CMIP mechanized interface users. | Sept. ’18 TOSC mtg – This CO was discussed and accepted  Oct. ’18 – This CO was implemented |  | No | No | No | No |
| NANC 532 | iconectiv | 11/6/18 | Name:MUMP File Formats - Doc Only ChangeBusiness Need: The FRS requirement concerning the layout of the Mass Update Mass Porting (MUMP) file template that can be used to upload MUMP data to be used as input for MUMP jobs is at a high level and does not accurately identify the file layout in use. There is a need to identify the specific formats of the MUMP File spreadsheets in the requirements so that all vendors and service providers can understand and build support for specific formats used. Therefore, a description of the MUMP spreadsheets will be documented in an Appendix of the NPAC SMS FRS. Also see change order NANC 524 for a near term view of MUMP File formats and PIM 107, as well as NANC 525 associated with a longer term view of MUMP capabilities. | November ’18 TOSC mtg – This CO was discussed and Accepted as Doc Only December ‘18 TOSC conference call – CO was discussed and agreement reached to move this to Status = Requested | NA | No | No | No | No |
| NANC 536 | iconectiv | 11/6/18 | Name:MUMP Email Notification listBusiness Need: MUMP users have expressed the need for specifying multiple email addresses in the MUMP spreadsheets that can receive notifications associated with processing MUMP jobs. Currently, only a single email address can be identified. | November ’18 TOSC mtg – NANC 525 was discussed and agreement reached to break it into 3 separate COs. This is one of the new COs associated with NANC 525 December ‘18 TOSC conference call – CO was discussed and agreement reached to move this to Status = Requested | Low | No | No | No | No |
| NANC 539 | iconectiv | 3/5/19 | Name:Vendor Certification and Regressions Test Plan Updates – Doc Only UpdatesBusiness Need: Documentation Updates - Test Plan updates are needed for NANC 507, where on immediate disconnects, if the effective release date is specified with the current date or a date in the past, a status attribute value change notification setting the requested SV(s) to “disconnect-pending” is sent to the New SP SOA. A step describing this behavior needs to be added to the immediate disconnect test cases. | March ’19 TOSC mtg – NANC 539 was reviewed and accepted. May ’19 TOSC mtg – NANC 539 Chapters 1-7, 8, 9, 10 and 11 were reviewed,  July ‘19 TOSC mtg – This CO was discussed and agreement reached to move this to Status = Implemented |  | No | No | No | No |
| NANC 540 | iconectiv | 5/7/19 | Name:Vendor Certification and Regrression Test Plan Updates – Doc Only Updates for Release 4.1bBusiness Need: Documentation Updates associated with the implementation of NANC 527 (Attribute Value Change or AVC notifications associated with modify pending SV requests) in NPAC SMS documentation release 4.1b are needed. Existing Modify (Pending) Test Cases to be modified in the Vendor Certification and Regression Test Plan. | May ’19 TOSC mtg – NANC 540 was reviewed, accepted and status changed to Requested. |  | No | No | No | No |

| Release 5.0 | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CO #** | **Originator** | **Date Accepted** | **Description** | **Notes** | **NPAC Level**  **Of**  **Effort** | **Systems Impacted** | | | |
| **CMIP** | | **XML** | |
| **SOA** | **LSMS** | **SOA** | **LSMS** |
| NANC 403 | NeuStar | 3/30/05 | **Name:**  **Allow Recovery Messages to be sent only during Recovery**  **Business Need:**  The current documentation does NOT specifically state that ALL recovery messages should only be sent to the NPAC during recovery (it is currently indicated for notifications and SWIM data). This change order will clarify the documentation to include ALL data.  This will require some operational changes for Service Providers that utilize Network Data and/or Subscription Data recovery while in normal mode.  **Link to Change Order:**  [**NANC 403**](https://workinggroup.numberportability.com/nanc-change-orders/?search=nanc+403&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | Func Backward Compatible: Yes  The proposed solution is to update the FRS, IIS and GDMO recovery description to indicate that network data and subscription data recovery requests sent during normal mode will be rejected.  No sunset policy will be implemented with this change order.  Sept. ’18 TOSC mtg. – Agreement reached to change the status of this CO to Requested  Jan. ’19 TOSC mtg – Agreement reached to change the status of this CO back to Open  July ’19 TOSC mtg –  This CO was discussed and agreement reached to change status back to Requested  September ’19 TOSC mtg – This CO was discussed and the TOSC chair was asked to have the NAPM request an SOW from the vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | **No** | **No** | **No** | **No** |
| NANC 467 | iconectiv | 9/03/15 | **Name:**  **ASN.1 – lnpRecoveryComplete**  **Business Need:**  Recovery - CMIP lnpRecoveryComplete Action reply - RecoveryCompleteReply definition in ASN.1 contains subscriber-data, network-data, block-data. However, all of the subscription, network and block data is recovered via other messages, not the recovery complete message. These attributes seem to be unnecessary, and if so, can they be removed from ASN.1?  **Link to Change Order:**  [**NANC 467**](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+467&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | Func Backward Compatible: Yes  This change order was accepted. This change order requires a recompile, and is not a doc-only change.  In order to make it a doc-only change, a comment will be added to the ASN.1, but the change order will remain open for future implementation without a comment.  November ‘18 TOSC mtg – CO was discussed and agreement reached to move this to Status = Requested  May ’19 TOSC mtg – This CO was discussed and the TOSC chair was asked to have the NAPM request an SOW from the vendor  May ’19 - SOW sent to Vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | **No** | **No** | **No** | **No** |
| NANC 471 | iconectiv | 9/03/15 | **Name:**  **ASN.1 – SV DisconnectReply**  **Business Need:**  SV Disconnects - the ASN.1 DisconnectReply definition includes an optional "version-id SET OF SubscriptionVersionId". However, there are no details in the FRS, IIS, EFD, or GDMO that describe under what condition this set of version IDs is populated. iconectiv team assumes this is not used, as other reply structures (SV modify, SV create) do not include this. XML interface does not include this information in its disconnect reply.  **Link to Change Order:**  [**NANC 471**](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+471&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | Func Backward Compatible: Yes  This change order was accepted. This change order requires a recompile, and is not a doc-only change.  In order to make it a doc-only change, a comment will be added to the ASN.1, but the change order will remain open for future implementation without a comment.  November ‘18 TOSC mtg – CO was discussed and agreement reached to move this to Status = Requested  May ’19 TOSC mtg – This CO was discussed and the TOSC chair was asked to have the NAPM request an SOW from the vendor  May ’19 - SOW sent to Vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | **No** | **No** | **No** | **No** |
| NANC 472 | iconectiv | 9/03/15 | **Name:**  **ASN.1 – Audit Discrepancy Report**  **Business Need:**  Audit Processing - the discrepancy report for CMIP (MismatchAttributes definition in ASN.1) indicates that the SV Type can be reported as discrepant. However, the ASN.1 definition for SVType does not support a "no-value-needed" choice, which means that the SV Type could not be reported as null in either NPAC/LSMS or non-null in the other system, even though SV Type, from an interface perspective, is optional for downloads.  **Link to Change Order:**  [**NANC 472**](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+472&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | Func Backward Compatible: Yes  This change order was accepted. This change order requires a recompile.  November ‘18 TOSC mtg – CO was discussed and agreement reached to move this to Status = Requested  July ’19 TOSC mtg – CO was discussed and agreement reached to move this to status = Requested  September ’19 TOSC mtg – This CO was discussed and the TOSC chair was asked to have the NAPM request an SOW from the vendor  September ’19 – SOW sent to vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | No | No | No | No |
| NANC 473 | iconectiv | 9/03/15 | **Name:**  **ASN.1 – Address Information**  **Business Need:**  The ASN.1 AddressInformation definition does not indicate that any attributes are optional, while the FRS data model indicates that several attributes are optional (province, fax, pager, etc.). Which is correct?  **Link to Change Order:**  [**NANC 473**](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+473&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | Func Backward Compatible: Yes  This change order was accepted. This change order requires a recompile, and is not a doc-only change.  In order to make it a doc-only change, a comment will be added to the ASN.1, but the change order will remain open for future implementation without a comment.  November ‘18 TOSC mtg – CO was discussed and agreement reached to move this to Status = Requested  May ’19 TOSC mtg – This CO was discussed and the TOSC chair was asked to have the NAPM request an SOW from the vendor  May ’19 - SOW sent to Vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | No | No | No | No |
| NANC 474 | iconectiv | 9/03/15 | **Name:**  **ASN.1 – SWIM Recovery**  **Business Need:**  Is the additionalInformation field in the M-EVENT-REPORT Reply SwimProcessing-RecoveryResponse ever populated?  **Link to Change Order:**  [**NANC 474**](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+474&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | Func Backward Compatible: Yes  This change order was accepted. This change order requires a recompile, and is not a doc-only change.  In order to make it a doc-only change, a comment will be added to the ASN.1, but the change order will remain open for future implementation without a comment.  November ‘18 TOSC mtg – CO was discussed and agreement reached to move this to Status = Requested  May ’19 TOSC mtg – This CO was discussed and the TOSC chair was asked to have the NAPM request an SOW from the vendor  May ’19 - SOW sent to Vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | No | No | No | No |
| NANC 477 | iconectiv | 9/03/15 | **Name:**  **GDMO – Service Provider Type**  **Business Need:**  GDMO: There appears to be a typo in the GDMO (extra space between “LNP-ASN1.” and “ServiceProviderType”).  **Link to Change Order:**  [**NANC 477**](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+477&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | Func Backward Compatible: Yes  This change order was accepted.  November ‘18 TOSC mtg – CO was discussed and agreement reached to move this to Status = Requested  May ’19 TOSC mtg – This CO was discussed and the TOSC chair was asked to have the NAPM request an SOW from the vendor  May ’19 - SOW sent to Vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | No | No | No | No |
| NANC 478 | iconectiv | 9/03/15 | **Name:**  FRS ASN.1 – Pre-Cancellation Status of Disconnect-Pending  **Business Need:**  If a Pre-Cancellation Status of Disconnect Pending is never used, can the FRS/GDMO/ASN.1 be updated to remove the value?  **Link to Change Order:**  [**NANC 478**](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+478&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | Func Backward Compatible: Yes  This change order was accepted. There were no objections to deleting disconnect-pending. The FRS change can be updated now. The ASN.1 change requires a recompile, and is not a doc-only change.  In order to make it a doc-only change, a comment will be added to the ASN.1, but the change order will remain open for future implementation without a comment.  May ’19 TOSC mtg – NANC 478 was discussed further and agreement reached to change status changed to Requested.  This CO was discussed and the TOSC chair was asked to have the NAPM request an SOW from the vendor  May ’19 - SOW sent to Vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | No | No | No | No |
| NANC 484 | 10x People | 3/10/16 | **Name:**  **XML – Removal of Optional Data Values**  **Business Need:**  The current XML schema definition of the Optional Data attribute on subscription version and number pool block modify operations incorrectly indicate the values can be removed in their entirety. Since the Optional Data attribute could contain multiple parameters (with values), the XML schema should be changed to prevent a mistake where all of the values in all of the parameters are removed, when only one or more are meant to removed. As such, the current behavior requires that each parameter within the Optional Data attribute be individually identified for modification, including a modification where the existing value is being removed..  **Link to Change Order:**  [**NANC 484**](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+484&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | Func Backward Compatible: Yes  This change order was accepted. There were no objections to removing optional data values. The XIS change can be updated now. The XML Schema change requires a new schema file, and is not a doc-only change.  Dec. 5, ‘18 TOSC conference call – CO was discussed and agreement reached to move this to Status = Requested  May ’19 TOSC mtg – This CO was discussed and the TOSC chair was asked to have the NAPM request an SOW from the vendor  May ’19 - SOW sent to Vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | No | No | No | No |
| NANC 494 | iconectiv | 5/02/17 | **Name:**  **RR6-237 – XML Message Delegation**  **Business Need:**  Documentation Updates  **Link to Change Order:**  [**NANC 494**](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+494&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | Jul ’17 WG mtg - Change Order was discussed and accepted.  This Change Order has been sent to the NAPM LLC  October 2020 – Implemented in Release 5.0 on October 25, 2020 | High | No | No | No | No |
| NANC 497 | iconectiv | 7/11/17 | **Name:**  **NPAC Customer ID in CMIP Key exchange Files**  **Business Need:**  Updates to clarify use of NPAC Customer ID in CMIP key files.  **Link to Change Order:**  [**NANC 497**](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+497&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | Jul ’17 WG mtg - Change Order was discussed and accepted.  May ’19 TOSC mtg – NANC 497 was discussed. One vendor challenged need to remove the work around. Vendor to submit proposed alternate solution for discussion at July TOSC meeting.  July ’19 TOSC mtg – Vendor submitted proposed solution which was discussed. New Action Item assigned to verify how many Service Providers would be impacted by this solution.  November ’19 TOSC mtg – Version 2 of this CO was discussed and agreement reached to change the status to Requested  October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | TBD | TBD | No | No |
| NANC 528 | iconectiv | 9/11/18 | Name:GDMO-ASN.1-XSD updatesBusiness Need: During the transition of the NPAC, various changes to the CMIP GDMO and ASN.1 were identified and certain features were sunset that will also require changes to the the GDMO and ASN.1. Although behavior statements were updated in the NPAC documentation, the actual changes to the GDMO and ASN.1 specifications were not made. A future release of the NPAC SMS, where the GDMO objects and ASN.1 changes are made to align with the behavioral changes already made to the documentation, is needed to eliminate the inconsistency in the documentation with the actual implementation of the interface specifications.  **Link to Change Order:**  [**NANC 528**](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+528&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | Sept. ’18 TOSC mtg – This CO was discussed and accepted Jan. ’19 TOSC mtg. – v3 of this CO was discussed and changes were accepted  May ’19 TOSC mtg – NANC 528 – GDMO and ASN.1 updates were reviewed and agreement reached to change status = Requested.  Vendor requested TOSC to send to NAPM to request an SOW  May ’19 - SOW sent to Vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | **Yes** | **Yes** | **Yes** | **No** |
| NANC 531 | iconectiv | 9/11/18 | Name:Recovery/RollupBusiness Need:During the transition of the NPAC, it was identified that the implementation of the Roll-up of subscription version and/or number pool block broadcasts while an LSMS(s) is in recovery in the iconectiv NPAC was different than the implementation in the Neustar NPAC. The iconectiv implementation was based on the IIS that indicated roll-up is delayed while an LSMS is in recovery, while the Neustar implementation completed roll-up as normal regardless if any LSMSs are in recovery. To normalize roll-up behavior regardless of LSMSs being active or in recovery, the IIS should be updated to indicate roll-up behavior is not delayed if an LSMS(s) is in recovery. Also see PIM 112. **Link to Change Order:**  [**NANC 531**](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+531&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | Sept. ’18 TOSC mtg – This CO was discussed and accepted September ’19 TOSC mtg – This CO was discussed and the TOSC chair was asked to have the NAPM request an SOW from the vendor  September ’20 – SOW sent to vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 | **Low** | **No** | **No** | **No** | **No** |
| NANC 533 | iconectiv | 11/6/18 | Name:Audits with Activation Timestamp RangeBusiness Need: This change order discusses changes associated with NPAC SMS ignoring the activation time range when it appears in an audit request.  **Link to Change Order:**  [**NANC 533**](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+533&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | November ’18 TOSC mtg – This CO was discussed and Accepted December ‘18 TOSC conference call – CO was discussed and agreement reached to move this to Status = Requested September ’19 TOSC mtg – This CO was discussed and the TOSC chair was asked to have the NAPM request an SOW from the vendor September ’20 – SOW sent to vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 | **Low** | **No** | **No** | **No** | **No** |
| NANC 534 | iconectiv | 11/6/18 | Name: Reference Data updates for new NPA-NXX - Doc Only Change Business Need: The FRS and the ATIS 0300051 COCAG (Central Office Code Assignment Guidelines) expectations regarding updating the NPAC SMS are not aligned. The period of updating the NPAC SMS reference data and the guideline specified in the COCAG present a different expectation for users. The NPAC would reject, or accept, a request, if ownership information is missing or outdated. (It is appropriate NPAC behavior to reject). The process for updating the NPAC for new NPA-NXX reference data should support the interval for adding new NPA-NXXs defined in ATIS 0300051 – COCAG (Central Office Code Guidelines). See also PIM 119  **Link to Change Order:**  [NANC 534](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+534&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | November ’18 TOSC mtg – This CO was discussed and Accepted as Doc Only December ‘18 TOSC conference call – CO was discussed. Since TBAG/COCAG documents are being combined and will be released in January, agreement was reached to wait until combined doc is released and update once with combined document name. Remain in Open status.  November ’19 TOSC mtg – CO was discussed. INC documents were finalized and changes verified. Agreement was reached to change CO status to Requested  October 2020 – Documentation updated and posted to website | **NA** | **No** | **No** | **No** | **No** |
| NANC 535 | iconectiv | 11/6/18 | Name: SP Deletion Validations for Alt SPID and Last Alt SPID Business Need: Existing NPAC validations require a SPID defined in the Alt SPID field or Last Alt SPID field of subscription versions or number pool blocks to be a valid SPID defined in the NPAC SMS. But, existing validations do not require that when a SPID is deleted, that the SPID should not be defined in subscription versions or number pool blocks as an Alt SPID or Last Alt SPID (i.e., SPIDs can be deleted from the NPAC even though they may exist as an Alt SPID or Last Alt SPID in active SVs or Blocks). Validations for deleting SPIDs need to be extended to not allow a SPID to be deleted if it is defined in the Alt SPID or Last Alt SPID fileds of non-old, non-cancelled SVs or Blocks. Also see PIM 121.  **Link to Change Order:**  [**NANC 535**](https://workinggroup.numberportability.com/nanc-change-orders/?search=NANC+535&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | November ’18 TOSC mtg – This CO was discussed and Accepted December ‘18 TOSC conference call – CO was discussed and agreement reached to move this to Status = Requested  October 2020 – Implemented in Release 5.0 on October 25, 2020 | **Low-Med** | **No** | **No** | **No** | **No** |
| NANC 537 | iconectiv | 11/6/18 | Name:MUMP Due Date MatchingBusiness Need: A capability to more easily concur with the other provider’s due date for inter-service provider ports using MUMPs would be helpful to reduce fallout when MUMP Jobs are processed.(e.g., indicate to use the other provider’s due date if different than the due date in the spreadsheet).  **Link to Change Order:**  [**NANC 537**](https://workinggroup.numberportability.com/nanc-change-orders/?search=nanc+537&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | November ’18 TOSC mtg – NANC 525 was discussed and agreement reached to break it into 3 separate COs. This is one of the new COs associated with NANC 525 December ‘18 TOSC conference call – CO was discussed and agreement reached to move this to Status = Requested September ’19 TOSC mtg – This CO was discussed and the TOSC chair was asked to have the NAPM request an SOW from the vendor September 19 – SOW sent to vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 | **Med** | **No** | **No** | **No** | **No** |
| NANC 538 | iconectiv | 3/5/19 | Name:Expanded Deletion of Inactive SPIDsBusiness Need: Change Order NANC 453 was introduced and implemented in order to allow Inactive SPIDs to be deleted from the NPAC in certain situations when they were defined as the Old SP on subscription versions (SVs). Although the Description of Change in NANC 453 indicated: “The proposed change is to allow a SPID to be deleted if it is only listed as the Old SP on an active-like SV.”, the actual requirements in NANC 453 only allowed a SPID to be deleted if it is only listed as the Old SP on an active record (in addition to if it appeared as any SPID on a cancelled or old without a Failed SP list record). SVs with additional active-like statuses should be supported. If the SPID being deleted only exists on any Canceled or Old (without a Failed SP List) SVs or only exists as an Old SP on any Active, Disconnect-Pending, or Old (regardless of it having a Failed SP List) SVs, then the deletion of the SPID should be allowed.  **Link to Change Order:**  [**NANC 538**](https://workinggroup.numberportability.com/nanc-change-orders/?search=nanc+538&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | March ’19 TOSC mtg – NANC 538 was reviewed and accepted July ‘19 TOSC mtg – This CO was discussed and agreement reached to move this to Status = Requested  September ’19 TOSC mtg – This CO was discussed and the TOSC chair was asked to have the NAPM request an SOW from the vendor  September ’20 – SOW sent to vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | **No** | **No** | **No** | **No** |
| NANC 541 | iconectiv | 5/7/19 | Name:Time Based Recovery LimitBusiness Need:iconectiv developed recovery capabilities based on NPAC SMS FRS requirements to allow CMIP-based local systems to recover Subscription Version and Network data elements. During industry discussions, some industry participants expressed a need for clarification for what is the 24 hour period. Agreement was understood regarding the interval of 24 hours. However, the start time of the recovery was not bound and therefore could have mislead local systems regarding how far back Time Based Recovery could be facilitated before requiring a Bulk Data download. See also PIM 123 **Link to Change Order:**  [**NANC 541**](https://workinggroup.numberportability.com/nanc-change-orders/?search=nanc+541&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | May ’19 TOSC mtg – NANC 541 was reviewed and accepted.July ‘19 TOSC mtg – This CO was discussed and agreement reached to move this to Status = Requested September ’19 TOSC mtg – This CO was discussed and the TOSC chair was asked to have the NAPM request an SOW from the vendor  September ’20 – SOW sent to vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | **No** | **No** | **No** | **No** |
| NANC 542 | iconectiv | 5/7/19 | Name:ReTry Timer Intervals – Doc Only ChangeBusiness Need:The Industry, through a series of discussions (dating back approximately 20+ years), concluded that the appropriate retry and time interval would be 1x15 due to messages not lost on interface so retries are not necessitated. This has been the adopted methodology prior to Transition. Post Transition it was observed that at least one local system is not replicating the NPAC behavior and has chosen to continue to implement the original retry interval of 3x5. This does not take advantage of the reduced messaging. See also PIM 122 **Link to Change Order:**  [**NANC 542**](https://workinggroup.numberportability.com/nanc-change-orders/?search=nanc+542&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | May ’19 TOSC mtg – NANC 541 was reviewed and accepted. A Best Practice for Retry Timer Intervals was drafted, reviewed and accepted. July ‘19 TOSC mtg – This CO was discussed and agreement reached to move this to Status = Requested  October 2020 – Documentation was updated and posted to website |  | **No** | **No** | **No** | **No** |
| NANC 543 | iconectiv | 5/7/19 | Name:Vendor Certification and Regression Test Plan Updates – Doc Only Updates for Release 5.0Business Need: Documentation Updates associated with the implementation of NANC 528 (GDMO-ASN.1-XSD Updates associated with the sunsetting of features in the iconectiv NPAC SMS implementation) in NPAC SMS documentation release 5.0 are needed. NANC 528 is a conglomeration of interface changes associated with a host of change orders, including the sunset change orders NANC 460 and 461. Although many updates to the Vendor Certification and Regression Test Plan have already been made due to sunsetting of these features, a few additional updates to test cases are needed associated with the sunsetting of Customer Contact Data in NANC 461.  **Link to Change Order:**  [**NANC 543**](https://workinggroup.numberportability.com/nanc-change-orders/?search=nanc+543&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | May ’19 TOSC mtg – NANC 543 was reviewed, accepted and status changed to Requested. Vendor requested TOSC to send to NAPM to request an SOW. May ’19 - SOW sent to Vendor  December ’19 – SOW approved  October 2020 – Implemented in Release 5.0 on October 25, 2020  Documentation updated and posted to website |  | **No** | **No** | **No** | **No** |
| NANC 544 | iconectiv | 7/9/19 | Name:FRS – Doc Only ChangesBusiness Need:Updates to the FRS to Add MMS to the Glossary and remove 2 tunable parameters in Appendix C **Link to Change Order:**  [**NANC 544**](https://workinggroup.numberportability.com/nanc-change-orders/?search=nanc+544&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | July ’19 TOSC mtg – This CO was reviewed, accepted and assigned NANC 544 January ’20 TOSC mtg – This CO was discussed and agreement reached to change status to Requested  October 2020 – Documentation updated and posted to website |  | **No** | **No** | **No** | **No** |
| NANC 545 | iconectiv | 7/9/19 | Name:GDMO – Doc Only ChangesBusiness Need:Updates to the GDMO to change the wording of the Subscription Version Managed Object behavior **Link to Change Order:**  [**NANC 545**](https://workinggroup.numberportability.com/nanc-change-orders/?search=nanc+545&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | July ’19 TOSC mtg – This CO was reviewed, accepted and assigned NANC 545 January ’20 TOSC mtg – This CO was discussed and agreement reached to change status to Requested  October 2020 – Documentation updated and posted to website |  | **No** | **No** | **No** | **No** |
| NANC 546 | iconectiv | 7/9/19 | Name:XIS – Doc Only ChangesBusiness Need:Updates to the XIS to Section 2.6 - Recovery of Failed or Missed Messages and section 5.8.18 NpbModifyDownload **Link to Change Order:**  [**NANC 546**](https://workinggroup.numberportability.com/nanc-change-orders/?search=nanc+546&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | July ’19 TOSC mtg – This CO was reviewed, accepted and assigned NANC 546 November ’19 TOSC mtg – This CO was discussed and agreement reached to change status to Requested  October 2020 – Documentation updated and posted to website |  | **No** | **No** | **No** | **No** |
| NANC 547 | iconectiv | 9/10/19 | Name:Vendor Test Plan for Notification SuppressionBusiness Need: Prior to the NPAC Transition, a separate test plan document outside of the Certification and Regression Testing Plan was developed to test Notification Suppression (for delegate/grantor related transactions in XML) in NANC Release 3.4.8. In order to provide a single documentation set associated with Vendor Certification and Regression testing, the contents of the NPAC SMS Release 3.4.8 Turn Up Test Plan needs tp be incorporated into the Vendor Certification and Regression Test Plan documentation.  **Link to Change Order:** [NANC 547](https://workinggroup.numberportability.com/nanc-change-orders/?search=nanc+547&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | September ’19 TOSC mtg – This CO was reviewed, accepted and assigned NANC 547January ’20 TOSC mtg – This CO was discussed and agreement reached to change status to Requested October 2020 – Documentation updated and posted to website |  | **No** | **No** | **No** | **No** |
| NANC 548 | iconectiv | 9/10/19 | Name:XIS Doc-only Changes - XML Content TypeBusiness Need: The XML Interface Specification (XIS), currently does not specify the Content Type to be used in interface messages except in the message examples. Since multiple Content Types can be used and have been implemented, the XIS should be updated to identify the supported Content Type(s) other than in example messages. This will make the implementation clear to any vendor that wants to build the XML interface in the future. Also see PIM 126.  **Link to Change Order:** [NANC 548](https://workinggroup.numberportability.com/nanc-change-orders/?search=nanc+548&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | September ’19 TOSC mtg – This CO was reviewed, accepted, assigned NANC 548 and moved to Status = Requested October 2020 – Documentation updated and posted to website |  | **No** | **No** | **No** | **No** |
| NANC549 | iconectiv | 9/10/19 | Name:Removal of Error Codes for Sunset of Customer Contact DataBusiness Need:With NPAC Release 5.0 and the Sunset of Customer Contact Data, errors associated with the creation or modification of Customer Contact Data will be removed from the NPAC. These errors are defined in the Errors and Message Flow Diagrams (EFD – which is Part 2 of the Interoperable Interface Specification or IIS). **Link to Change Order:** [NANC 549](https://workinggroup.numberportability.com/nanc-change-orders/?search=nanc+549&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=) | September ’19 TOSC mtg – This CO was reviewed, accepted, assigned NANC 549 and moved to Status = Requested September ’19 – SOW sent to vendor December ’19 – SOW approved October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | **No** | **No** | **No** | **No** |
| **NANC 550** | **iconectiv** | **11/2/19** | Name:Billing ID and Alt Billing ID ConsistencyBusiness Need: The optional Billing ID field on SVs is defined in the FRS as a variable 1-4 *alphanumeric* character field, while the Alt-Billing ID field is defined as a variable 1-4 character field (with no limitation that the characters be alphanumeric). Also, the optional Alternatvie SPID is defined in the FRS as a 4 *alphanumeric* character field, while the Last Alternatvie SPID field is defined as a 4 character field (with no limitation that the characters be alphanumeric). Every instance of an SV or Number Pool Block in the NPAC database that has the Alt-Billing ID or Last Alternative SPID field populated only has it populated with alphanumeric characters. In the spirit of normalizing and correcting documentation for the transition, iconectiv believes that the data definition of these two similar fields should be standardized.  Also see PIM 127.  **Link to Change Order:**  **[NANC 550](https://workinggroup.numberportability.com/nanc-change-orders/?search=nanc+550&return-url=%2Fnanc-change-orders%2F&start_date=&end_date=)** | November ’19 TOSC mtg – This CO was reviewed, accepted, assigned NANC 550 and moved to Status = Requested October 2020 – Implemented in Release 5.0 on October 25, 2020 |  | **No** | **No** | **No** | **No** |
| NANC 551 | iconectiv | 5/13/20 | Name: lsmsfilterNPA-NXX – Doc Only Changes  **Business Need:**  There are documentation changes that need to be made to the IIS (Interoperable Interface Specification) to remove references to lsmsfilterNPA-NXX functionality from the Naming Heirarchy for the NPAC-SMS.  There are no LSMS NPA-NXX filters managed on the interfaces. The SOA and LSMS do not use the CMIP message for creating their own NPA-NXX Filters  See also NANC 454  **[NANC 551](https://workinggroup.numberportability.com/documents/6681/NANC_551-_lsmsFilterNPA-NXX_Doc_Only_Changes_1.docx)** | May ’20 LNP Informal MeetingThis CO was reviewed, accepted, assigned NANC 551June ’20 LNP Informal Meeting  * Changes to IIS were reviewed and will be included in Next Doc Relesase  August ’20 LNP Informal MeetingThis CO was moved to Status = Requested October 2020 – Documentation updated and posted to website |  | **N** | **N** | **N** | **N** |
| NANC 552 | iconectiv | 10/6/20 | Name: XIS - timestamp examples format - Doc Only Changes  **Business Need:**  The XML Interface Specification (XIS) contains several examples that are missing the ‘Z’ in the timestamp. This is a document only change to update the examples in the XIS  [**NANC 552**](https://workinggroup.numberportability.com/documents/7018/NANC_552_-_XIS_-_timestamp_examples_format_-_Doc_Only_changes.docx) | October ’20 LNP Informal MeetingThis CO was reviewed, accepted, assigned NANC 552 and moved to status = RequestedOctober 2020 – Documentation updated and posted to website |  | **N** | **N** | **N** | **N** |
| NANC 553 | iconectiv | 10/6/20 | Name: FRS - BDD Response Files & NPA-NXX Edit Flag Indicator - Doc Only Changes  **Business Need:**  Documentation update to remove functionality (BDD Response Files from SPs ) that was removed with the implementation of NANC 460.  Documentation update to correct RR3-447 NPA Regional NPAC NPA Edit Flag Indicator default value to <FALSE> to match FRS Appendix C – Communication Tunable and actual NPAC SMS implementation.  [**NANC 553**](https://workinggroup.numberportability.com/documents/7026/NANC_553_-_FRS_-_BDD_Response_Files__NPA_Edit_Flag_Indicator_-_Doc_Only_Changes.docx) | October ’20 LNP Informal MeetingThis CO was reviewed, accepted, assigned NANC 553 and moved to status = Requested October 2020 – Documentation updated and posted to website |  | **N** | **N** | **N** | **Y** |

| Release 5.1 | | | | | | | | | |
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| **CO #** | **Originator** | **Date Accepted** | **Description** | **Notes** | **NPAC Level**  **Of**  **Effort** | **Systems Impacted** | | | |
| **CMIP** | | **XML** | |
| **SOA** | **LSMS** | **SOA** | **LSMS** |
| CO 554 | iconectiv | 10/06/20 | **Name:**  XML LSMS Query Recovery  **Business Need:**  When an XML LSMS is not responding to NPAC SMS download messages for either a period of time or after a certain volume of messages are queued to be sent, NPAC SMS operations staff may disable downloads to the XML LSMS or change the state of the XML LSMS to Inactive. When this occurs, the only mechanisms for XML LSMS systems to recover missed downloads are either   * by requesting and processing a BDD file for the time range when the XML LSMS downloads were disabled or the XML LSMS was in an Inactive state or * performing queries to obtain the missed data while simultaneously processing new downloads. Having a mechanism that is analogous to the CMIP interface’s recovery functionality would allow for XML LSMS systems to recover missed data without the need for a BDD file or querying data while processing downloads from the NPAC SMS. Also see PIM 130.   Link to Change Order:  [**CO 554**](https://workinggroup.numberportability.com/documents/7466/CO_554_-_XML_LSMS_Query_Recovery_v2.docx) | Func Backward Compatible: Yes  10/06/2020 LNP Informal Meeting   * This CO was reviewed, accepted, assigned CO 554     12/08/2020 NPIF Meeting   * Consensus was reached to move this CO to status=Requested * New AI – Tri-chairs to have the NAPM to request an SOW from the vendor   10/06/2020 NPIF Meeting   * CO TBD – XML LSMS Query Recovery * Steve Koch (iconectiv) reviewed the draft CO * This draft CO was accepted and assigned CO 554 * Version 2 will be sent out with corrections to the steps   12/8/2020 NPIF Meeting   * Steve Koch reviewed the updated Change Order * Consensus was reached to move this CO to status=Requested * New AI – Tri-chairs to have the NAPM to request an SOW from the vendor |  | **N** | **N** | **N** | **Y** |
| CO 555 | iconectiv | 07/06/21 | **Name:**  Turn-Up Test Plan – Doc Only  **Business Need:**  Test the ability of local systems (SOA and LSMS) to accept an incoming message from NPAC when the Schema Version minor value is greater than the current minor version  Link to Change Order:  [**CO 555**](https://workinggroup.numberportability.com/documents/7741/CO_555_-_Turn-up_Test_Plan_-_Doc_Only_v2.docx) | 07/06/2021 NPIF Meeting   * This CO was reviewed, accepted, assigned CO 555 * iconectiv will update the Vendor Certification and Regression test plans in track changes mode for review at the August NPIF meeting   08/03/2021 NPIF meeting   * CMA reviewed updated Vendor Certification and Regression Test Plan – Chapter 17. * Consensus was reached on updates * CMA to post to website   09/07/2021 NPIF meeting   * Consensus reached on proposed wording changes to CO. * CO status changed to Requested   02/08/2022 NPIF   * Consensus was reached to change this CO to Implemented |  | **N** | **N** | **N** | **N** |
| CO 559 | iconectiv | 12/07/21 | **Name:**  Limit Delegation Configuration – Doc Only  **Business Need:**  As described in PIM 140, service provider SPIDs are currently allowed to be delegates of other service provider SPIDs. However, no two service provider SPIDs have entered into a delegation arrangement since the delegation functionality was introduced in late 2013. Supporting the ability of service provider SPID to be a delegate of another service provider SPID requires relatively complex processing logic for notifications in the NPAC. This complex processing has not been utilized for 8 years. During meetings of the APT in 2021, no member of the group could determine a business scenario that would utilize the ability of a service provider SPID to be a delegate of another service provider SPID.  In discussions at the APT, the group agreed to recommend updates to M&Ps that would prohibit a service provider SPID – based on Service Provider Type – from being a delegate of another service provider SPID. This change contains updates to the FRS document to note that the ability of a service provider SPID to be a delegate of another service provider SPID may be limited by M&Ps.  This change does not affect the ability of non-service-provider SPIDs to be delegates of service provider SPIDs. | 12/07/2021 NPIF MeetingThis CO was reviewed, accepted, assigned CO 559Consensus reached to move to Requested status01/11/2022 NPIF MeetingCMA reviewed updated FRS in track changes mode.Consensus reached on changesCMA to post updated version of FRS to website 02/08/2022 NPIF   * iconectiv (Matt Timmerman) - Reviewed a draft M&P for this CO which will be available in the Knowledge base   03/08/2022 NPIF  Consensus was reached to change this CO to Implemented status |  | **N** | **N** | **N** | **N** |
|  |  |  | As described in PIM 141, there is currently no limit to the number of delegate SPIDs that may be configured for a single grantor SPID. Adding delegate SPIDs can significantly increase the overall volume of notifications generated by the NPAC, as notifications to a grantor SPID may also be sent to each of its delegate SPIDs.  In discussions at the APT, the group agreed to recommend updates to M&Ps that would limit the quantity of delegate SPIDs that can be configured for a single grantor SPID. This change contains updates to the FRS document to note that the quantity of delegate SPIDs that may be configured for a single grantor SPID may be limited by M&Ps.  This change does not affect the quantity of grantor SPIDs to which a single delegate SPID may be associated.  Link to Change Order:  [CO559](https://workinggroup.numberportability.com/documents/8034/CO_559_-_Limit_Delegation_Configurations_-_Doc_Only.docx) |  |  |  |  |  |  |

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| **CO #** | **Originator** | **Date Accepted** | **Description** | **Notes** | **NPAC Level**  **Of**  **Effort** | **Systems Impacted** | | | |
| **CMIP** | | **XML** | |
| **SOA** | **LSMS** | **SOA** | **LSMS** |
| CO 560 | iconectiv | 12/1/21 | **Name:**  SMURF File EOL – Doc Only  **Business Need:**  Currently the FRS states that the EOL character for Selection Input Criteria SPID Migration Update Request (SIC-SMURF) Files is a carriage return (CR).  The FRS should state that the End of Line (EOL) character is a line feed. This is the value that is being used in the current implementation of the NPAC SMS and by all NPAC SMS Service Providers.  Link to Change Order:  [CO560](https://workinggroup.numberportability.com/documents/8018/CO_560_-_SMURF_File_EOL_-_Doc_Only.docx) | 12/07/2021 NPIF Meeting   * This CO was reviewed, accepted, assigned CO 560 * Consensus reached to move to Requested status   01/11/2022 NPIF Meeting   * CMA reviewed updated FRS in track changes mode. * Consensus reached on changes * CMA to post updated version of FRS to website   02/08/2022 NPIF  Consensus was reached to change this CO to Implemented |  | **N** | **N** | **N** | **N** |

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| **Closed No Action Change Orders** | | | | | |
| **CO #** | **Originator** | **Date Accepted** | **Description** | **Date**  **Closed** | **Final Resolution** |
| NANC 419 | ATT | 3/15/07 | User Prioritization of Recovery – Related Notifications | 9/11/18 | The Originator requested that this CO be Closed |
| NANC 437 | Telcordia | 1/08/09 | Multi-Vendor NPAC SMS Solution | 9/11/18 | LNPA TOSC reached agreement to Close this CO. |
| NANC 447 | ATT | 11/01/2011 | NPAC Support for CMIP over TCP/IPv6 -V2 | 4/05/22 | NPIF reached agreement to Close this CO. |
| NANC 449 | Comcast | 2/23/12 | Active-Active SOA connection to NPAC – same SPID | 3/5/19 | The Originator withdrew the CO. |
| NANC 457 | LNPA WG | 7/9/13 | SPID Migration TN Count | 1/8/19 | LNPA TOSC reached agreement to Close this CO. |
| NANC 492 | iconectiv | 5/2/17 | Sunset items 5.1 and 5.2 – Audit Notifications | 1/8/19 | LNPA TOSC reached agreement to Close this CO. |
| NANC 504 | iconectiv | 3/6/19 | Recovery of Modified SVs | 3/6/19 | LNPA TOSC reached agreement to Accept and subsequently Close this CO |