**Origination Date:** 09/11/18

**Originator:** iconectiv

### Change Order Number: NANC 528

**Description:** Transition Related GDMO/ASN.1/XSD updates

**Functional Backwards Compatible:** No

**IMPACT/CHANGE ASSESSMENT**

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CMIP | GDMO | ASN.1 | iconectiv NPAC | SOA | LSMS |
| Y | Y | Y | Y | Y |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XML | XIS | XSD | iconectiv NPAC | SOA | LSMS |
| Y | Y | Y | Y | Y |

**Business 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.

**Description of Change:**

This change order is a “catch all” for various other change orders that have been documented that define changes to the CMIP interface specification. These other change orders are:

1. NANC 454 – Remove Unused Messages from the NPAC SMS
2. NANC 460 – Sunset List Items – Local System Impacts = No
3. NANC 461 – Sunset List Items – Local System Impacts = Yes
4. NANC 467 – ASN.1 – CMIP lnpRecoveryComplete Action reply
5. NANC 471 – ASN.1 – SV DisconnectReply
6. NANC 473 – ASN.1 – Address Information
7. NANC 474 – ASN.1 – SWIM Recovery
8. NANC 477 – GDM0 – Service Provider Type Definition
9. NANC 478 – ASN.1 – Pre-cancellation Status of Disconnect Pending
10. NANC 484 – XML – Removal of Optional Data values

Additionally, since the log object functionality defined for CMIP is not used, all log objects will be removed from the CMIP interface.

Also correct GDMO behavioral statement for the subscriptionVersionNPAC object that indicates an SV created by the Old SP goes to canceled status on expiration of T2.

During review of the ASN.1 changes a recommendation was made to change an unnecessarily complex substructure of the *NetworkDownloadCriteria* structure (used for recovery) that was a CHOICE of CHOICE into a single CHOICE substructure (Action Item 02062019-01).

Changes are identified by yellow highlighting in the text below.

Requirements:

**NANC 454 – Remove Unused Messages from the NPAC SMS**

**FRS Changes:**

Remove requirements R10-10.1, R10-10.2 and R10-10.3 in Section 10.1 on Availability and Reliability.

~~R10‑10.1 Service Provider Notification of System Unavailability~~

~~NPAC SMS shall notify Service Providers of the system unavailability via both the NPAC SMS-to-Local SMS interface and the SOA-to-NPAC SMS interface if the system becomes unavailable for normal operations due to any reason, including both scheduled and unscheduled maintenance.~~

~~R10-10.2 System Availability Notification Method~~

~~NPAC SMS shall notify Service Providers via their contact numbers if electronic communication is not possible.~~

~~R10-10.3 System Availability Notification Contents~~

~~NPAC SMS shall include the following information in the notification:~~

1. ~~The reason for the downtime~~
2. ~~When the down time will start~~
3. ~~When the down time will stop~~
4. ~~An NPAC contact number~~

**GDMO Changes:**

Remove objects, notifications, and behavior description for the lnpNPAC-SMS-Operational-Information notification and for the lsmsFilterNPA-NXX object.

Remove several references to lnpNPAC-SMS-Operational-Information.

.

For the lsmsFilterNPA-NXX managed object:

* Remove lsmsFilterNPA-NXX MANAGED OBJECT CLASS
* Remove lsmsFilterNPA-NXX-serviceProv NAME BINDING
* Remove lsmsFilterNPA-NXX-ID ATTRIBUTE
* Remove lsmsFilterNPA-NXX-Value ATTRIBUTE

For the lnpNPAC-SMS-Operational-Information

* Remove lnpLogOperational-InformationRecord MANAGED OBJECT CLASS
* Remove lnpNPAC-SMS-Operational-Information from the list of Notifications associated with the lnpNPAC-SMS MANAGED OBJECT CLASS as well as remove this sentence from the Behavior of the lnpNPAC-SMS managed object: ~~The lnpNPAC-SMS-Operational-Information will be used to notify service provider SOA and Local SMS systems of planned outages.~~
* Remove the lnpNPAC-SMS-Operational-Information NOTIFICATION
* Remove the following Attributes for the Operational Information Notification:

npacContactNumber ATTRIBUTE

downTime ATTRIBUTE

additionalDownTimeInformation ATTRIBUTE

**ASN.1 Changes:**

Remove references.

Several refences to lnp-npac-sms-operational-information.

* Remove lnp-npac-sms-operational-information from the NetworkNotificationRecoveryReply structure for both LSMS and SOA
* Remove the NPAC-SMS-Operational-Information structure
* Remove the NPAC-SMS-Operational-InformationRecovery structure

**NANC 460 – Sunset List Items – Local System Impacts = No**

* Sunset ability for SOA to use a separate channel for notifications –

**Proposed Changes:** remove references to SOA notification download units and separate SOA Notification channel in ASN.1 and GDMO as well as from the FRS

**FRS Changes:**

Remove the SOA Notification Download from the Customer Allowable Functions:

|  |  |  |  |
| --- | --- | --- | --- |
| NPAC Customer Allowable Functions | M | √ | Each bit in the mask represents a Boolean indicator for the following functional options:1. SOA Management
2. SOA Network Data Management
3. SOA Data Download
4. ~~SOA Notification Download – not supported; always set to 0 (false)~~
5. LSMS Network Data Management
6. LSMS Data Download
7. LSMS Queries/Audits

(only applies to the CMIP interface, not the XML interface) |

**GDMO Changes:**

* Remove the following sentence from the Behavior of the **lnpDownload ACTION** as well as from the **lnpNotificationRecovery ACTION**:~~If a SOA supports a separate SOA channel, the SOA recovers notification data using the notification download association function (notificationDownload)~~

**ASN.1 Changes:**

* Remove “notificationDownload” from the SoaUnits structure.

SoaUnits ::= SEQUENCE {

 soaMgmt [0] NULL OPTIONAL,

 networkDataMgmt [1] NULL OPTIONAL,

 dataDownload [2] NULL OPTIONAL

 ~~notificationDownload [3] NULL OPTIONAL~~

}

* Sunset single TN Notification formats –

**Proposed Changes:** remove single TN notification log record managed objects and single TN notification definitions/behaviors in GDMO and associated changes in ASN.1

**GDMO Changes:**

* For the subscriptionVersionNPAC MANAGED OBJECT CLASS, remove the NOTIFICATIONS except the first port notification under the subscriptionVersionNPAC-Pkg PACKAGE:
 ~~NOTIFICATIONS
 subscriptionVersionOldSP-ConcurrenceRequest,~~

 ~~subscriptionVersionNewSP-CreateRequest,~~

 ~~subscriptionVersionOldSPFinalConcurrenceWindowExpiration,~~

 subscriptionVersionNewNPA-NXX;

 ~~subscriptionVersionCancellationAcknowledgeRequest,~~

 ~~subscriptionVersionDonorSP-CustomerDisconnectDate,~~

 ~~subscriptionVersionStatusAttributeValueChange,~~

 ~~subscriptionVersionNewSP-FinalCreateWindowExpiration,~~

 ~~"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2 : 1992":attributeValueChange~~

 ~~accessControlParameter phoneNumberParameter,~~

 ~~"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2 : 1992":objectCreation~~

 ~~accessControlParameter;~~

For the subscriptionVersionNPAC managed object class, modify behavior statements to only refer to TN range notifications and add the following text at the end of the Behavior dscription to indicate that TN Range notifications are emitted from the lnpSubscriptions object:

 Note, with the sunset of CMIP single TN notification formats, only TN range

 (subscriptionVersionRange) notification formats are used. However, the

 TN range notifications described in the subscriptionVersionNPAC managed

 object behavior are not emitted from the subscriptionVersionNPAC object,

 but rather from the lnpSubscriptions object instead.

* Remove the following log managed objects for the notifications being sunset:
* lnpLogCancellationAcknowledgeRequestRecord MANAGED OBJECT CLASS
* lnpLogNewSP-CreateRequestRecord MANAGED OBJECT CLASS
* lnpLogOldSP-ConcurrenceRequestRecord MANAGED OBJECT CLASS
* lnpLogStatusAttributeValueChangeRecord MANAGED OBJECT CLASS
lnpLogDonorSP-CustomerDisconnectDateRecord MANAGED OBJECT CLASS
* lnpLogOldSPFinalConcurrenceWindowExpirationRecord MANAGED OBJECT CLASS
* lnpLogNewSP-FinalCreateWindowExpirationRecord MANAGED OBJECT CLASS
* Remove the following notification definitions for the notifications being sunset:
* subscriptionVersionCancellationAcknowledgeRequest NOTIFICATION
* subscriptionVersionDonorSP-CustomerDisconnectDate NOTIFICATION
* subscriptionVersionNewSP-CreateRequest NOTIFICATION
* subscriptionVersionOldSP-ConcurrenceRequest NOTIFICATION
* subscriptionVersionStatusAttributeValueChange NOTIFICATION
* subscriptionVersionOldSPFinalConcurrenceWindowExpiration NOTIFICATION
* subscriptionVersionNewSP-FinalCreateWindowExpiration NOTIFICATION

**ASN.1 Changes:**

* Remove the following structures associated with sunset notifications:
* VersionCancellationAcknowledgeRequest
* VersionCancellationAcknowledgeRequestRecovery
* VersionCreateConcurrenceRequest
* VersionCreateConcurrenceRequestRecovery
* VersionCustomerDisconnectDate
* VersionCustomerDisconnectDateRecovery
* VersionNewSP-CreateRequest
* VersionNewSP-CreateRequestRecovery
* VersionOldSP-ConcurrenceRequest
* VersionOldSP-ConcurrenceRequestRecovery
* VersionStatusAttributeValueChange
* VersionStatusAttributeValueChangeRecovery
* VersionOldSPFinalConcurrenceWindowExpiration
* VersionOldSPFinalConcurrenceWindowExpirationRecovery
* VersionNewSP-FinalCreateWindowExpiration
* VersionNewSP-FinalCreateWindowExpirationRecovery
* Remove the following notification structures from the NetworkNotificationRecoveryReply structure associated with sunset notifications:
* VersionCancellationAcknowledgeRequestRecovery
* VersionCustomerDisconnectDateRecovery
* VersionNewSP-CreateRequestRecovery
* VersionOldSP-ConcurrenceRequestRecovery
* VersionStatusAttributeValueChangeRecovery
* VersionOldSPFinalConcurrenceWindowExpirationRecovery
* VersionNewSP-FinalCreateWindowExpirationRecovery
* Sunset the ability for SOA to not support Cause Code 2 (automatic conflict from cancellation notification) – **No GDMO/ASN.1 changes**
* Sunset the ability for SOA to not support receiving AVC when an SV transitions from Cancel-Pending to Conflict due to expiration of T2 – **No GDMO/ASN.1 changes**
* Sunset BDD Response Files – **No GDMO/ASN.1 changes**
* Sunset Data Integrity Sample (Audit and report) – **No GDMO/ASN.1 changes**
* Sunset the following (highlighted in yellow) unused billing categories (like mass storage, audits, etc.) – **No GDMO/ASN.1 changes**
* Clarify Requirements for Unused User ID disable period tunable/feature – **No GDMO/ASN.1 changes**

**NANC 461 – Sunset List Items – Local System Impacts = Yes**

* Sunset the ability for Service Providers to update their CMIP network data in their customer profile
* Sunset unused Customer Contact information on NPAC Admin GUI and LTI –(note, the capability to update this over the SOA/LSMS interface was also sunset, but it can be queried over the CMIP Interface and the Customer Contact Information can be queried as part of a query reply for Service Provider data over the XML interface) –

**Proposed Changes:** Customer Contact Data will be removed entirely from the GDMO and ASN.1 and CMIP network address data will be read only, no longer modifiable from the CMIP interface. Customer Contact Data will also be removed from the NPAC entirely, so remove all references to it from the FRS. Also, Customer Contact Data will be removed from the SPID Query Reply message in XML and the XSD support, resulting in only the short form of the Service Provider query on the XML interface will be supported. The long form of the query (which consisted of the short form data plus customer contact data) is no longer supported with removal of customer contact data from the NPAC.

**FRS Changes:**

* Remove Table 3-3, NPAC Customer Contact Data Model, from the FRS

Update Requirement R3-11 to remove the contact data from being posted on the bulletin board.

R3‑11 NPAC SMS notification of LRNs and Service Provider data by Service Provider

NPAC SMS shall inform all Service Providers about a new Service Provider and the associated LRNs via the NPAC SMS-to-Local SMS interface and SOA-to-NPAC SMS interface. NPAC SMS shall post the new Service Providers and/or new LRNs on the Web bulletin board.

The Service Provider data fields sent to the WEB bulletin board are:

1. NPAC Customer ID
2. NPAC Customer Name
3. NPAC Customer Type
4. ~~Contact Type~~
5. ~~Contact Name~~
6. ~~Contact Address 1~~
7. ~~Contact Address 2~~
8. ~~Contact City~~
9. ~~Contact State~~
10. ~~Contact Zip~~
11. ~~Contact Province~~
12. ~~Contact Country~~
13. ~~Contact Phone~~
14. ~~Contact Fax~~
15. ~~Contact Pager~~
16. ~~Contact Pager PIN~~
17. ~~Contact Email~~

The LRN data fields sent to the WEB bulletin board are:

1. NPAC Customer ID
2. NPAC Customer Name
3. LRN Value
* Update introductory paragraph of Section 4.1 on SP Data Administration to remove references to contact data:

Service Provider Data Administration functions allow NPAC personnel to receive and record data needed to identify authorized LNP Service Providers. The Service Provider data indicates the LNP Service Providers and includes ~~location, contact name, security, routing, and~~name, type, support indicators, and network interface information.
* Update requirement RR4-20 to indicate only the short form of data is returned on the XML interface when SPs query their own data.

RR4-20 Authorized Service Providers View Service Provider Data – XML Interface

NPAC SMS shall allow authorized Service Provider personnel to view their own Service Provider data ~~(long-form version)~~ and view other Service Provider data (short-form version which includes SPID, SP Name, and SP Type) via the XML Interface for the SOA-to-NPAC SMS interface, and the NPAC SMS-to-Local SMS interface. (Previously NANC 372, Req 4)

* Update requirement R4-8 to remove contact data when creating a new Service Provider on the NPAC.

R4‑8 Service Provider Data Elements

NPAC SMS shall require the following data if there is no existing Service Provider data: (reference NANC 399)

* Service Provider name~~, address, phone number, and contact organization~~.
* Service Provider allowable functions (applies only to the CMIP interface, not the XML interface).
* Service Provider Network Address of NPAC SMS-to-Local SMS interface (applies only to the CMIP interface, not the XML interface).
* Service Provider Network Address of SOA-to-NPAC SMS interface (applies only to the CMIP interface, not the XML interface).
* ~~Service Provider Security Contact. Contact data is security data when Contact Type is “SE.”~~
* ~~Service Provider Repair contact name and phone number. The default Service Provider Repair Contact and phone number shall be the same as the Service Provider contact and phone number, if the Service Provider Repair Contact information is left blank.~~
* ~~Service Provider billing name, address, phone number, and billing contact for NPAC SMS billing. The default for the Service Provider Billing data shall be the same as the Service Provider data, if the Service Provider Billing information is left blank.~~
* Service Provider Download Indicator
* …

The following data is optional:

* ~~Service Provider Contact Type: SOA Contact, Local SMS, Web, Network Communications, Conflict Resolution, Operations, and User Administration Contact Address Information.~~
* NPAC Customer Associated Service Provider Information

 [end of requirement]

* Remove mention of the Customer Contact Data in requirements R4-15.1 and R4-26.2 (Table 3-3 in the FRS describes the Customer Contact Data).

R4‑15.1 Modify restrictions on Service Provider data - Service Providers

NPAC SMS shall prohibit modification of the ~~Service Provider data listed in Table 3-3 and the~~ OSI Address and Internet Address information in **Error! Reference source not found.** by the SOA-to-NPAC SMS interface, the NPAC-to-Local SMS interface, and the LTI.

R4‑26.2 Results returned to Service Provider during a query

NPAC SMS shall return all Service Provider data associated with the Service Provider ID and/or Service Provider Name, as listed in Tables 3-2, ~~3-3,~~ 3-4, and 3-5, if the Service Provider data matches the query criteria. Service Providers are only allowed to query their own data on the CMIP interface but can query short form data of other Service Providers on the XML interface.

**GDMO Changes:**

* Remove “contact” related Conditional Packages from the serviceProv MANAGED OBJECT CLASS:

~~CONDOTIONAL PACKAGES~~

~~serviceProvBillingAddressPkg PRESENT IF~~

 ~~!the service provider has billing address and contact~~

 ~~information!,~~

~~serviceProvSOA-AddressPkg PRESENT IF~~

 ~~!the service provider has SOA address and contact information!,~~

~~serviceProvLSMS-AddressPkg PRESENT IF~~

 ~~!the service provider has LSMS address and contact information!,~~

~~serviceProvWebAddressPkg PRESENT IF~~

 ~~!the service provider has Web address and contact information!,~~

~~serviceProvNetAddressPkg PRESENT IF~~

 ~~!the service provider has network and communication facilities~~

 ~~address and contact information!,~~

~~serviceProvConflictAddressPkg PRESENT IF~~

 ~~!the service provider has conflict resolution interface~~

 ~~address and contact information!,~~

~~serviceProvOperationsAddressPkg PRESENT IF~~

 ~~!the service provider has operations address and contact~~

 ~~information!,~~

~~serviceProvRepairCenterInfoPkg PRESENT IF~~

 ~~!the service provider has repair contact information!,~~

~~serviceProvSecurityAddressPkg PRESENT IF~~

 ~~!the service provider has security contact information!,~~

~~serviceProvUserAdminAddressPkg PRESENT IF~~

 ~~!the service provider has user administration interface address and contact information!;~~

* Remove the serviceProvAddress as an ATTRIBUTE of the serviceProvPkg on the serviceProv managed object; remove the capability to modify the serviceProvSysLinkInfo in this same package

serviceProvPkg PACKAGE

 BEHAVIOUR

 serviceProvDefinition,

 serviceProvBehavior;

 ATTRIBUTES

 npacCustomerAllowableFunctions GET,

 ~~serviceProvAddress GET-REPLACE,~~

 serviceProvSysLinkInfo GET~~-REPLACE~~;

 ;

* Remove the Contact Data Address attributes from the Attribute definitions as well as the Package Definitions:

serviceProvAddress ATTRIBUTE

serviceProvBillingAddress ATTRIBUTE

serviceProvSOA-Address ATTRIBUTE

serviceProvLSMS-Address ATTRIBUTE

serviceProvWebAddress ATTRIBUTE

serviceProvNetAddress ATTRIBUTE

serviceProvConflictAddress ATTRIBUTE

serviceProvOperationsAddress ATTRIBUTE

serviceProvRepairCenterInfo ATTRIBUTE

serviceProvSecurityAddress ATTRIBUTE

serviceProvUserAdminAddress ATTRIBUTE

serviceProvBillingAddress PACKAGE

serviceProvSOA-Address PACKAGE

serviceProvLSMS-Address PACKAGE

serviceProvWebAddress PACKAGE

serviceProvNetAddress PACKAGE

serviceProvConflictAddress PACKAGE

serviceProvOperationsAddress PACKAGE

serviceProvRepairCenterInfo PACKAGE

serviceProvSecurityAddress PACKAGE

serviceProvUserAdminAddress PACKAGE

**ASN.1 Changes:**

* Remove the AddressInfo structure used to convey customer contact data:

~~AddressInformation ::= SEQUENCE {~~

 ~~line1 GraphicString40,~~

 ~~line2 GraphicString40,~~

 ~~city GraphicString20,~~

 ~~state GraphicString(SIZE(2)),~~

 ~~zip GraphicString(SIZE(9)),~~

 ~~province GraphicString(SIZE(2)), -- optional when populated with NULL values~~

 ~~country GraphicString20,~~

 ~~contactPhone PhoneNumber,~~

 ~~contact GraphicString40,~~

 ~~contactFax PhoneNumber, -- optional when populated with NULL values~~

 ~~contactPager PhoneNumber, -- optional when populated with NULL values~~

 ~~contactPagerPIN DigitString, -- optional when populated with NULL values,~~

 ~~-- value should be no more than 10 digits~~

 ~~contactE-mail GraphicString60 -- optional when populated with NULL values~~

~~}~~

**XML Changes:**

* Remove mention of short form and long form for SPID Query Request and SPID Query Reply messages (the long form returns customer contact information which is going away as well as short form data). All SPID Query Requests will return the same type of data for the queried SPIDs (what used to be the short form of Service Provider data), so no need to make a distinction between types of replies.

XIS Section **5.5.25 (SOA) and Section 5.7.11 (LSMS)** **SPIDQueryRequest**

This message is used by the SOA or LSMS to query the NPAC about an existing service provider. There are three different formats for this request:

* No parameter is specified – This is a query for all service provider information. The SpidQueryReply ~~short\_form~~ will be returned (see SpidQueryReply for details) for all SPID objects.
* The sp\_id parameter is specified – This is a query for a specific service provider. ~~If this sp\_id parameter matches the SPID issuing the query, the SpidQueryReply long\_form is returned (see SpidQueryReply for details). Otherwise, t~~The SpidQueryReply ~~short\_form~~ is returned for the specified SPID object. See the section 5.1 (“Message Structure”) for details on how the NPAC determines which spid is issuing the query.
* The query\_expression is specified – This is a query that can return multiple SPID records. ~~Regardless of which objects match the criteria, t~~The SpidQueryReply ~~short\_form~~ is returned (see SpidQueryReply for details) for the service provider objects that match the query\_expression criteria.

The asynchronous reply to this message is a SpidQueryReply message.

XIS Section **5.6.40** **(SOA) or 5.8.26 (LSMS) SPIDQueryReply**

This message is the asynchronous reply to a SpidQueryRequest message.

~~There are two forms for this reply. The short form~~It includes the sp\_id, sp\_name, and sp\_type. ~~The long form adds the Service Providers contact information. Replies will be in short form unless the criteria specified in the SpidQueryRequest was just a sp\_id parameter and it matches the SPID issuing the query.~~  See the section 5.1 (“Message Structure”) for details on how the NPAC determines which spid is issuing the query.

5.6.40.1 SpidQueryReply Parameters

| Parameter | Description |
| --- | --- |
| basic\_code | This required attribute will always be populated in this message. basic\_code indicates the high level success or failure, and is described in detail in the “Error Handling” section. |
| status\_code | status\_code is an optional field that specifies the error number.  |
| status\_info | status\_info is an optional field that describes the error info.  |
| spid\_list ~~(short form)~~ | This field contains an optional repeating list of sp\_data items where each contains the following items:* sp\_id
* sp\_name
* optional sp\_type
* activity\_timestamp
* download\_reason
 |
| ~~spid\_list (long form)~~ | ~~This field contains the Service Provider profile information for the requesting SPID. It’s an optional list that contains a single sp\_data item with the following parameters:~~* ~~sp\_id~~
* ~~sp\_name~~
* ~~optional sp\_type~~
* ~~sp\_system\_type~~
* ~~sp\_address~~
* ~~address\_line1~~
* ~~optional address\_line2~~
* ~~address\_city~~
* ~~address\_state~~
* ~~address\_zip~~
* ~~optional address\_province~~
* ~~address\_country~~
* ~~address\_contract\_phone~~
* ~~address\_contact~~
* ~~optional address\_contact\_fax~~
* ~~optional address\_contact\_pager~~
* ~~optional address\_contact\_pager\_pin~~
	+ ~~optional address\_contact\_email~~
* ~~sp\_billing\_address \*~~
* ~~optional sp\_soa\_address \*~~
* ~~optional sp\_lsms\_address \*~~
* ~~optional sp\_web\_address \*~~
* ~~optional sp\_net\_address \*~~
* ~~optional sp\_conflict\_address \*~~
* ~~optional sp\_operations\_address \*~~
* ~~sp\_repair\_center\_address \*~~
* ~~sp\_security\_address \*~~
* ~~optional sp\_user\_admin\_address \*~~
* ~~activity\_timestamp~~
* ~~download\_reason~~

~~\* See sp\_address for complete list of parameters in an “address”~~ |

* Remove the Customer Contact Data structures from the XSDs and Mnemonics file.

Remove the following XML Long Form components (make same changes to short form components):

[~~<xs:complexType name="~~**~~AddressInformation~~**~~">~~](file:///C%3A%5CASMS%5CNPAC%5CFRS_IIS%5CNANC%204.1%20-%20iconectiv%20baseline%5CXML%20Interface%5CNPAC_XML_Schema_v1.6s_07-31-2018.xsd)

[~~<xs:sequence>~~](file:///C%3A%5CASMS%5CNPAC%5CFRS_IIS%5CNANC%204.1%20-%20iconectiv%20baseline%5CXML%20Interface%5CNPAC_XML_Schema_v1.6s_07-31-2018.xsd)

~~<xs:element name="~~**~~address\_line1~~**~~" type="~~**~~GraphicString40~~**~~"/>~~

~~<xs:element name="~~**~~address\_line2~~**~~" type="~~**~~GraphicString40~~**~~" minOccurs="~~**~~0~~**~~"/>~~

~~<xs:element name="~~**~~address\_city~~**~~" type="~~**~~GraphicString20~~**~~"/>~~

~~<xs:element name="~~**~~address\_state~~**~~" type="~~**~~AddressState~~**~~"/>~~

~~<xs:element name="~~**~~address\_zip~~**~~" type="~~**~~AddressZip~~**~~"/>~~

~~<xs:element name="~~**~~address\_province~~**~~" type="~~**~~AddressProvince~~**~~" minOccurs="~~**~~0~~**~~"/>~~

~~<xs:element name="~~**~~address\_country~~**~~" type="~~**~~GraphicString20~~**~~"/>~~

~~<xs:element name="~~**~~address\_contact\_phone~~**~~" type="~~**~~PhoneNumber~~**~~"/>~~

~~<xs:element name="~~**~~address\_contact~~**~~" type="~~**~~GraphicString40~~**~~"/>~~

~~<xs:element name="~~**~~address\_contact\_~~fax**" type="**PhoneNumber**" ~~minOccurs="~~**~~0~~**~~"/>~~

~~<xs:element name="~~**~~address\_contact\_pager~~**~~" type="~~**~~PhoneNumber~~**~~" minOccurs="~~**~~0~~**~~"/>~~

~~<xs:element name="~~**~~address\_contact\_pager\_pin~~**~~" type="~~**~~DigitString~~**~~" minOccurs="~~**~~0~~**~~"/>~~

~~<xs:element name="~~**~~address\_contact\_email~~**~~" type="~~**~~GraphicString60~~**~~" minOccurs="~~**~~0~~**~~"/>~~

~~</xs:sequence>~~

~~</xs:complexType>~~

[~~<xs:simpleType name="~~**~~AddressProvince~~**~~">~~](file:///C%3A%5CASMS%5CNPAC%5CFRS_IIS%5CNANC%204.1%20-%20iconectiv%20baseline%5CXML%20Interface%5CNPAC_XML_Schema_v1.6s_07-31-2018.xsd)

[~~<xs:restriction base="~~**~~xs:string~~**~~">~~](file:///C%3A%5CASMS%5CNPAC%5CFRS_IIS%5CNANC%204.1%20-%20iconectiv%20baseline%5CXML%20Interface%5CNPAC_XML_Schema_v1.6s_07-31-2018.xsd)

~~<xs:length value="~~**~~2~~**~~"/>~~

~~</xs:restriction>~~

~~</xs:simpleType>~~

[~~<xs:simpleType name="~~**~~AddressState~~**~~">~~](file:///C%3A%5CASMS%5CNPAC%5CFRS_IIS%5CNANC%204.1%20-%20iconectiv%20baseline%5CXML%20Interface%5CNPAC_XML_Schema_v1.6s_07-31-2018.xsd)

[~~<xs:restriction base="~~**~~xs:string~~**~~">~~](file:///C%3A%5CASMS%5CNPAC%5CFRS_IIS%5CNANC%204.1%20-%20iconectiv%20baseline%5CXML%20Interface%5CNPAC_XML_Schema_v1.6s_07-31-2018.xsd)

~~<xs:length value="~~**~~2~~**~~"/>~~

~~</xs:restriction>~~

~~</xs:simpleType>~~

[~~<xs:simpleType name="~~**~~AddressZip~~**~~">~~](file:///C%3A%5CASMS%5CNPAC%5CFRS_IIS%5CNANC%204.1%20-%20iconectiv%20baseline%5CXML%20Interface%5CNPAC_XML_Schema_v1.6s_07-31-2018.xsd)

[~~<xs:restriction base="~~**~~xs:string~~**~~">~~](file:///C%3A%5CASMS%5CNPAC%5CFRS_IIS%5CNANC%204.1%20-%20iconectiv%20baseline%5CXML%20Interface%5CNPAC_XML_Schema_v1.6s_07-31-2018.xsd)

~~<xs:minLength value="~~**~~1~~**~~"/>~~

~~<xs:maxLength value="~~**~~9~~**~~"/>~~

~~</xs:restriction>~~

~~</xs:simpleType>~~

Remove AddressInformation structure from SPIDQueryData structure in the long form of the schema (make same changes to short form of schema):

[<xs:complexType name="**SPIDQueryData**">](file:///C%3A%5CASMS%5CNPAC%5CFRS_IIS%5CNANC%204.1%20-%20iconectiv%20baseline%5CXML%20Interface%5CNPAC_XML_Schema_v1.6s_07-31-2018.xsd)

[<xs:sequence>](file:///C%3A%5CASMS%5CNPAC%5CFRS_IIS%5CNANC%204.1%20-%20iconectiv%20baseline%5CXML%20Interface%5CNPAC_XML_Schema_v1.6s_07-31-2018.xsd)

<xs:element name="**sp\_id**" type="**ServiceProvId**"/>

<xs:element name="**sp\_name**" type="**ServiceProvName**"/>

<xs:element name="**sp\_type**" type="**ServiceProvType**" minOccurs="**0**"/>

~~<xs:element name="~~**~~sp\_system\_type~~**~~" type="~~**~~SystemType~~**~~" minOccurs="~~**~~0~~**~~"/>~~

~~<xs:element name="~~**~~sp\_address~~**~~" type="~~**~~AddressInformation~~**~~" minOccurs="~~**~~0~~**~~"/>
<xs:element name="~~**~~sp\_billing\_address~~**~~" type="~~**~~AddressInformation~~**~~" minOccurs="~~**~~0~~**~~"/>~~

~~<xs:element name="~~**~~sp\_soa\_address~~**~~" type="~~**~~AddressInformation~~**~~" minOccurs="~~**~~0~~**~~"/>~~

~~<xs:element name="~~**~~sp\_lsms\_address~~**~~" type="~~**~~AddressInformation~~**~~" minOccurs="~~**~~0~~**~~"/>~~

~~<xs:element name="~~**~~sp\_web\_address~~**~~" type="~~**~~AddressInformation~~**~~" minOccurs="~~**~~0~~**~~"/>~~

~~<xs:element name="~~**~~sp\_net\_address~~**~~" type="~~**~~AddressInformation~~**~~" minOccurs="~~**~~0~~**~~"/>~~

~~<xs:element name="~~**~~sp\_conflict\_address~~**~~" type="~~**~~AddressInformation~~**~~" minOccurs="~~**~~0~~**~~"/>~~

~~<xs:element name="~~**~~sp\_operations\_address~~**~~" type="~~**~~AddressInformation~~**~~" minOccurs="~~**~~0~~**~~"/>~~

~~<xs:element name="~~**~~sp\_repair\_center\_address~~**~~" type="~~**~~AddressInformation~~**~~" minOccurs="~~**~~0~~**~~"/>~~

~~<xs:element name="~~**~~sp\_security\_address~~**~~" type="~~**~~AddressInformation~~**~~" minOccurs="~~**~~0~~**~~"/><~~

~~xs:element name="~~**~~sp\_user\_admin\_address~~**~~" type="~~**~~AddressInformation~~**~~" minOccurs="~~**~~0~~**~~"/>~~

<xs:element name="**activity\_timestamp**" type="**xs:dateTime**"/>

<xs:element name="**download\_reason**" type="**DownloadReason**"/>

</xs:sequence>

</xs:complexType>

Remove the SystemType structure from the long form schema (and make same changes to the short form of the schema) – the SystemType is only used for the SP Query Reply and is being removed.

~~<xs:simpleType name="SystemType">~~

 ~~<xs:restriction base="xs:token">~~

 ~~<xs:enumeration value="soa\_system"/>~~

 ~~<xs:enumeration value="lsms\_system"/>~~

 ~~<xs:enumeration value="lsms\_soa\_system"/>~~

 ~~<xs:enumeration value="npac\_system"/>~~

 ~~</xs:restriction>~~

~~</xs:simpleType>~~

Remove Customer Contact related information from the Mnemonics file:

|  |  |  |  |
| --- | --- | --- | --- |
| ~~73~~ | ~~ATTR~~ | ~~SPST~~ | ~~sp\_system\_type~~ |
| ~~74~~ | ~~ATTR~~ | ~~SPAD~~ | ~~sp\_address~~ |
| ~~75~~ | ~~ATTR~~ | ~~SPBA~~ | ~~sp\_billing\_address~~ |
| ~~76~~ | ~~ATTR~~ | ~~SPSA~~ | ~~sp\_soa\_address~~ |
| ~~77~~ | ~~ATTR~~ | ~~SPLA~~ | ~~sp\_lsms\_address~~ |
| ~~78~~ | ~~ATTR~~ | ~~SPWA~~ | ~~sp\_web\_address~~ |
| ~~79~~ | ~~ATTR~~ | ~~SPNA~~ | ~~sp\_net\_address~~ |
| ~~80~~ | ~~ATTR~~ | ~~SPCA~~ | ~~sp\_conflict\_address~~ |
| ~~81~~ | ~~ATTR~~ | ~~SPOA~~ | ~~sp\_operations\_address~~ |
| ~~82~~ | ~~ATTR~~ | ~~SPRA~~ | ~~sp\_repair\_center\_address~~ |
| ~~83~~ | ~~ATTR~~ | ~~SPEA~~ | ~~sp\_security\_address~~ |
| ~~84~~ | ~~ATTR~~ | ~~SPUA~~ | ~~sp\_user\_admin\_address~~ |
| ~~112~~ | ~~ATTR~~ | ~~ALN1~~ | ~~address\_line1~~ |
| ~~113~~ | ~~ATTR~~ | ~~ALN2~~ | ~~address\_line2~~ |
| ~~114~~ | ~~ATTR~~ | ~~ACTY~~ | ~~address\_city~~ |
| ~~115~~ | ~~ATTR~~ | ~~ASTE~~ | ~~address\_state~~ |
| ~~116~~ | ~~ATTR~~ | ~~AZIP~~ | ~~address\_zip~~ |
| ~~117~~ | ~~ATTR~~ | ~~APRV~~ | ~~address\_province~~ |
| ~~118~~ | ~~ATTR~~ | ~~ACNY~~ | ~~address\_country~~ |
| ~~119~~ | ~~ATTR~~ | ~~ACNM~~ | ~~address\_contact~~ |
| ~~120~~ | ~~ATTR~~ | ~~ACPH~~ | ~~address\_contact\_phone~~ |
| ~~121~~ | ~~ATTR~~ | ~~ACFX~~ | ~~address\_contact\_fax~~ |
| ~~122~~ | ~~ATTR~~ | ~~ACPG~~ | ~~address\_contact\_pager~~ |
| ~~123~~ | ~~ATTR~~ | ~~ACPP~~ | ~~address\_contact\_pager\_pin~~ |
| ~~124~~ | ~~ATTR~~ | ~~ACEM~~ | ~~address\_contact\_email~~ |
| ~~516~~ | ~~ENUM~~ | ~~STSO~~ | ~~soa\_system~~ |
| ~~517~~ | ~~ENUM~~ | ~~STLM~~ | ~~lsms\_system~~ |
| ~~518~~ | ~~ENUM~~ | ~~STLS~~ | ~~lsms\_soa\_system~~ |
| ~~519~~ | ~~ENUM~~ | ~~STNC~~ | ~~npac\_system~~ |

The GDMO and ASN.1 changes for the following change orders are addressed in those change orders:

**NANC 467 – ASN.1 – CMIP lnpRecoveryComplete Action reply**

**NANC 471 – ASN.1 – SV DisconnectReply**

**NANC 473 – ASN.1 – Address Information**

**NANC 474 – ASN.1 – SWIM Recovery**

**NANC 477 – GDMO – Service Provider Type Definition**

**NANC 478 – ASN.1 – Pre-cancellation Status of Disconnect Pending**

The following change order had a change to the XML schema, which is documented in that change order:

**NANC 484 – XML – Removal of Optional Data values** (concerns removal of optional data fields on modify from SOA – they have to be removed individually, the whole optional data structure can not be removed).

Removal of Log Record objects from the CMIP Interface:

IIS Changes:

Indicate Log Records are no longer part of the NPAC SMS to Local SMS and SOA to NPAC SMS CMIP Interface in Section 3:

Section 3.1 Overview:

The following ~~five~~ exhibits show the class hierarchy diagram for all managed objects (*Exhibit 2*), ~~Log Record Objects (~~*~~Exhibit 3~~*~~),~~ the Local SMS (*Exhibit 3*), the NPAC SMS naming hierarchies for the Local SMS (*Exhibit 4*), the SOA (*Exhibit 5*), and the NPAC SMS naming hierarchies for the SOA. (Exhibit 6). These exhibits will help the user gain a better understanding of the structure of the interface definitions provided.

Section 3.1.2 – Log Record Managed Object Heirarchy – Remove this section entirely.



~~The Log Record Managed Object Hierarchy shows the inheritance hierarchy of the log records used in the NPAC SMS to Local SMS and SOA to NPAC SMS interfaces.~~

Exhibit 3 . Log Record Managed Object Hierarchy

Remove the log records from Exhibit 9, Managed Object Interface Functionality Table:

|  |  |
| --- | --- |
| ~~lnpLogAudit-DiscrepancyRptRecord~~ | ~~Object used to log information from asubscriptionAuditDiscrepancyRpt notification.~~ |
| ~~lnpLogAuditResultsRecord~~ | ~~Object used to log information from asubscriptionAuditResults notification.~~ |
| ~~lnpLogLocalSMS-ActionResultsRecord~~ | ~~Object used to log information from asubscriptionVersionLocalSMS-ActionResults notification.~~ |
| ~~lnpLogNewNPA-NXXRecord~~ | ~~Object used to log information from asubscriptionVersionNewNPA-NXX notification.~~ |
| ~~lnpLogNumberPoolBlockStatusAttributeValueChangeRecord~~ | ~~Object used to log information from a numberPoolBlockStatusAttributeValueChange notification.~~ |
| ~~lnpLogRangeAttributeValueChangeRecord~~ | ~~Object used to log information from a lnpLogRangeAttributeValueChange notification.~~ |
| ~~lnpLogRangeObjectCreationRecord~~ | ~~Object used to log information from a lnpLogRangeObjectCreation notification.~~ |
| ~~lnpLogRangeStatusAttributeValueChangeRecord~~ | ~~Object used to log information from a lnpLogRangeStatusAttributeValueChange notification.~~ |
| ~~lnpLogRangeDonorSP-CustomerDisconnectDateRecord~~ | ~~Object used to log information from a lnpLogRangeDonorSP-CustomerDisconnectDate notification.~~ |
| ~~lnpLogRangeCancellationAcknowledgeRecord~~ | ~~Object used to log information from a lnpLogRangeCancellationAcknowledge notification.~~ |
| ~~lnpLogRangeNewSP-CreateRequestRecord~~ | ~~Object used to log information from a lnpLogRangeNewSP-CreateRequest notification.~~ |
| ~~lnpLogRangeNewSP-FinalCreateWindowExpirationRecord~~ | ~~Object used to log information from a lnpLogRangeNewSP-FinalCreateWindowExpiration notification.~~ |
| ~~lnpLogRangeOldSPFinalConcurrenceWindowExpirationRecord~~ | ~~Object used to log information from a lnpLogRangeOldSPFinalConcurrenceWindowExpiration notification.~~ |
| ~~lnpLogHeartbeat-InformationRecord~~ | ~~Object used to log information from aHeartbeat-Information notification.~~ |
| ~~lnpLogSwimProcessing-RecoveryResultsRecord~~ | ~~Object used to log information from a swimProcessing-RecoveryResults notification.~~ |

GDMO Changes:

Remove the following log managed objects for the notifications being sunset (note, see above for log records being removed for the sunset of single TN notification formats in CMIP):

* ~~lnpLogAudit-DiscrepancyRptRecord MANAGED OBJECT CLASS~~
* ~~lnpLogAuditResultsRecord MANAGED OBJECT CLASS~~
* ~~lnpLogCancellationAcknowledgeRequestRecord MANAGED OBJECT CLASS~~
* ~~lnpLogLocalSMS-ActionResultsRecord MANAGED OBJECT CLASS~~
* ~~lnpLogNewNPA-NXXRecord MANAGED OBJECT CLASS~~
* ~~lnpLogNewSP-CreateRequestRecord MANAGED OBJECT CLASS~~
* ~~lnpLogNumberPoolBlockStatusAttributeValueChangeRecord MANAGED OBJECT CLASS~~
* ~~lnpLogOldSP-ConcurrenceRequestRecord MANAGED OBJECT CLASS~~
* ~~lnpLogStatusAttributeValueChangeRecord MANAGED OBJECT CLASS~~
* ~~lnpLogDonorSP-CustomerDisconnectDateRecord MANAGED OBJECT CLASS~~
* ~~lnpLogOldSPFinalConcurrenceWindowExpirationRecord MANAGED OBJECT CLASS~~
* ~~lnpLogRangeAttributeValueChangeRecord MANAGED OBJECT CLASS~~
* ~~lnpLogRangeObjectCreationRecord MANAGED OBJECT CLASS~~
* ~~lnpLogRangeStatusAttributeValueChangeRecord MANAGED OBJECT CLASS~~
* ~~lnpLogRangeDonorSP-CustomerDisconnectDateRecord MANAGED OBJECT CLASS~~
* ~~lnpLogRangeCancellationAcknowledgeRecord MANAGED OBJECT CLASS~~
* ~~lnpLogRangeNewSP-CreateRequestRecord MANAGED OBJECT CLASS~~
* ~~lnpLogRangeOldSP-ConcurrenceRequestRecord MANAGED OBJECT CLASS~~
* ~~lnpLogRangeOldSPFinalConcurrenceWindowExpirationRecord MANAGED OBJECT CLASS~~
* ~~lnpLogRangeNewSP-FinalCreateWindowExpirationRecord MANAGED OBJECT CLASS~~
* ~~lnpLogNewSP-FinalCreateWindowExpirationRecord MANAGED OBJECT CLASS~~
* ~~lnpLogHeartBeat-InformationRecord MANAGED OBJECT CLASS~~
* ~~lnpLogSwimProcessing-RecoveryResultsRecord MANAGED OBJECT CLASS~~

In many of the Attribute definitions, there is sometimes an additional mention of storing an attribute in a log record – these definitions will be modified to not mention their storage in log records…

Correct a behavioral statement in the GDMO subscriptionVersionNPAC object that indicates when T2 concurrence notification expires, the SV transitions to conflict (New SP does not concur) or canceled (Old SP does not concur).

[snip]

 If there is a pending version that does not have concurrence during the

 "Service Provider Concurrence Window" specified in the Service Data

 table, a ~~subscriptionVersion~~Concurrence Request notification will be sent

 to the service provider SOA that has not responded

 (subscriptionVersionRangeNewSP-CreateRequest to New SP or

 subscriptionVersionRangeOldSP-ConcurrenceRequest to the Old SP). ~~The~~

 ~~subscriptionVersionStatus will be set to cancel if the new service~~

 ~~provider SOA has not responded or to conflict if the old service~~

 ~~provider SOA has not responded after the "Service Provider Final~~

 ~~Concurrence Window". A status attribute value change will be sent to both service providers.~~

A final concurrence expiration notification can be sent to both the new and

 old service provider SOAs, if supported, if the service provider SOA has not

 responded after the “Service Provider Final Concurrence Window”

 (subscriptionVersionRangeNewSP-FinalCreateWindowExpiration or

 subscriptionVersionRangeOldSPFinalConcurrenceWindowExpiration).

In the ASN.1, the *NetworkDownloadCriteria* structure (used for recovery) contains a substructure (chc2) that is a CHOICE of CHOICEs. Change this into a single CHOICE substructure (Action Item 02062019-01).

NetworkDownloadCriteria ::= SEQUENCE {

 time-range [0] TimeRange OPTIONAL, -- swim value NOT applicable

 chc1 [1] EXPLICIT CHOICE {

 service-prov [0] ServiceProvId,

 all-service-provs [1] NULL

 },

 chc2 [2] EXPLICIT CHOICE {~~-- A decision was made by~~

 ~~-- NANC to leave this structure a CHOICE of~~

 ~~-- CHOICEs instead of using one CHOICE to~~

 ~~-- simplify tagging~~

 ~~npa-nxx-data [0] EXPLICIT CHOICE {~~

 ~~npa-nxx-range [0] NPA-NXX-Range, all-npa-nxx [1] NULL~~

 ~~},~~

 ~~lrn-data [1] EXPLICIT CHOICE {~~

 ~~lrn-range [0] LRN-Range,~~

 ~~all-lrn [1] NULL~~

 ~~},~~

 ~~all-network-data [2] NULL,~~

 ~~npa-nxx-x-data [3] EXPLICIT CHOICE {~~

 ~~npa-nxx-x-range [0] NPA-NXX-X-Range,~~

 ~~all-npa-nxx-x [1] NULL~~

 ~~}~~  npa-nxx-range [0] NPA-NXX-Range,

 all-npa-nxx [1] NULL,

 lrn-range [2] LRN-Range,

 all-lrn [3] NULL,

 npa-nxx-x-range [4] NPA-NXX-X-Range,

 all-npa-nxx-x [5] NULL,

 all-network-data [6] NULL

 }

}