

NANC 204 – Inter Service Provider Communication Process

This document contains the IIS flows that are affected by this change order:

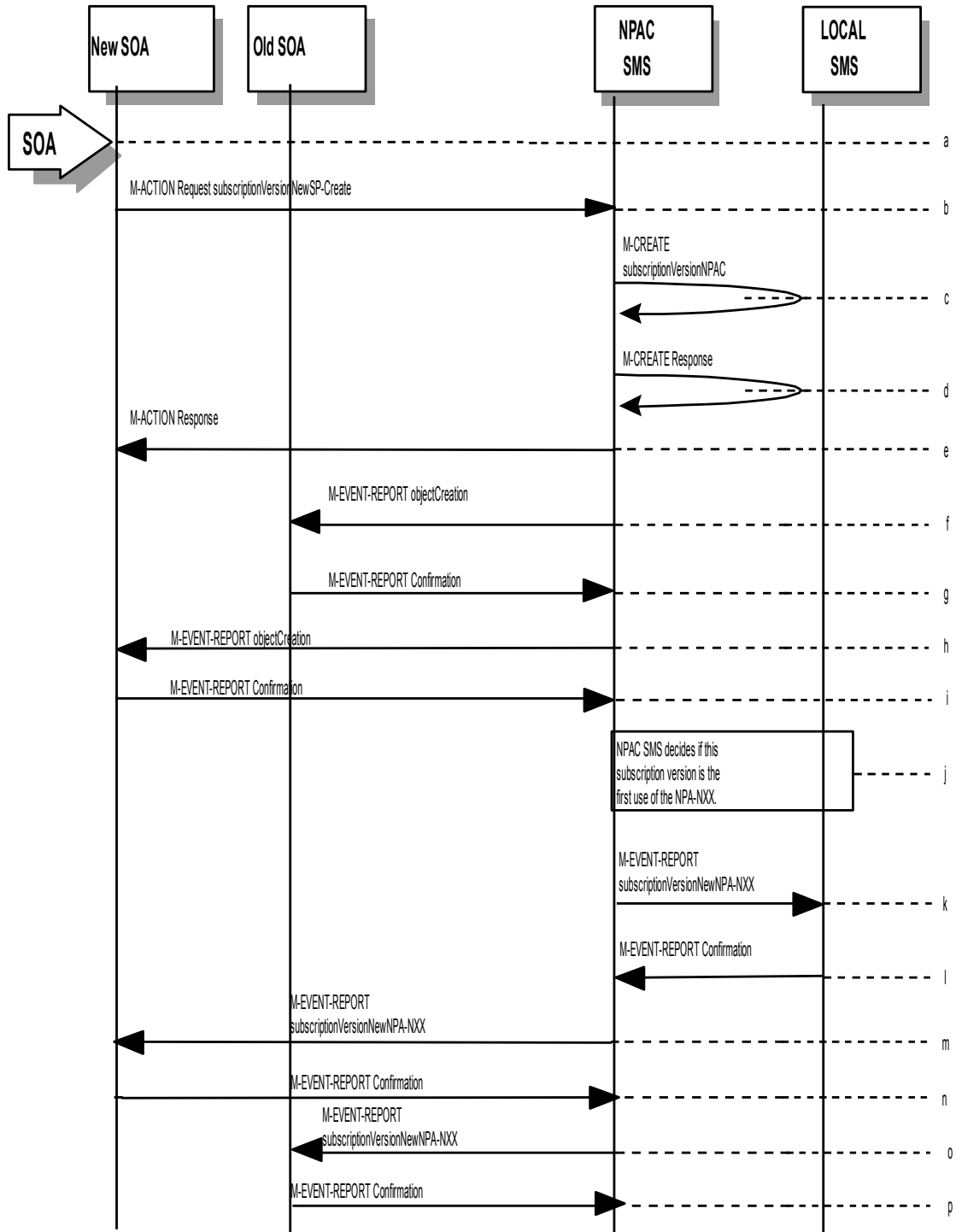
- 06.5.1.2 – New SP Create
- 16.5.1.6.2 – No Create from Old SP After Initial Concurrency Window
- 26.5.1.6.3 – No Create from Old SP After Final Concurrency Window
- 36.5.2.3 – Modify Pending using M-ACTION
- 46.5.2.4 – Modify Pending using M-SET
- 56.5.3.x – SV Inter Service Provider Cancel ACTION (NEW FLOW)
- 66.5.6 – Query SV

For the six existing flows, the modifications for this change order are listed in ***bold italics*** font style. The basic change is to pass the “Subscription Name and Address” in the Object Creation and the Initial and Final Concurrency Timers (assuming both New and Old SPs have the ”Subscription Name and Address Acceptance Indicator” set to TRUE). Also, a new ACTION is being introduced that allows the Old SP to send a “cancel” to the NPAC for Subscription Name and Address mismatch, prior to Old SP concurrence.

1.1.1.1

(6.5.1.2) SubscriptionVersion Create by the Initial SOA (New Service Provider)

In this scenario, the new service provider is the first to send the M-ACTION to create the subscriptionVersion object.



a. Action is taken by the new service provider SOA to create a new version of a subscriber.

- b. If the new service provider SOA sends M-ACTION subscriptionVersionNewSP-Create to the NPAC SMS InpSubscriptions object to create a new subscriptionVersionNPAC. The new service provider SOA must specify the following valid attributes:

subscriptionTN or a valid subscriptionVersionTN-Range  
subscriptionNewCurrentSP  
subscriptionOldSP  
subscriptionNewSP-DueDate  
subscriptionLNPTType  
subscriptionPortingToOriginal-SP Switch

The following items must be provided unless subscriptionPortingToOriginal-SP is true:

subscriptionLRN  
subscriptionCLASS-DPC  
subscriptionCLASS-SSN  
subscriptionLIDB-DPC  
subscriptionLIDB-SSN  
subscriptionCNAM-DPC  
subscriptionCNAM-SSN  
subscriptionISVM-DPC  
subscriptionISVM-SSN

The following attributes are optional:

subscriptionEndUserLocationValue  
subscriptionEndUserLocationType  
subscriptionBillingId  
***subscriptionNameAndAddress***

If the service provider were to give a range of TNs, this would result in an M-CREATE and M-EVENT-REPORT for each TN.

If any attribute is invalid, an action failure will be returned, indicating invalidArgumentValue. Other appropriate errors will also be returned.

***If the Service Provider sends the subscriptionNameAndAddress attribute, the NPAC will reject the Create when the Old Service Provider has a Subscription Name and Address Acceptance Indicator set to FALSE (not supported).***

- c. If the request is valid, the NPAC SMS will create the subscriptionVersionNPAC object. The status will be set to "pending" and the subscriptionModifiedTimeStamp and subscriptionCreationTimeStamp will be set.
- d. NPAC SMS responds to M-CREATE.
- e. NPAC SMS sends action reply with success or failure and reasons for failure.

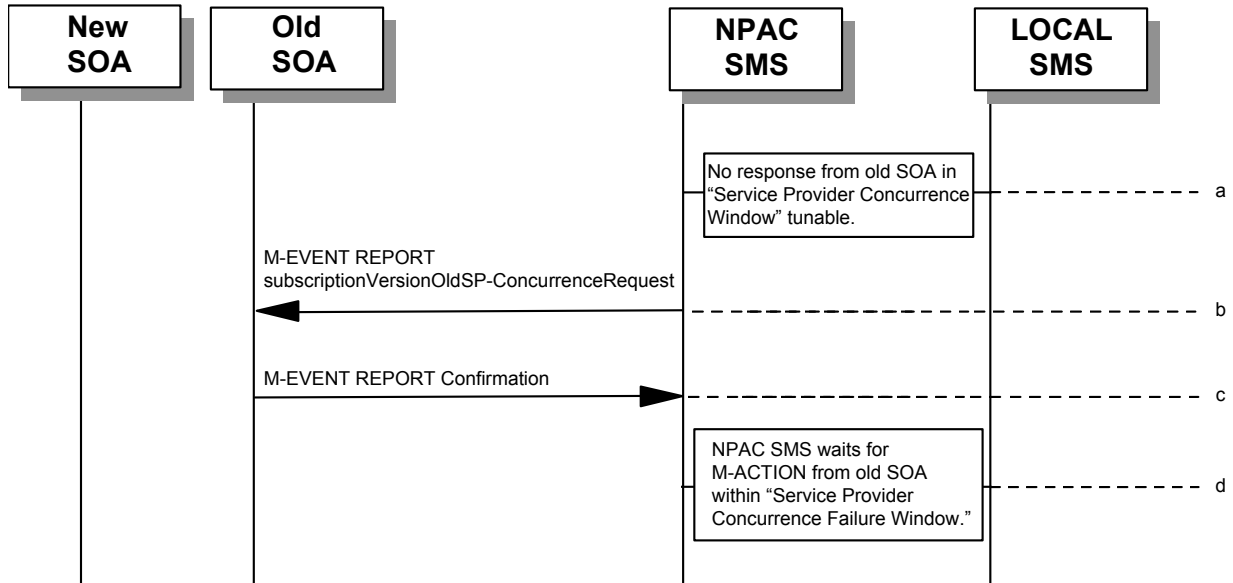
- f. If the M-ACTION was successful, NPAC SMS issues an M-EVENT-REPORT containing the following attributes to old service provider SOA of subscriptionVersionNPAC creation.
  - g. subscriptionTN
  - h. subscriptionOldSP
  - i. subscriptionNewCurrentSP
  - j. subscriptionNewSP-CreationTimeStamp
  - k. subscriptionVersionStatus
  - l. subscriptionNewSP-DueDate
  - m. ***subscriptionNameAndAddress (optional)***
    - n. Old service provider SOA responds by sending an M-EVENT-REPORT confirmation back to the NPAC SMS.
    - o. If the M-ACTION was successful, NPAC SMS issues an M-EVENT-REPORT to new service provider SOA of subscriptionVersionNPAC creation.
    - p. New service provider SOA issues an M-EVENT-REPORT confirmation to NPAC SMS.
    - q. NPAC SMS decides if this subscription version is the first use or the NPA-NXX.
    - r. If this is the first use of the NPA-NXX, the NPAC SMS sends the subscriptionVersionNewNPA-NXX M-EVENT-REPORT to inform the accepting Local SMSs.
    - s. The Local SMS confirms the M-EVENT-REPORT.
    - t. The NPAC SMS sends the subscriptionVersionNew NPA-NXX M-EVENT-REPORT to inform the Old SOA.
    - u. The Old SOA confirms the M-EVENT-REPORT.
    - v. The NPAC SMS sends the subscriptionVersionNew NPA-NXX M-EVENT-REPORT to inform the New SOA.
    - w. The New SOA confirms the M-EVENT-REPORT.
- 0The next scenario is either “SubscriptionVersion Create by the Second SOA (Old Service Provider).” or “SubscriptionVersion Activated by New Service Provider SOA”.

1.1.1.2

(6.5.1.6.2) SubscriptionVersion Create: No Create Action from the Old Service Provider SOA After Initial Concurrency Window

This scenario shows no response within “Service Provider Concurrency Window” by the old service provider SOA.

In this case, the new service provider SOA issued the create request. The NPAC SMS has issued the ObjectCreation M-EVENT-REPORT back to both the old and new service provider SOAs. No response has yet been received by the old service provider SOA.



- a. NPAC SMS does not receive a response from the old service provider SOA within “Service Provider Concurrency Window” for the pending subscriptionVersionNPAC created by the new service provider SOA.
- b. NPAC SMS sends the old service provider an M-EVENT-REPORT subscriptionVersionOldSP-ConcurrenceRequest.

**NOTE: The NPAC SMS shall include subscriptionNameAndAddress information, if the Old Service Provider supports this functionality (Subscription Name and Address Acceptance Indicator set to TRUE), and the subscriptionVersion contains this data.**

- c. The old service provider SOA returns an M-EVENT-REPORT confirmation to the NPAC SMS.
- d. Old service provider has up to “Service Provider Concurrency Failure Window” to respond to the request.

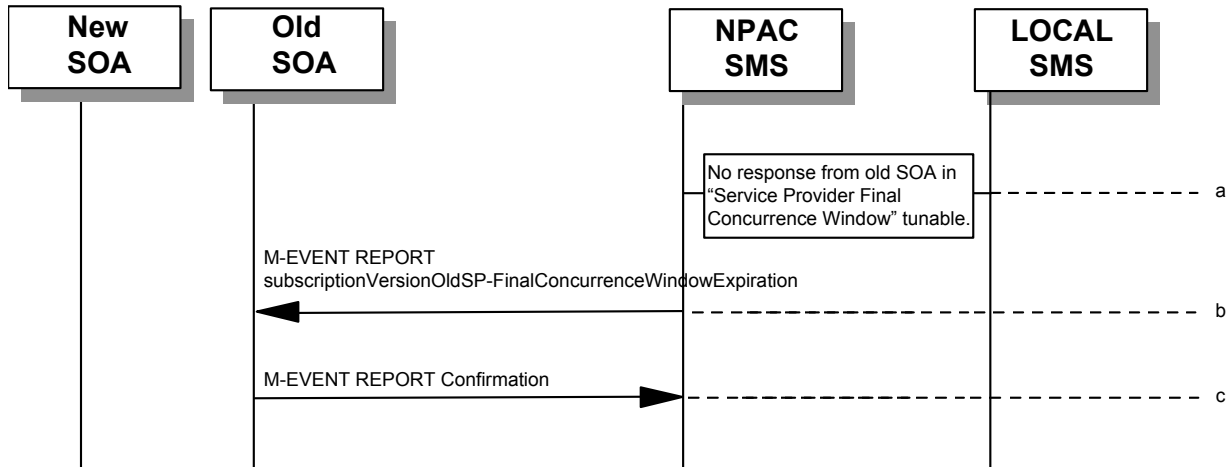
←If the old service provider SOA responds with a valid M-ACTION or M-SET, processing resumes as a successful create.

1.1.1.3

(6.5.1.6.3) SubscriptionVersion Create: No Create Action from the Old Service Provider SOA After Final Concurrency Window

This scenario shows no response within “Service Provider Final Concurrency Window” by the old service provider SOA.

In this case, the new service provider SOA issued the create request. The NPAC SMS has issued the ObjectCreation M-EVENT-REPORT back to both the old and new service provider SOAs as well as a subscriptionVersionOldSP-ConcurrenceRequest M-EVENT-REPORT to the old service provider SOA. No response has yet been received by the old service provider SOA.



- e. NPAC SMS does not receive a response from the old service provider SOA within “Service Provider Final Concurrency Window” for the pending subscriptionVersionNPAC created by the new service provider SOA.
- f. NPAC SMS sends the old service provider an M-EVENT-REPORT subscriptionVersionOldSP-Final ConcurrencyWindowExpiration.

**NOTE: The NPAC SMS shall include subscriptionNameAndAddress information, if the Old Service Provider supports this functionality (Subscription Name and Address Acceptance Indicator set to TRUE), and the subscriptionVersion contains this data.**

- g. The old service provider SOA returns an M-EVENT-REPORT confirmation to the NPAC SMS.

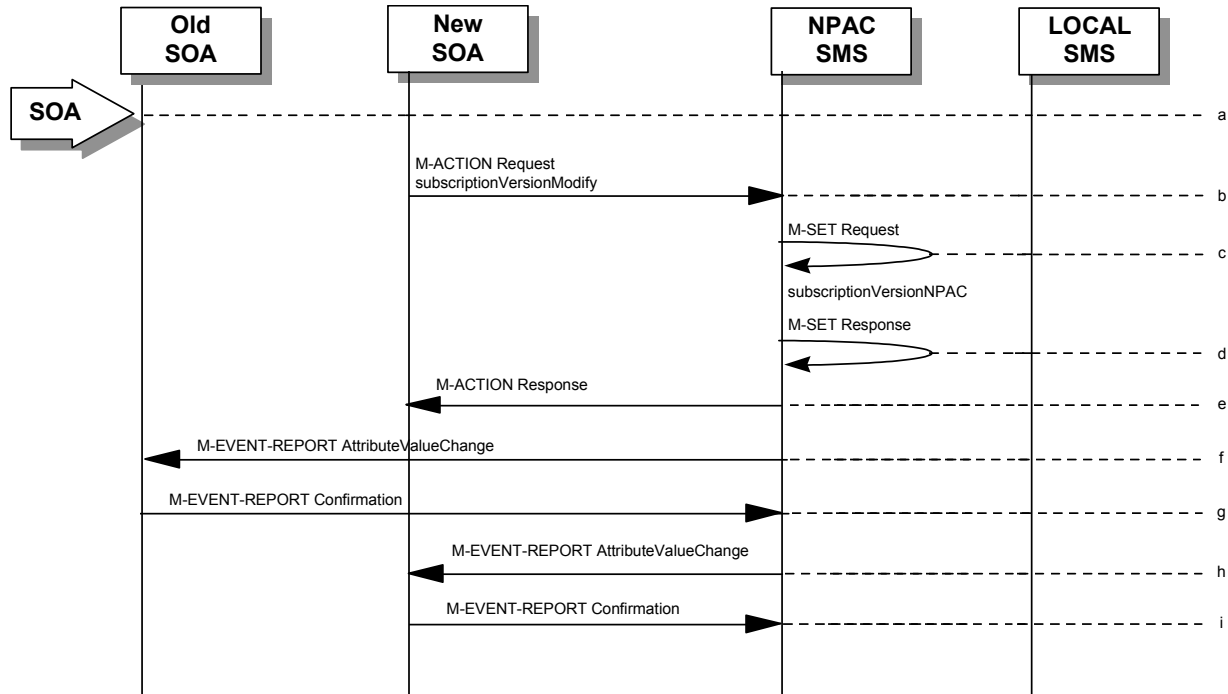
←If the old service provider SOA responds with a valid

M-ACTION or M-SET prior to activation by the new service provider, the subscription version will be updated.

1.1.1.4

(6.5.2.3) SubscriptionVersion Modify Prior to Activate Using M-ACTION

This scenario can only be performed when the subscriptionVersionStatus is conflict or pending.



- x. Action is taken by a service provider to modify a subscriptionVersion by specifying the TN, TN range, and the version status, or by specifying the version ID of the subscription version to be modified; and the data to be modified.

The old service provider can only update the following attributes:

subscriptionOldSP-DueDate  
 subscriptionOldSP-Authorization  
 subscriptionStatusChangeCauseCode

NOTE: The subscriptionStatusChangeCauseCode can only be modified when the subscriptionOldSP-Authorization is set to FALSE

The new service provider can only update the attributes:

subscriptionLRN  
 subscriptionNewSP-DueDate  
 subscriptionCLASS-DPC  
 subscriptionCLASS-SSN  
 subscriptionLIDB-DPC  
 subscriptionLIDB-SSN  
 subscriptionCNAM-DPC  
 subscriptionCNAM-SSN  
 subscriptionISVM-DPC



subscriptionISVM-SSN  
subscriptionEndUserLocationValue  
subscriptionEndUserLocationType  
subscriptionBillingId  
***subscriptionNameAndAddress***

- y. Service provider SOA issues M-ACTION  
subscriptionVersionModify to the NPAC SMS  
InpSubscriptions object to update the version. The NPAC SMS  
validates the data.

***The new service provider can only modify the  
subscriptionNameAndAddress PRIOR to concurrence by the  
old service provider.***

- z. If validation is successful, NPAC SMS will M-SET the attributes  
modified in the subscriptionVersionNPAC object and set the  
subscriptionModifiedTimeStamp.
- aa. The NPAC SMS will issue an M-SET response.
- bb. NPAC SMS replies to the M-ACTION with success or failure and  
reasons for failure.

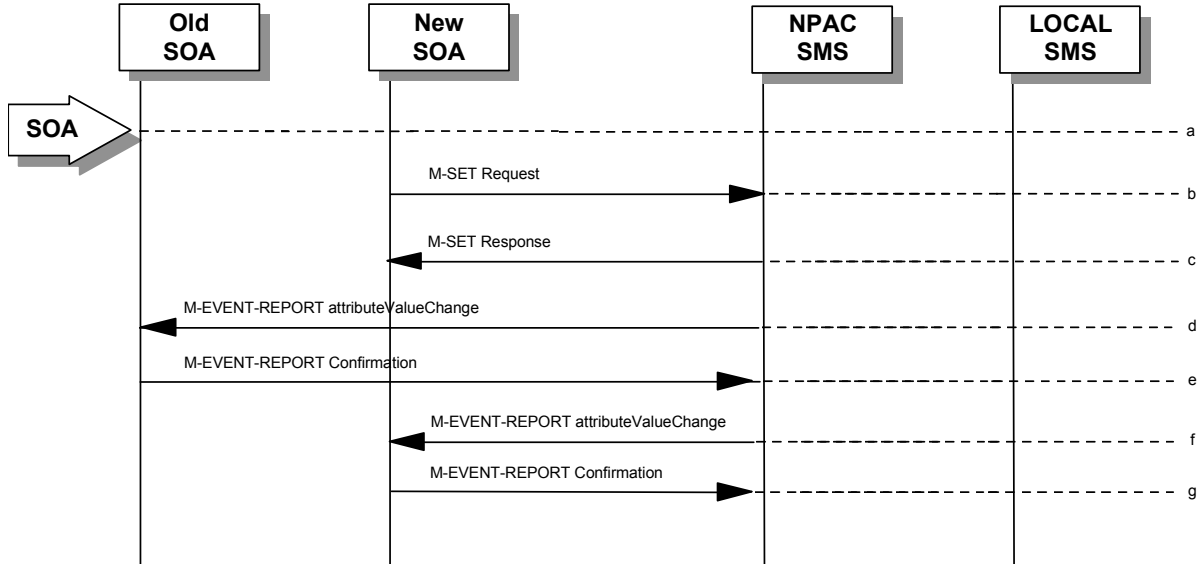
Note: If the old service provider was the initiator of the M-  
ACTION that caused the subscription version status to change,  
the NPAC SMS would issue a  
subscriptionVersionStatusAttributeValueChange M-EVENT-  
REPORT to the old and new service provider SOAs.

- cc. NPAC SMS issues M-EVENT-REPORT attributeValueChange to  
the old service provider SOA.
- dd. The old service provider SOA returns M-EVENT-REPORT  
confirmation to the NPAC SMS.
- ee. NPAC SMS issues M-EVENT-REPORT attributeValueChange to  
the new service provider SOA.
- ff. The new service provider SOA returns M-EVENT-REPORT  
confirmation to the NPAC SMS.

1.1.1.5

(6.5.2.4) SubscriptionVersion Modify Prior to Activate Using M-SET

This scenario shows a modify using an M-SET. The M-SET can only be performed when the subscriptionVersionStatus is conflict or pending.



gg. Action is taken by a service provider to modify the subscriptionVersion. The old service provider can only update the following attributes:

- subscriptionOldSP-DueDate
- subscriptionOldSP-Authorization
- subscriptionStatusChangeCauseCode

NOTE: The subscriptionStatusChangeCauseCode can only be modified when the subscriptionOldSP-Authorization is set to FALSE

The new service provider can only update the attributes:

- subscriptionLRN
- subscriptionNewSP-DueDate
- subscriptionCLASS-DPC
- subscriptionCLASS-SSN
- subscriptionLIDB-DPC
- subscriptionLIDB-SSN
- subscriptionCNAM-DPC
- subscriptionCNAM-SSN
- subscriptionISVM-DPC
- subscriptionISVM-SSN
- subscriptionEndUserLocationValue
- subscriptionEndUserLocationType
- subscriptionBillingId
- subscriptionNameAndAddress**

hh. The new or old service provider SOA will issue an M-SET request for the attributes to be updated in the subscriptionVersionNPAC object. The request will be

validated for an authorized service provider and validation of the attributes and values.

***The new service provider can only modify the subscriptionNameAndAddress PRIOR to concurrence by the old service provider.***

- ii. The NPAC SMS will issue an M-SET response indicating success or failure and reasons for failure.

Note: If the old service provider was the initiator of the M-SET that caused the subscription version status to change, the NPAC SMS would issue a subscriptionVersionStatusAttributeValueChanged M-EVENT-REPORT to the old and new service provider SOAs

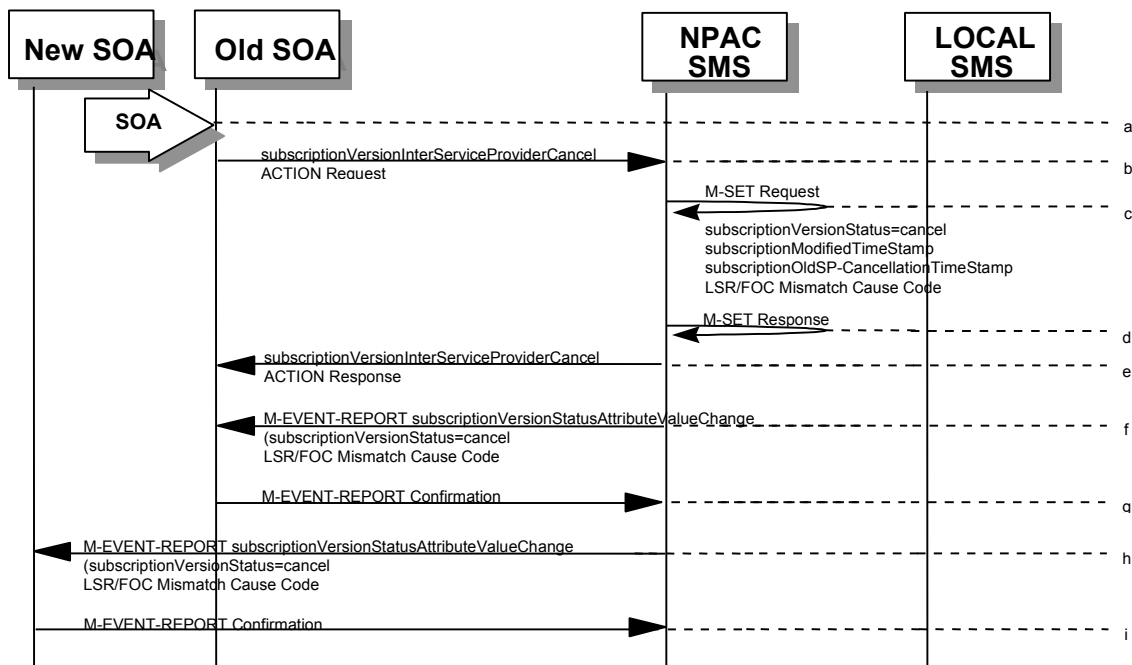
- jj. NPAC SMS issues M-EVENT-REPORT attributeValueChanged to the old service provider SOA.
- kk. The old service provider SOA returns M-EVENT-REPORT confirmation to the NPAC SMS.
- ll. NPAC SMS issues M-EVENT-REPORT attributeValueChanged to the new service provider SOA.
- mm. The new service provider SOA returns M-EVENT-REPORT confirmation to the NPAC SMS.

1.1.1.6

(6.5.3.x) SubscriptionVersionInterServiceProviderCancel ACTION by Old Service Provider SOA Prior to Old Service Provider SOA Concurrency

A subscription version can be canceled by the old service provider when the current status is pending, the new service provider has Created the subscription version with Customer Information, and the old service provider has NOT concurred to the subscription version.

In this scenario, the old service provider initiates the cancel after the new service provider SOA has issued its create action. The cancel action is used for LSR/FOC Mismatch, and includes one of the valid LSR/FOC Mismatch Cause Codes. The new service provider can either acknowledgment the cancellation, and send up a new Create message, or resolve the mismatch with the old service provider, and send up a modification for the customer information. If the modification is sent, the old service provider can then concur with the subscription version.



- a. Action is initiated by the old service provider SOA to cancel a subscription version for LSR/FOC Mismatch by specifying the TN, TN range, or version ID of the subscription version to be canceled.
- b. Old service provider SOA issues a subscriptionVersionInterServiceProviderCancel ACTION to the NPAC SMS to the InpSubscriptions object.
- c. NPAC SMS issues M-SET to update subscriptionVersionStatus to "cancel" in the subscriptionVersionNPAC object, the subscriptionModifiedTimeStamp, subscriptionOldSP-CancellationTimeStamp, and the LSR/FOC Mismatch Cause Code.
- d. NPAC SMS issues M-SET response.
- e. NPAC SMS returns the subscriptionVersionInterServiceProviderCancel ACTION reply. This either reflects a success or failure. Failure reasons

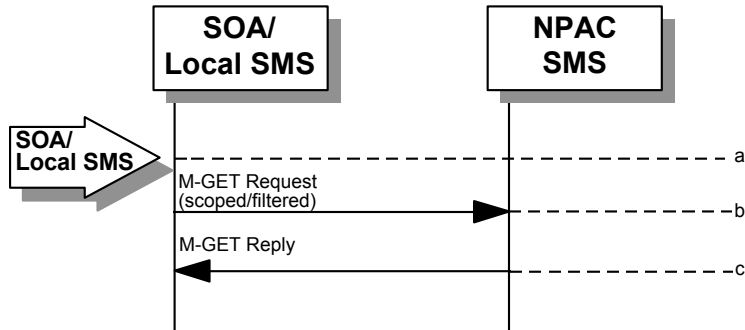
are version in wrong state, no version to cancel, and authorization service provider. If successful, the subscriptionPre-CancellationStatus is set to the current subscriptionVersionStatus and then the subscriptionVersionStatus is set to “cancel.” If the action fails, no modifications are applied and processing stops.

- f. An M-EVENT-REPORT for the subscriptionVersionStatus change is sent from the NPAC SMS to the old service provider SOA.
- g. The old service provider SOA returns an M-EVENT-REPORT confirmation to the NPAC SMS.
- h. An M-EVENT-REPORT for the subscriptionVersionStatus change is sent from the NPAC SMS to the new service provider SOA.
- i. The new service provider SOA returns an M-EVENT-REPORT confirmation to the NPAC SMS.

1.1.1.7

(6.5.6) SubscriptionVersion Query

This scenario shows subscriptionVersion query from service provider systems to the NPAC SMS.



- h. Action is taken by either a service provider SOA or Local SMS for retrieving one or more versions of a subscription.
- i. The service provider SOA or Local SMS issues a scoped filtered M-GET from the InpSubscriptions object to retrieve a specific version for a subscription version TN or can request all subscription versions. However, the service provider SOA is limited by a scope and filter in their search capabilities. The filter will currently support all the attributes on the subscriptionVersionNPAC.
- j. The NPAC SMS replies with the requested subscriptionVersion data if the requested number of records is less than or equal to “Max SubscriberQuery” specified in the NPAC SMS. Otherwise a complexityLimitation error will be returned.

0The query return data includes:

subscriptionTN  
 subscriptionLRN  
 subscriptionNewCurrentSP  
 subscriptionOldSP  
 subscriptionNewSP-DueDate  
 subscriptionNewSP-CreationTimeStamp  
 subscriptionOldSP-DueDate  
 subscriptionOldSP-Authorization  
 subscriptionOldSP-AuthorizationTimeStamp  
 subscriptionActivationTimeStamp  
 subscriptionBroadcastTimeStamp  
 subscriptionConflictTimeStamp  
 subscriptionCustomerDisconnectDate  
 subscriptionDisconnectCompleteTimeStamp  
 subscriptionEffectiveReleaseDate  
 subscriptionVersionStatus  
 subscriptionCLASS-DPC  
 subscriptionCLASS-SSN  
 subscriptionLIDB-DPC  
 subscriptionLIDB-SSN  
 subscriptionCNAM-DPC  
 subscriptionCNAM-SSN  
 subscriptionISVM-DPC  
 subscriptionISVM-SSN

subscriptionEndUserLocationValue  
subscriptionEndUserLocationType  
subscriptionBillingId  
subscriptionLNPTType  
subscriptionPreCancellationStatus  
subscriptionCancellationTimeStamp  
subscriptionOldTimeStamp  
subscriptionModifiedTimeStamp  
subscriptionCreationTimeStamp  
subscriptionOldSP-CancellationTimeStamp  
subscriptionNewSP-CancellationTimeStamp  
subscriptionOldSP-ConflictResolutionTimeStamp  
subscriptionNewSP-ConflictResolutionTimeStamp  
subscriptionPortingToOriginal-SPSwitch  
subscriptionFailedSP-List  
subscriptionDownloadReason  
***subscriptionNameAndAddress***

- k. NOTE: The subscriptionNameAndAddress attribute can only be viewed by the old and new service provider, if it is in a pending status, and is up to two days after cancellation (between 48 and 72 hours, depending on the time of execution of the cancellation purge job on the NPAC SMS and the time the subscription was cancelled).