*DELTA DOCUMENT*

NPAC SMS

Interoperability Test Plan

Release 3.3.4

Supporting NANC IIS Version 3.3.4b

**February 9, 2010**

Table of Contents

1 MOC Test Cases 1-1

1.1 NANC 441 1-1

1.1.1 MOC.SOA.INV.ACT.subscriptionVersionNewSP-Create-Support-NoMTI 1-1

1.1.2 MOC.SOA.INV.ACT.subscriptionVersionNewSP-Create-NoSupport-WithMTI 1-1

1.1.3 MOC.SOA.INV.ACT.subscriptionVersionOldSP-Create-Support-NoMTI 1-2

1.1.4 MOC.SOA.INV.ACT.subscriptionVersionOldSP-Create-NoSupport-WithMTI 1-2

1.1.5 MOC.SOA.CAP.ACT.subscriptionVersionModifyMTINewSP 1-2

1.1.6 MOC.SOA.CAP.ACT.subscriptionVersionModifyMTIOldSP 1-3

1.1.7 MOC.SOA.INV.ACT.subscriptionVersionModifyMTINewSP-NoSupport 1-3

1.1.8 MOC.SOA.CAP.ACT.lnpNotificationRecovery 1-4

1.1.9 MOC.SOA.CAP.ACT.subscriptionVersionNewSP-Create-Initial 1-4

1.1.10 MOC.SOA.CAP.ACT.subscriptionVersionOldSP-Create-Initial 1-4

1.1.11 MOC.SOA.CAP.ACT.subscriptionVersionNewSP-Create-Second 1-4

1.1.12 MOC.SOA.CAP.ACT.subscriptionVersionOldSP-Create-Second 1-4

1.1.13 MOC.SOA.CAP.OP.SET.OldSP.subscriptionVersionNPAC 1-4

1.1.14 MOC.SOA.CAP.OP.SET.NewSP.subscriptionVersionNPAC 1-4

1.1.15 MOC.SOA.CAP.OP.GET.subscriptionVersionNPAC 1-5

1.1.16 MOC.SOA.CAP.ACT.lnpNotificationRecovery 1-5

1.1.17 MOC.SOA.CAP.ACT.subscriptionVersionNewSP-Create-Second 1-5

1.1.18 MOC.SOA.CAP.ACT.subscriptionVersionOldSP-Create-Second 1-5

1.1.19 MOC.SOA.CAP.NOT.subscriptionVersionOldSp-ConcurrenceRequest 1-5

1.1.20 MOC.SOA.CAP.NOT.subscriptionVersionNewSP-CreateRequest 1-5

1.1.21 MOC.LSMS.CAP.ACT.lnpSubscriptions.lnpDownload 1-5

1.1.22 MOC.LSMS.CAP.OP.GET.subscriptionVersionNPAC 1-5

Appendix A – Test Case Nomenclature A-1

Appendix B – Release 3.3.4 Test Case Checklist B-1

# MOC Test Cases

## NANC 441

For each test case related to NANC 441, Medium Timer Indicator should be set to TRUE or FALSE as dictated by the individual test case, to verify that all systems are capable of supporting the two different values.

### MOC.SOA.INV.ACT.subscriptionVersionNewSP-Create-Support-NoMTI

|  |  |
| --- | --- |
| ***Purpose*** | To test the SOA’s ability to handle an error response for an M-ACTION request releated to Medium Timers. This will be accomplished by returning the error status ‘*invalid-data-values*’ in response to the subscriptionVersionNewSP-Create action. |
| ***Severity*** | R |
| ***Severity Explanation*** | Should be performed to validate the SOA’s error handling for MTI. |
| ***Prerequisites*** | MOC.SOA.CAP.ACT.lnpSubscriptionVersionNewSP-Create-Initial |
| ***Procedure*** | 1. SOA issues a valid subscriptionVersionNewSP-Create action where the Medium Timer Support Indicator is set to TRUE, but the subscription version request does not include the New SP Medium Timer attribute. 2. NPAC SMS Simulator responds with an error status: *invalid-data-values* and error invalid-data: *subscription-med-ind* set to *no-value* choice. If the SOA supports application level errors, an error code is returned. |
| ***Expected Results*** | The SOA will correctly handle the error response received from the NPAC SMS Simulator. |

### MOC.SOA.INV.ACT.subscriptionVersionNewSP-Create-NoSupport-WithMTI

|  |  |
| --- | --- |
| ***Purpose*** | To test the SOA’s ability to handle an error response for an M-ACTION request releated to Medium Timers. This will be accomplished by returning the error status ‘*invalid-data-values*’ in response to the subscriptionVersionNewSP-Create action. |
| ***Severity*** | R |
| ***Severity Explanation*** | Should be performed to validate the SOA’s error handling for MTI. |
| ***Prerequisites*** | MOC.SOA.CAP.ACT.lnpSubscriptionVersionNewSP-Create-Initial |
| ***Procedure*** | 1. SOA issues a valid subscriptionVersionNewSP-Create action where the Medium Timer Support Indicator is set to FALSE, but the subscription version includes the New SP Medium Timer attribute. 2. NPAC SMS Simulator responds with an error status: *invalid-data-values* and error invalid-data: *subscription-med-ind*. If the SOA supports application level errors, an error code is returned. |
| ***Expected Results*** | The SOA will correctly handle the error response received from the NPAC SMS Simulator. |

### MOC.SOA.INV.ACT.subscriptionVersionOldSP-Create-Support-NoMTI

|  |  |
| --- | --- |
| ***Purpose*** | To test the SOA’s ability to handle an error response for an M-ACTION request. This will be accomplished by returning the error status ‘*invalid-data-values*’ in response to the subscriptionVersionOldSP-Create action. |
| ***Severity*** | R |
| ***Severity Explanation*** | Should be performed to validate the SOA’s error handling. |
| ***Prerequisites*** | MOC.SOA.CAP.ACT.lnpSubscriptionVersionOldSP-Create-Initial |
| ***Procedure*** | 1. SOA issues a valid subscriptionVersionOldSP-Create action where the Medium Timer Support Indicator is set to TRUE, but the subscription version request does not include the Old SP Medium Timer attribute. 2. NPAC SMS Simulator responds with an error status: *invalid-data-values* and error invalid-data: *subscription-med-ind* set to *no-value* choice. If the SOA supports application level errors, an error code is returned. |
| ***Expected Results*** | The SOA will correctly handle the error response received from the NPAC SMS Simulator. |

### MOC.SOA.INV.ACT.subscriptionVersionOldSP-Create-NoSupport-WithMTI

|  |  |
| --- | --- |
| ***Purpose*** | To test the SOA’s ability to handle an error response for an M-ACTION request. This will be accomplished by returning the error status ‘*invalid-data-values*’ in response to the subscriptionVersionOldSP-Create action. |
| ***Severity*** | R |
| ***Severity Explanation*** | Should be performed to validate the SOA’s error handling. |
| ***Prerequisites*** | MOC.SOA.CAP.ACT.lnpSubscriptionVersionOldSP-Create-Initial |
| ***Procedure*** | 1. SOA issues a valid subscriptionVersionOldSP-Create action where the Medium Timer Support Indicator is set to FALSE, but the subscription version includes the Old SP Medium Timer attribute. 2. NPAC SMS Simulator responds with an error status: *invalid-data-values* and error invalid-data: *subscription-med-ind*. If the SOA supports application level errors, an error code is returned. |
| ***Expected Results*** | The SOA will correctly handle the error response received from the NPAC SMS Simulator. |

### MOC.SOA.CAP.ACT.subscriptionVersionModifyMTINewSP

|  |  |
| --- | --- |
| ***Purpose*** | To test the SOA’s ability to modify the New SP Medium Timer attribute for a pending subscription version. |
| ***Severity*** | R |
| ***Severity Explanation*** | Direct impact on providing LNP service. Requirement exists which can be satisfied using M-SET only (test case in subscriptionVersionNPAC). |
| ***Prerequisites*** |  |
| ***Procedure*** | 1. SOA issues a valid subscriptionVersionModify M-ACTION and specifies either the subscriptionVersionId or subscriptionVersionTN, along with the New SP Medium Timer attribute. 2. NPAC SMS Simulator responds with a successful M-ACTION response. 3. NPAC SMS Simulator issues the attributeValueChange or subscriptionVersionRangeAttributeValueChange M-EVENT-REPORT. Since the SOA supports the Medium Timer Attribute, the attribute is provided in the SV AVC notification. 4. SOA confirms the M-EVENT-REPORT. |
| ***Expected Results*** | The SOA issues a valid M-ACTION request and receives the NPAC SMS Simulator's M-ACTION response and M-EVENT-REPORT properly. |

### MOC.SOA.CAP.ACT.subscriptionVersionModifyMTIOldSP

|  |  |
| --- | --- |
| ***Purpose*** | To test the SOA’s ability to modify the Old SP Medium Timer attribute for a pending subscription version. |
| ***Severity*** | R |
| ***Severity Explanation*** | Direct impact on providing LNP service. Requirement exists which can be satisfied using M-SET only (test case in subscriptionVersionNPAC). |
| ***Prerequisites*** |  |
| ***Procedure*** | 1. SOA issues a valid subscriptionVersionModify M-ACTION and specifies either the subscriptionVersionId or subscriptionVersionTN, along with the Old SP Medium Timer attribute. 2. NPAC SMS Simulator responds with a successful M-ACTION response. 3. NPAC SMS Simulator issues the attributeValueChange or subscriptionVersionRangeAttributeValueChange M-EVENT-REPORT. Since the SOA supports the Medium Timer Attribute, the attribute is provided in the SV AVC notification. 4. SOA confirms the M-EVENT-REPORT. |
| ***Expected Results*** | The SOA issues a valid M-ACTION request and receives the NPAC SMS Simulator's M-ACTION response and M-EVENT-REPORT properly. |

### MOC.SOA.INV.ACT.subscriptionVersionModifyMTINewSP-NoSupport

|  |  |
| --- | --- |
| ***Purpose*** | To test the SOA’s ability to handle an error response for an M-ACTION request releated to Medium Timers for a modifyof a pending subscription version. This will be accomplished by returning the error status ‘*invalid-data-values*’ in response to the subscriptionVersionModify action where the New SP does not support MTI. |
| ***Severity*** | R |
| ***Severity Explanation*** | Should be performed to validate the SOA’s error handling for MTI. |
| ***Prerequisites*** | MOC.SOA.CAP.ACT.subscriptionVersionModifyMTINewSP |
| ***Procedure*** | 1. SOA issues a valid subscriptionVersionModify action where the Medium Timer Support Indicator is set to FALSE, but the subscription version includes the New SP Medium Timer attribute. 2. NPAC SMS Simulator responds with an error status: *invalid-data-values* and error invalid-data: *subscription-med-ind*. If the SOA supports application level errors, an error code is returned. |
| ***Expected Results*** | The SOA will correctly handle the error response received from the NPAC SMS Simulator. |

Perform the following Test Cases for New SP/Old SP Medium Timer attributes when SOA Medium Timer Indicator is set to TRUE. Each test should verify that the New SP/Old SP Medium Timer attributes are provided.

### MOC.SOA.CAP.ACT.lnpNotificationRecovery

Existing Test Case, verify that the New SP/Old SP Medium Timer attributes are provided in the recovery of SV OCN and AVC notifications.

### MOC.SOA.CAP.ACT.subscriptionVersionNewSP-Create-Initial

Existing Test Case, verify that the New SP Medium Timer attribute is provided in the OCN or Range OCN notifications.

### MOC.SOA.CAP.ACT.subscriptionVersionOldSP-Create-Initial

Existing Test Case, verify that the Old SP Medium Timer attribute is provided in the OCN or Range OCN notifications.

### MOC.SOA.CAP.ACT.subscriptionVersionNewSP-Create-Second

Existing Test Case, verify that the New SP Medium Timer attribute is provided in the AVC or Range AVC notifications.

### MOC.SOA.CAP.ACT.subscriptionVersionOldSP-Create-Second

Existing Test Case, verify that the Old SP Medium Timer attribute is provided in the AVC or Range AVC notifications.

### MOC.SOA.CAP.OP.SET.OldSP.subscriptionVersionNPAC

Existing Test Case, verify that the SOA acting as the Old SP can M-SET the Old SP Medium Timer attribute.

### MOC.SOA.CAP.OP.SET.NewSP.subscriptionVersionNPAC

Existing Test Case, verify that the SOA acting as the New SP can M-SET the New SP Medium Timer attribute.

### MOC.SOA.CAP.OP.GET.subscriptionVersionNPAC

Existing Test Case, verify that the SOA can M-GET a subscription version including the New SP Medium Timer attribute and the Old SP Medium Timer attribute.

Perform the following Test Cases for Timer Type and Business Type attributes when Timer Type and Business Type Indicators are set to TRUE. Each test should verify that the Timer Type and Business Type attributes are provided.

### MOC.SOA.CAP.ACT.lnpNotificationRecovery

Existing Test Case, verify that the Timer Type and Business Type attributes with a value of 2 are provided in the recovery of SV OCN and AVC notifications.

### MOC.SOA.CAP.ACT.subscriptionVersionNewSP-Create-Second

Existing Test Case, verify that the Timer Type and Business Type attributes with a value of 2 are provided in the AVC or Range AVC notifications.

### MOC.SOA.CAP.ACT.subscriptionVersionOldSP-Create-Second

Existing Test Case, verify that the Timer Type and Business Type attributes with a value of 2 are provided in the AVC or Range AVC notifications.

### MOC.SOA.CAP.NOT.subscriptionVersionOldSp-ConcurrenceRequest

Existing Test Case, verify that the Timer Type and Business Type attributes with a value of 2 are provided in the Old SP Concurrence notification.

### MOC.SOA.CAP.NOT.subscriptionVersionNewSP-CreateRequest

Existing Test Case, verify that the Timer Type and Business Type attributes with a value of 2 are provided in the New SP Create notification.

Perform the following Test Cases for Regression. Each test should verify that the LSMS is not affected by the Medium Timer changes.

### MOC.LSMS.CAP.ACT.lnpSubscriptions.lnpDownload

Existing Test Case, verify that the LSMS is not affected by the Medium Timer changes.

### MOC.LSMS.CAP.OP.GET.subscriptionVersionNPAC

Existing Test Case, verify that the LSMS is not affected by the Medium Timer changes.

Appendix A – Test Case Nomenclature

| stack-To-stack test-id symbols | |
| --- | --- |
| Abbreviation | Description |
| S2S | Stack-to-Stack Interoperability Testing |
| VAL | Valid Test |
| INV | Invalid Test |
| SOA | Initiating system is SOA |
| LSMS | Initiating system is LSMS |
| ASSOC | Association (A-ASSOCIATE) Request |
| RELES | Release (A-RELEASE) Request |
| ABORT | Abort (A-ABORT) Request |
| INVK | Invalid KEY |
| INVT | Invalid Time |
| ISMFU | Invalid Systems Management Functional Unit Identifier |
| ISEQ | Invalid Sequence Number |

| security test-id symbols | |
| --- | --- |
| Abbreviation | Description |
| SEC | Security Interoperability Testing |
| VAL | Valid Test |
| INV | Invalid Test |
| SOA | Initiating system is SOA |
| LSMS | Initiating system is LSMS |
| ASSOC | Association (A-ASSOCIATE) Request |
| RELES | Release (A-RELEASE) Request |
| ABORT | Abort (A-ABORT) Request |
| INVK | Invalid KEY |
| INVT | Invalid Time |
| ISMFU | Invalid Systems Management Functional Unit Identifier |
| ISEQ | Invalid Sequence Number |

| MOC test-id symbols | |
| --- | --- |
| Abbreviation | Description |
| MOC | Managed Object Conformance Interoperability Testing |
| NPAC | Initiating System is NPAC |
| SOA | Initiating system is SOA |
| LSMS | Initiating system is LSMS |
| CAP | MO Capability Test |
| OP | Operation Test |
| NOT | Notification Test |
| ACT | Action Test |
| VAL | Valid behaviour Test |
| INV | Invalid behaviour Test |
| CRE | MO Instance Create Test |
| DEL | MO Instance Delete Test |
| SET | Attribute Set Test |
| GET | Attribute Get Test |
| SING | Operation on Single Attribute Test |
| MULT | Operation on Multiple Attribute Test |
| COND | Operation on Conditional Attribute Test |
| AUTO | Automatic Object Naming |
| RO | Read Only |
| CO | Contained Objects |
| SCOP | Scoped Test |
| FILT | Filter Test |
| BND | Boundary Test |
| MIN | Lower Bound Test |
| MAX | Upper Bound Test |
| MAXQ | Maximum number of allowed queries |
| MAXB | Maximum number of allowed Bytes |
| RANGE | Tests the “range” structure of a “range/list” notification |
| LIST | Tests the “list” structure of a “range/list” notification |

| recovery test-id symbols | |
| --- | --- |
| Abbreviation | Description |
| AMG | Association Management Interoperability Testing |
| SOA | Initiating system is SOA |
| LSMS | Initiating system is LSMS |
| ASSOC | Association (A-ASSOCIATE) Request |
| REASSOC | re-establish Association |
| REQTMOT | Request Timeout Test |
| RETRY | Retry a Request |
| SWOV | Switch Over |
| BKUP | Backup NPAC |
| CMIP | CMIP requests |
| SECVIOL | Security Violation Test |
| LOSS | Association Loss Test |
| DOWN | NPAC Down test |
| SAME | Retry Same Host |
| OTHER | Retry Other Host |

| A2A test-id symbols | |
| --- | --- |
| Abbreviation | Description |
| A2A | Application to Application Test |
| LSMS | System Under Test is an LSMS |
| SOA | System Under Test is a SOA |
| NSOA | System Under Test is a New SOA |
| OSOA | System Under Test is an Old SOA |
| DSOA | System Under Test is a Donor SOA |
| VAL | Valid Transaction Test |
| INV | Invalid Transaction / Inopportune Behavior Test |
| Audit Test Cases | |
| MISSVER | Missing Subscription Version Test |
| OBSVER | Old Subscription Version Test |
| ERRVER | Erroneous Subscription Version Test |
| NODIS | No Discrepancy Found Test |
| TN | Single Telephone Number Test |
| TNRNG | Telephone Number Range Test |
| ACTRNG | Activation Range Test |
| WITHDIS | Audit Discrepancy Found Test |
| NPACCNCLD | Canceled by NPAC |
| CRENOT | Object Creation Notification |
| TIMOUT | Operation/Transaction Timeout Test |
| COMP | Audit Complete Test |
| NORES | Missing Audit Results Test |
| NUMTN | Audit Number of TNs Test |
| COMPTN | Completed Number of TNs Test |
| NUMDISERR | Number of Discrepancies Error Test |
| Service Provider and Network Data Test Cases | |
| SETSP | Set Service Provider Test |
| CREND | Create a Network Data Instance Test |
| DELND | Delete a Network Data Instance Test |
| Subscription Version Test Cases | |
| CREATE | Subscription Version Creation Test |
| ACTIVATE | Subscription Version Activation Test |
| MODIFY | Subscription Version Modification Test |
| CANCEL | Subscription Version Cancellation Test |
| IMMDISC | Subscription Version Immediate Disconnect Test |
| DEFDISC | Subscription Version Deferred Disconnect Test |
| STATE-TRANS | State Transition Test |
| FIRST | First Create Transaction Test |
| SECOND | Second Create Transaction Test |
| TN-RANGE | Telephone Number Range Transaction Test |
| PEND | Pending Subscription Version Test |
| CONFLICT | Conflict Subscription Version Test |
| ACT, ACTIVE | Active Subscription Version Test |
| OLD | Old Subscription Version Test |
| PARTFAIL | Partially Failed Subscription Version Test |
| FAIL, FAILED | Failed Subscription Version Test |
| SENDING | Sending Subscription Version Test |
| CANCEL-PEND | Cancel-Pending Subscription Version Test |
| DISCPEND | Disconnect-Pending Subscription Version Test |
| OBJCRE | Object Creation Notification Test |
| NOTMISS | Missing Notification Test |
| ACTNOTMISS | Active Status Missing Notification Test |
| BYNPAC | Operation Performed by NPAC Test |
| BYOSOA | Operation Performed by Old SOA Test |
| BYNSOA | Operation Performed by New SOA Test |
| ATTRCHNG | Attribute is Changed Test |
| STATCHNG | Status Attribute is Changed Test |
| ATTRSAME | Attribute in Unchanged Test |
| NONONC | No Concurrence by Other SOA Test |
| ACKREQ | Acknowledge Request Test |
| RESOLV | Conflict Resolution Test |
| PORT-TO-ORIG | Port To Original SP Test |
| MULT | Multiple Versions Test |
| UNKNOWN | Unknown Instance Test |
| Miscellaneous Test Cases | |
| MISC | Miscellaneous Test |
| ACTION | Action Request Test |
| EVENT | Event Report Test |
| SET | Set Request Test |

Appendix B – Release 3.3.4 Test Case Checklist

| **Test Case Number and Name** | | | **Sev** | **Date** | **Result** |
| --- | --- | --- | --- | --- | --- |
| **MOC NANC 351** | | | | | |
| 1 | 1.1.1 | MOC.SOA.INV.ACT.subscriptionVersionNewSP-Create-Support-NoMTI | C |  |  |
| 2 | 1.1.2 | MOC.SOA.INV.ACT.subscriptionVersionNewSP-Create-NoSupport-WithMTI | C |  |  |
| 3 | 1.1.3 | MOC.SOA.INV.ACT.subscriptionVersionOldSP-Create-Support-NoMTI | C |  |  |
| 4 | 1.1.4 | MOC.SOA.INV.ACT.subscriptionVersionOldSP-Create-NoSupport-WithMTI | C |  |  |
| 5 | 1.1.5 | MOC.SOA.CAP.ACT.subscriptionVersionModifyMTINewSP | C |  |  |
| 6 | 1.1.6 | MOC.SOA.CAP.ACT.subscriptionVersionModifyMTIOldSP | C |  |  |
| 7 | 1.1.7 | MOC.SOA.CAP.ACT.subscriptionVersionModifyMTINewSP-NoSupport | C |  |  |
| 8 | 1.1.8 | MOC.SOA.CAP.ACT.lnpNotificationRecovery | C |  |  |
| 9 | 1.1.9 | MOC.SOA.CAP.ACT.subscriptionVersionNewSP-Create-Initial | C |  |  |
| 10 | 1.1.10 | MOC.SOA.CAP.ACT.subscriptionVersionOldSP-Create-Initial | C |  |  |
| 11 | 1.1.11 | MOC.SOA.CAP.ACT.subscriptionVersionNewSP-Create-Second | C |  |  |
| 12 | 1.1.12 | MOC.SOA.CAP.ACT.subscriptionVersionOldSP-Create-Second | C |  |  |
| 13 | 1.1.13 | MOC.SOA.CAP.OP.SET.OldSP.subscriptionVersionNPAC | C |  |  |
| 14 | 1.1.14 | MOC.SOA.CAP.OP.SET.NewSP.subscriptionVersionNPAC | C |  |  |
| 15 | 1.1.15 | MOC.SOA.CAP.OP.GET.subscriptionVersionNPAC | C |  |  |
| 16 | 1.1.16 | MOC.SOA.CAP.ACT.lnpNotificationRecovery | C |  |  |
| 17 | 1.1.17 | MOC.SOA.CAP.ACT.subscriptionVersionNewSP-Create-Second | C |  |  |
| 18 | 1.1.18 | MOC.SOA.CAP.ACT.subscriptionVersionOldSP-Create-Second | C |  |  |
| 19 | 1.1.19 | MOC.SOA.CAP.NOT.subscriptionVersionOldSP-ConcurrenceRequest | C |  |  |
| 20 | 1.1.20 | MOC.SOA.CAP.NOT.subscriptionVersionNewSP-CreateRequest | C |  |  |
| 21 | 1.1.21 | MOC.LSMS.CAP.ACT.lnpSubscriptions.lnpDownload | C |  |  |
| 22 | 1.1.22 | MOC.LSMS.CAP.OP.GET.subscriptionVersionNPAC | C |  |  |