**Origination Date:** 10/20/05

**Originator:** T-Mobile

### Change Order Number: NANC 408

**Description:** SPID Migration Automation Change

**Cumulative SP Priority, Average:** #1, 4.00

**Functional Backward Compatible:** YES

**IMPACT/CHANGE ASSESSMENT**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| FRS | IIS | GDMO | ASN.1 | **NPAC** | SOA | LSMS |
| Y | Y | Y | Y | High | Med | Med |

**Business Need:**

NANC 323 SPID Migration – Currently Service Providers and the NPAC require a fair amount of manual processing, beginning with the initial SPID migration request form, through performing the actual SPID migration during the maintenance window. With the frequency of SPID Migrations (several times every month), this creates a personnel resource situation that could be helped through software automation.

As discussed during the Oct ’05 LNPAWG meeting, an effort will be started to identify areas of most concern and/or areas for improvement. Possible discussion areas include:

* Automating the request form process (online web GUI). Incorporate edits to ensure valid data is entered and submitted.
* Incorporating an online scheduling function (i.e., if it’s available, you can reserve/book it).
* Self-maintenance of scheduled migrations (modify or delete).
* Automated checking/warning/cancelling/reporting of pending-like SVs that need to be handled prior to the migration.
* Enhancing the interface to pass SMURF (**S**PID **M**igration **U**pdate **R**equest **F**iles) data across the interface (new messages).
* Automatic generation of both preliminary and final SMURF data.
* Changes to data definitions, such that the SPID attribute can be updated automatically via messages.
* Other reporting functions that are automatically generated after a SPID migration (e.g., SV counts).
* E-mail notifications to the SPID Migration distro.

**Nov ‘05 LNPAWG mtg comments:**

Discussion on Issues:

1. Manual handling of SMURF files. Can we have some type of automation?
2. Number of migrations. Since have to process serially, can we limit the number of migrations?
3. SP1, changes with Linux with secure FTP, since we had previously done automated downloads.
4. SP2, auto push down instead of having to go pick them up. However, SP3, concern about auto push, rather than allowing us to decide when to go get them. Right now not real excited about automation. Have some security issues, and cost-benefit issues. Major concern is how can this reduce our costs.
5. SP4, our pull down is automated, but would want the SMURF files earlier. SP3, yes need to get the SMURF files earlier. NeuStar comment – main issue is that things could change as long as the NPAC is up and available. NeuStar to look at what can be done to make it earlier in the maint window.
6. SP6, feedback from his IT folks. What automation that can save me time and labor costs on the weekends. Really need something that is cost justifiable. Never heard about the forms internally.
7. SP7, not a whole lot of interest. Area of automation, with getting SMURF file sooner, and getting some type of notification when they’re ready on the FTP site. E-mail notif (this is what several people want). Never heard about the online forms internally.

Discussion on Potential New Features:

1. SP5, we have received positive internal feedback on online GUI access. Also ability to adjust the schedule online (trade online, swap with other migrations that we already have sched).
2. Online scheduling was positive feedback. Want the real-time feedback, rather than waiting for a day or more to get feedback.
3. Where should the online sched be located? On public web, secure web, or require an LTI user account? Answer, secure website. Prob, is that won’t have immediate access to NPAC data.
4. Also some back office validation. Need to get more info on this from SPs. This will be provided at a later date from the SPs.
5. Clean up of Pending-likes. Right now get e-mail from NeuStar. SP tries to get them activated, or will get them cancelled. Helpful feature would be a Web site that shows the pending-likes, rather than the e-mail that goes through multiple groups before getting to the right person. When automated, provide the list of what was auto cancelled (not sure if from e-mail or on the web).
6. SP3, method or rpt that shows the actual count of what was modified. This would help with verifying or reconcile against our numbers. NeuStar comment – we currently provides an estimate ahead of time, but no count of actuals. SP3 wants something post migration on number of SVs that were migrated with current SP value. In some cases would want the details as well.
7. SP8, questions internally about the count. Does this include EDR or non-EDR? NeuStar comment – we have recently changed the method.
8. Interface changes. First thing would be to be able to modify the SPID over the interface. Some vendors have pure CMIP implementation that would prohibit this over the interface, since SPID is part of distinguished name. No problem on NPAC side. Vendor1, indicated not a problem with the SMURF files, but would have problem with modifying the SPID. Vendor2, we’ve talked more about modifying the whole thing. We could handle SPID modify.

Nov ’05 Summary, SPs want SMURF files sooner, notif on when it’s available, post migration SV counts and reporting, and automating pieces of current process, rather than enhancing the interface.

**Mar ‘06 LNPAWG mtg comments: (discussed three areas, prior to migration, during migration, after migration)**

Discussion on Potential New Features:

1. SPID Migration Form. Available online, available to enter on web site. Have Drop-Down list of SP contacts (for us to contact them for Q&A, agreement, etc.). Also incorporate edits such as LRN.
2. SPID Migration Calendar. Available online, and able to “pick” our own timeslot.
3. Automated Distribution. We have scripts to automatically grab the SMURF files already, so no need for automated distro. FTP works today.
4. Clean up of Pending-Like process. SP1 explained the process. Question to every else, “*are you comfortable with this process?*” What about if we just default to having NPAC do this for us? NeuStar comment – not part of the documented process. Also, manual effort on NPAC side. Not the best idea to move from one manual process to another. SP2, what about automating the cleanup process? NeuStar comment – yes it could be done. SP2, we don’t see a problem if there is a charge for those that use this feature. NeuStar to discuss with NAPM.

Discussion on Current Process:

1. Preliminary SMURF files. NeuStar, “*does anyone still need or use them?*” SP3, yes we continue to use them for sizing and estimating purposes.
2. No comments or concerns about activities during the migration window (maintenance).
3. After the migration, SP3, looking for actual counts.

**Jul ‘06 LNPAWG mtg comments: (discussed three areas, prior to migration, during migration, after migration)**

NeuStar discussed some of the New Features coming up in R3.3.1:

1. SPID Migration SMURF Files. An enhancement is being made that allows SMURF files to be saved after initial distribution. Currently NPAC Personnel must manually create SMURF files for each distribution. With this enhancement subsequent distribution will use the saved files, allow necessary updates to occur, then re-generate the SMURF files for additional distributions.
2. Clean up of Pending-Like SVs. An enhancement is being made that allows NPAC Personnel to initiate the clean-up of Pending-Like SVs in an automated fashion. Currently, the process requires manual handling of all Pending-Like SVs.

Discussion on Potential New Features:

1. SPID Migration Form. Available online, available to enter on web site.
2. SPID Migration Calendar. Available online, and able to “pick” our own timeslot. For both the Form and the Calendar, self service is desired by multiple SPs. The analogy was used to equate the new process to being able to perform online airline reservations and bookings (obtain list of flights, check availability and times, make a reservation, and obtain a confirmation number).
3. Post Migration Counts. SP1 indicated again, a desire to obtain post migration counts (similar to the pre migration estimated counts that are currently provided).  
   **Dec ’06**, new change order NANC 418 (Post-SPID Migration SV Counts) has been opened in the change management list.

**Jul ‘07 LNPAWG mtg comments:**

Discussion on Potential New Features:

1. The “self-service” function has been raised again. Several SPs see the value in scheduling SPID Migrations themselves (similar to web-based airline reservation bookings that are available for consumers today).
2. SMURF File Automation. Some SPs want to investigate the possibility of sending SMURF or SMURF equivalent information over the interface rather than continue to use the FTP manual batch process. The group was reminded on the initial concerns and why the implementation included SMURF files to begin with:
   1. A concern about the volume of transactions over the CMIP interface.
   2. Modifying the SPID value over the interface violates the CMIP standard, since it’s a naming attribute in the managed object class hierarchy.

NeuStar will investigate both of these items and provide more information to be discussed during the Sep ’07 meeting.

**Sep ‘07 LNPAWG mtg comments:**

Discussion on Potential New Features:

1. As a follow-up to the July discussion on SMURF File Automation, the group discussed and agreed that not only for migrations that involved no SVs (i.e., just NPA-NXXs), but also for migrations that involved a small volume of SVs (e.g., less than 25K), it would be appropriate to allow those to be automated as well. Based on YTD figures, this would encompass 95% of SPID Migrations (332 of 353). Using a cap would help to ensure that the load over the interface was manageable.
2. Using the new “self-service” function, need to figure out a way to get the proper authorization by SPID B when requesting a migration. Group recommendation was to use the company PIN. Also need to figure out how best to get concurrence from SPID A, and also what to do if the contact for SPID A is no good. What are the options to do the validation that SPID A is OK with SPID B doing the migration?
3. During the development of NANC 323, the industry agreement was that the SPID Migration date should be as close to, but not before the LERG Effective Date. To accommodate timely migrations a “process it now” feature should be incorporated. May want to consider only allowing this for LERG ED in the past, and not in the future. Are there any negative impacts on not enforcing any synchronization between the migration date and the LERG ED?
4. The issue of modifying the SPID value over the interface was discussed. This is not an issue for the NPAC, and for some vendors. It is unclear whether or not other vendors (not present during the discussion) have issues.

**Nov ‘07 LNPAWG mtg comments:**

No issues were identified with the Sep ’07 notes, however two items were requested for the next meeting, 1.) detail on the SV counts (of the 353 identified in #1 above), and 2.) a sample ACTION message for the modify (#4 above).

**Description of Change:**

This change order recommends that SPID Migration Automation Changes be added to the NPAC. From the Jul ’07 meeting, there are two changes being discussed.

1. Self-service feature for requesting SPID Migrations. This change adds a web-based solution that allows a Service Provider to input their SPID migration data, then check for and reserve available slots based on their input data. The following items would apply:

* A Service Provider may only schedule migrations for its own data.
* Each migration request must be designated for a single migration window (i.e., weekend). If multiple weekends are desired, they must be broken down into multiple migration requests.
* Once a reserved slot has been allocated for a SPID migration, the Service Provider may change the migration to a different slot based on availability. If changed, the original (previous) slot is released, and becomes available to other Service Providers.
* A Service Provider may cancel a reserved SPID migration up to *tunable* number of days/hours before the actual migration.
* Once a SPID Migration is scheduled for a specific data item, that same data item cannot be scheduled for another SPID Migration. This prevents a Service Provider from “double booking” different weekends.

2. Sending NPA-NXX ownership change information to Service Providers. This change allows the NPAC to send NPA-NXX ownership changes via CMIP messages over the interface. The following items would apply:

* A new set of CMIP messages (M-ACTIONs) would be incorporated to indicate the ownership change.
* The messages will be sent in a real-time fashion, and are not dependent on a SPID migration window.
* These messages would apply for SPID Migrations where no (zero) SVs were involved. If SVs were involved, that SPID Migration would use the current SMURF file approach. **Sep ’07 update**, the group agreed that a manageable number of SVs should be considered for interface updates (rather than the SMURF file approach). This is captured in the Sep ’07 discussion above. **Jan ’09 update**, the group agreed to maintain the no (zero) SVs position for interface messages. What this means is that a SPID Migration slated for interface updates (e.g., NPA-NXX contains zero SVs), could become a SMURF File migration right before the start of the SPID Migration.

**Jul ’08 LNPAWG**, discussion. Need to develop requirements for Sep ’08 review. See below requirements.

**Nov ’08 LNPAWG**, discussion. Minor clarifications on the requirements. Requirements 1 through 11 are only applicable when requirement 12 (regional tunable) is set to TRUE. The IIS Flow and new message should be included for the next meeting:

**Requirements:**

Req X1 SPID Migration Blackout Dates – GUI Entry By NPAC Personnel

NPAC SMS shall allow NPAC Personnel via the NPAC Administrative Interface, to add and remove SPID migration Blackout dates.

Req X2 SPID Migration Blackout Dates – Displaying in the GUI

The NPAC SMS shall allow Service Provider Personnel, via the NPAC Low-Tech Interface, and NPAC Personnel, via the NPAC Administrative Interface, to view SPID Migration Blackout Dates.

Req X3 SPID Migration Last Scheduling Date - Tunable Parameter

NPAC SMS shall provide a Regional SPID Migration Last Scheduling Date tunable parameter, which is defined as the last date that a SPID Migration may be entered into the NPAC system.

Note: This tunable date is used to make sure SPID Migrations are not scheduled in the GUI for dates when the Blackout Dates have not been specified by LNPAWG and/or entered into the NPAC system.

Req X4 SPID Migration Last Scheduling Date – Tunable Parameter Default

NPAC SMS shall default the SPID Migration Last Scheduling Date tunable parameter to none.

Req X5 SPID Migration Last Scheduling Date – Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the SPID Migration Last Scheduling Date tunable parameter.

Req X6 SPID Migration Entry Restriction - Last Scheduling Date – Service Provider Personnel

NPAC SMS shall reject a SPID Migration request from Service Provider Personnel, via the NPAC Low-Tech Interface, that has a scheduled date beyond the SPID Migration Last Scheduling Date.

Req X7 SPID Migration Update – Migration Summary Information

NPAC SMS shall, via the NPAC Low-Tech Interface and NPAC Administrative Interface, show the following information for each maintenance day:

* Maintenance date
* Total SV count for pending and approved migrations
* Total number of migrations in the region for pending and approved migrations
* Total number of migrations for all regions for pending and approved migrations
* Total quota for SV count and migration count in each region and migration count for all regions

Req 1 SPID Migration Update – GUI Availability/Selection function for Service Provider and NPAC Personnel

NPAC SMS shall allow Service Provider Personnel, via the NPAC Low-Tech Interface, and NPAC Personnel, via the NPAC Administrative Interface, to query for available SPID Migration timeslots.

Req 1.1 SPID Migration Update – Available Migration Window Minimum – Tunable Parameter

NPAC SMS shall provide a SPID Migration Available Migration Window Minimum tunable parameter, which is defined as the minimum length of time between the current date (exclusive) and the SPID Migration date (inclusive), when a Service Provider requests to see available SPID Migration timeslots.

Req X8 SPID Migration Update – Available Migration Window Minimum – Reject

The NPAC SMS shall reject a request from a Service Provider, via the NPAC Low-Tech Interface, if the length of time between the current date and the SPID Migration date is less than the Available Migration Window Minimum tunable.

Req X9 SPID Migration Update - NPAC Personnel Scheduling SPID Migrations to Any Migration Date in the Future

NPAC SMS shall allow NPAC Personnel to schedule a SPID migration to any migration date in the future after providing a warning if the SPID migration is scheduled to a date earlier than SPID migration creation date plus the Available Migration Window Minimum tunable.

Req 1.2 SPID Migration Update – Available Migration Window Minimum – Tunable Parameter Default

NPAC SMS shall default the SPID Migration Available Migration Window Minimum tunable parameter to thirty-two (32) calendar days.

Req 1.3 SPID Migration Update – Available Migration Window Minimum – Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the SPID Migration Available Migration Window Minimum tunable parameter.

Req 2 SPID Migration Update – GUI Entry by Service Provider and NPAC Personnel

NPAC SMS shall allow Service Provider Personnel, via the NPAC Low-Tech Interface, and NPAC Personnel, via the NPAC Administrative Interface, to “select and request” a SPID Migration, by entering selection input criteria (mandatory: migrating away from SPID, migrating to SPID; at least one of the following three: NPA-NXX, LRN, and/or NPA-NXX-X) for a partial SPID Migration Update Request Process.

Req X10 SPID Migration Update – GUI Entry by Service Provider and NPAC Personnel – Required Fields

NPAC SMS shall require the originator of a SPID Migration to enter the following fields:

* From SPID
* To SPID
* Scheduled Date
* Contact Information
* NPA-NXX ownership effective date (if NPA-NXX is included in the Migration)
* at least one of the following three: NPA-NXX, LRN, and/or NPA-NXX-X

Note: A Migration request that includes only NPA-NXXs is considered an “online” migration that will be sent over the CMIP interface to Service Providers that support the functionality (SMURF data will be used by Service Providers that do not support the functionality). If migration data includes at least one NPA-NXX-X or LRN, it is considered “offline” and all Service Providers will use SMURF data.

Req X11 SPID Migration Update – Generation of SPID Migration Name

NPAC SMS shall automatically generate the SPID Migration Name field that conforms to the SPID Migration naming convention <From SPID>\_<To SPID>\_<Scheduled Date>. (Example: 1111\_2222\_09282009).

Req-2.0.1 SPID Migration Update – GUI Modification by Service Provider Prior to Other Service Provider Concurrence or NPAC Personnel Approval

NPAC SMS shall allow Service Provider Personnel, via the NPAC Low-Tech Interface, to modify a currently scheduled SPID Migration that they entered, only if the other Service Provider has not concurred, and NPAC Personnel have not approved the SPID Migration.

Note: Migration data (e.g., NPA-NXX, LRN) is modifiable. SPID value is not modifiable.

Req-2.1 SPID Migration Update – GUI Cancellation by Service Provider Prior to NPAC Personnel Approval

NPAC SMS shall allow Service Provider Personnel, via the NPAC Low-Tech Interface, to cancel a currently scheduled SPID Migration that they entered, only if the other Service Provider has not concurred, and NPAC Personnel have not approved the SPID Migration.

Req-2.2 SPID Migration Update – GUI Error for Double Booking

NPAC SMS shall reject a request from Service Provider Personnel, via the NPAC Low-Tech Interface, for a SPID Migration when the requested data is already part of a pending SPID Migration request.

Req X12 SPID Migration Update – GUI Concurrence by Other Service Provider and NPAC Personnel

NPAC SMS shall allow Service Provider Personnel, via the NPAC Low-Tech Interface, and NPAC Personnel, via the NPAC Administrative Interface, to concur a previously entered SPID Migration.

Req X13 SPID Migration Creation by “migrating-from” and “migrating-to” SPIDs

NPAC SMS shall allow either the ‘migrating-from’ or ‘migrating-to’ service provider to be the first Service Provider to enter a SPID Migration.

Req-3 SPID Migration Update – GUI Entry Service Provider –Approval by NPAC Personnel

NPAC SMS shall, via the NPAC Administrative Interface, require NPAC Personnel to “approve” a SPID Migration as defined in Req-2.

Note: In an A-to-B migration, “approval” will involve validation by SPID A. M&Ps will be defined for this function.

Req X14 SPID Migration Update – Approval by NPAC Personnel Required

NPAC SMS shall require Service Provider concurrence as well as approval by NPAC personnel before performing a SPID Migration.

Req X15 SPID Migration Update – Cancel by NPAC Personnel

NPAC SMS shall require NPAC Personnel, via the NPAC Administrative Interface, to enter a cancellation reason text anytime a SPID Migration iscancelled.

Req X16 SPID Migration Update - Service Providers Viewing Migrations

NPAC SMS shall allow service providers to view all SPID migrations that have been approved by NPAC Personnel.

Req X17 SPID Migration Update - Service Providers Viewing Their Own Migrations

NPAC SMS shall allow only the ‘migrating-from’ or ‘migrating-to’ Service providers to view SPID migrations that haven’t been approved by NPAC Personnel.

Req X18 SPID Migration Creation – “Re-work” Option for Cancelled SPID Migrations

Deleted.

Req X19 SPID Migration Creation – Disallowing Scheduling of Two SPID Migrations with the same “Migrating-From” and “Migrating-To” SPID to the same Maintenance Day

NPAC SMS shall disallow scheduling of two SPID Migrations with the same “Migrating-From” and “Migrating-To” SPID to the same Maintenance Day.

Req X20 SPID Migration Email List - Tunable Parameter

NPAC SMS shall provide a Service Provider SPID Migration Email List tunable parameter, which is defined as the email address(es) that are notified of SPID Migration operations.

Req X21 SPID Migration Email List – Tunable Parameter Default

NPAC SMS shall default the SPID Migration Email List tunable parameter to <empty>.

Req X22 SPID Migration Email List – Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the SPID Migration Email List tunable parameter.

Req X23 SPID Migration E-mail due to NPAC Personnel Operations

NPAC SMS shall send e-mail notifications to all Service Providers for the following SPID Migration operations when performed by NPAC Personnel:

* approval of a SPID Migration
* modification of an approved SPID Migration
* cancellation of an approved SPID Migration

Req X24 SPID Migration E-mail to “migrating-from” and “migrating-to” Service Providers

NPAC SMS shall send e-mail notifications to the “migrating-from” and “migrating-to” Service Providers for the following SPID Migration operations:

* creation of a new SPID Migration
* concurrence of an existing SPID Migration
* modification of an existing SPID Migration
* cancellation of an existing SPID Migration

Req-4 SPID Migration Update – Cancellation Window – Tunable Parameter

Deleted.

Req-5 SPID Migration Update – Cancellation Window – Tunable Parameter Default

Deleted.

Req-6 SPID Migration Update – Cancellation Window – Tunable Parameter Modification

Deleted.

Req-7 SPID Migration Update – GUI Cancellation by Service Provider

Deleted.

Req-8 SPID Migration Update – GUI Cancellation by Service Provider – Notification to NPAC Personnel

Deleted.

Req-8.1 SPID Migration Update – GUI Cancellation by NPAC Personnel on behalf of Service Provider

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to cancel a currently scheduled SPID Migration on behalf of a migrating-to SPID or migrating-from SPID.

Req-8.2 SPID Migration Update – GUI Modification by NPAC Personnel of Scheduled SPID Migration

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify a currently scheduled SPID Migration on behalf of a migrating-to SPID or migrating-from SPID.

Note: Migration data (e.g., NPA-NXX, LRN) is modifiable. SPID value is not modifiable.

**Req X25 SPID Migration Update – Disallowing Modification of “migrating-to” SPID**

Deleted.

Req-9 SPID Migration Update – GUI Execution by NPAC Personnel of Scheduled SPID Migration

NPAC SMS shall, via the NPAC Administrative Interface, allow NPAC Personnel to execute a previously scheduled SPID Migration, in cases when there are no active-like subscription versions or Number Pool Blocks (quantity of zero) that would have the New SPID value changed in that NPA-NXX that is being migrated.

Note: This online activity allows a SPID Migration that will modify the NPA-NXX Service Provider ID (code owner). Unlike other SPID Migration activity (i.e., SMURF file generation), this function is allowed during any NPAC uptime. ‘Active-like’ Subscription Versions are defined as Subscription Versions that contain a status of active, sending, partial failure, old with a Failed SP List, or disconnect pending. M&Ps will indicate that this online activity (the actual execution) will be performed as close to the Maintenance window as practical. Online GUI execution works on an all-or-nothing basis (e.g., if attempting to modify five NPA-NXXs, and three of the five have zero SVs/NPBs, but two of the five have some SVs/NPBs, then the entire request of five will fail).

Req-10 SPID Migration Update – GUI Execution by NPAC Personnel – Notification to Local SMS and SOA

NPAC SMS shall notify all accepting Local SMSs and SOAs of the modification of the NPA-NXX owning Service Provider, immediately after validation of a SPID Migration as defined in Req-9.

Note: In conjunction with the online GUI activity defined in Req-9, the message will be sent out prior to the beginning of the maintenance window.

Note: To maintain consistency with SMURF Files, SPID Migration transactions sent over the interface will not apply NPA-NXX filters for the given Service Provider.

Req-11 SPID Migration Update – Pending-Like SVs and NPBs Cleaned Up

NPAC SMS shall clean up pending-like Subscription Versions and Number Pool Blocks at the time of SPID Migration where the migrating-from Service Provider in the NPA-NXX that is being migrated is present in those Subscription Versions or Number Pool Blocks, by setting the status to Cancelled.

Note: For Number Pool Blocks this will be the Block Holder SPID, and for Subscription Versions this will be either the New SPID or Old SPID.

Note: This applies to pending-like records where the OSP (migrating-from SPID) is either the code holder or the block holder, and also pending-like records where the previous port is an active record (migrating-from SPID is the NSP) that is being migrated (e.g., SV1 is active and will be migrated, SV2 is pending-like and will be cancelled).

Req X26 Completed SPID Migration Retention – Tunable Parameter

NPAC SMS shall provide a Regional Completed SPID Migration Retention tunable parameter, which is defined as the number of days before a completed SPID Migration will be purged from the database.

Req X27 Completed SPID Migration Retention – Tunable Parameter Default

NPAC SMS shall default the Completed SPID Migration Retention tunable parameter to 365 days.

Req X28 Completed SPID Migration Retention – Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the SPID Migration Completed Migrations Retention tunable parameter.

Req X29 Completed SPID Migration Retention – Housekeeping Purge

NPAC SMS shall purge completed SPID Migrations from the database after tunable Completed SPID Migration Retention days have passed since the completion of the SPID Migration.

Req X30 Cancelled SPID Migration Retention - Tunable Parameter

NPAC SMS shall provide a Regional Cancelled SPID Migration Retention tunable parameter, which is defined as the number of days before a cancelled SPID Migration will be purged from the database.

Req X31 Cancelled SPID Migration Retention – Tunable Parameter Default

NPAC SMS shall default the Cancelled SPID Migration Retention tunable parameter to 365 days.

Req X32 Cancelled SPID Migration Retention – Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the Cancelled SPID Migration Retention tunable parameter.

Req X33 Cancelled SPID Migration Retention – Housekeeping Purge

NPAC SMS shall purge cancelled SPID Migrations from the database after tunable Cancelled SPID Migration Retention days have passed since the cancellation of the SPID Migration.

Req-12 Regional SPID Migration Online Functionality Indicator – Tunable Parameter

NPAC SMS shall provide a Regional SPID Migration Online Functionality Indicator tunable parameter, which is defined as an indicator on whether or not SPID Migration Online Functionality capability will be supported by the NPAC SMS for a particular NPAC region.

Req-13 Regional SPID Migration Online Functionality Indicator – Tunable Parameter Default

NPAC SMS shall default the SPID Migration Online Functionality Indicator tunable parameter to TRUE.

Req-14 Regional SPID Migration Online Functionality Indicator – Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the SPID Migration Online Functionality Indicator tunable parameter.

Req-15 Service Provider SOA Automated SPID Migration Indicator

NPAC SMS shall provide a Service Provider SOA Automated SPID Migration Indicator tunable parameter which defines whether a SOA will receive/not-receive automated SPID Migration transactions over their SOA connection.

Req-15.1 Service Provider SOA Automated SPID Migration Indicator Default

NPAC SMS shall default the Service Provider SOA Automated SPID Migration Indicator tunable parameter to FALSE.

Req 16 Service Provider SOA Automated SPID Migration Indicator Modification

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider SOA Automated SPID Migration Indicator tunable parameter.

Req 17 Service Provider SOA Automated SPID Migration Indicator Usage

NPAC SMS shall send automated SPID Migration transactions over the SOA connection only when the Service Provider SOA Automated SPID Migration Indicator tunable parameter is set to TRUE.

NOTE: To maintain consistency with SMURF Files, SPID Migration transactions sent over the interface will not apply NPA-NXX filters for the given Service Provider.

Req-18 Service Provider LSMS Automated SPID Migration Indicator

NPAC SMS shall provide a Service Provider LSMS Automated SPID Migration Indicator tunable parameter which defines whether an LSMS will receive/not-receive automated SPID Migration transactions over their LSMS connection.

Req-18.1 Service Provider LSMS Automated SPID Migration Indicator Default

NPAC SMS shall default the Service Provider LSMS Automated SPID Migration Indicator tunable parameter to FALSE.

Req 19 Service Provider LSMS Automated SPID Migration Indicator Modification

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider LSMS Automated SPID Migration Indicator tunable parameter.

Req 20 Service Provider LSMS Automated SPID Migration Indicator Usage

NPAC SMS shall send automated SPID Migration transactions over the LSMS connection only when the Service Provider LSMS Automated SPID Migration Indicator tunable parameter is set to TRUE.

NOTE: To maintain consistency with SMURF Files, SPID Migration transactions sent over the interface will not apply NPA-NXX filters for the given Service Provider.

Req-21 Service Provider SOA FTP SMURF File Indicator

Deleted.

Req-21.1 Service Provider SOA FTP SMURF File Indicator Default

Deleted.

Req 22 Service Provider SOA FTP SMURF File Indicator Modification

Deleted.

Req 23 Service Provider SOA FTP SMURF File Indicator Usage

Deleted.

Req-24 Service Provider LSMS FTP SMURF File Indicator

Deleted.

Req-24.1 Service Provider LSMS FTP SMURF File Indicator Default

Deleted.

Req 25 Service Provider LSMS FTP SMURF File Indicator Modification

Deleted.

Req 26 Service Provider LSMS FTP SMURF File Indicator Usage

Deleted.

Req X34 SPID Migration Update – Quota Management

NPAC SMS shall apply quota to SPID Migration operations for Total US SPID Migrations, Total Regional Migrations, and Regional SV Counts when NPAC Personnel approve a SPID migration.

Req X35 SPID Migration Update – Quota Management – Quota Exceeded Rejection for Service Provider Personnel

NPAC SMS shall check quota to SPID Migration operations when a Service Provider creates or modifies a SPID Migration and reject the request if any of the quotas have been exceeded.

Req X35.5 SPID Migration Update – Quota Management – Quota Exceeded Warning for NPAC Personnel

NPAC SMS shall check quota to SPID Migration operations when NPAC Personnel creates or modifies a SPID Migration and provide a warning if any of the quotas have been exceeded.

Req X36 SPID Migration Update – Quota Management – Quota Exceeded Warning Content

NPAC SMS shall include the Pending and Approved counts for all exceeded quotas in the Quota Exceeded Warning Message.

Req-27 SPID Migration Update – Migration Quota Tunable Parameter

NPAC SMS shall provide a SPID Migration Quota tunable parameter, which is defined as the maximum number of SPID Migration timeslots within a region for a given SPID Migration maintenance window.

Req-28 SPID Migration Update – Migration Quota Tunable Parameter Default

NPAC SMS shall default the SPID Migration Quota tunable parameter to seven (7) migrations.

Req-29 SPID Migration Update – Migration Quota Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the SPID Migration Quota tunable parameter.

Req-30 SPID Migration Update – All Regions Migration Quota Tunable Parameter

NPAC SMS shall provide an All Regions SPID Migration Quota tunable parameter, which is defined as the maximum number of SPID Migrations timeslots for all regions for a given SPID Migration maintenance window.

Req-31 SPID Migration Update – All Regions Migration Quota Tunable Parameter Default

NPAC SMS shall default the All Regions SPID Migration Quota tunable parameter to twenty-five (25) migrations.

Req-32 SPID Migration Update – All Regions Migration Quota Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the All Regions SPID Migration Quota tunable parameter.

Req-33 SPID Migration Update – SPID Migration Transactions not included in Recovery Response

Deleted (duplicate of RR3-274).

Req-34 Service Provider FTP SMURF File

NPAC SMS shall provide SMURF Files in a Service Provider’s FTP directory.

Note: This is the mechanism that providers that support the interface message will be expected to recover missed SPID migration messages. Based on FRS requirement RR3-274 the NPAC does not include SPID migration data in the recovery messages sent over the CMIP interface.

Req-35 SPID Migration Update – SV Quota Tunable Parameter

NPAC SMS shall provide a SPID Migration SV Quota tunable parameter, which is defined as the maximum number of SVs within a region for a given SPID Migration maintenance window.

NOTE: The number includes both ported and pooled SVs.

NOTE: The quantity of SVs can be dynamic, so the quantity is based on the number of SVs for a given migration at the time of the SPID Migration request. For subsequent migrations in a given window, the previous SPID Migration SV quantities are not recalculated. Modifying a SPID Migration will cause SV quantities to be recalculated.

Req-36 SPID Migration Update – SV Quota Tunable Parameter Default

NPAC SMS shall default the SPID Migration SV Quota tunable parameter to five hundred thousand (500,000) SVs.

Req-37 SPID Migration Update – SV Quota Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the SPID Migration SV Quota tunable parameter.

Req X37 Maintenance Window Day of the Week - Tunable Parameter

NPAC SMS shall provide a Regional Maintenance Window Day of the Week tunable parameter, which is defined as the day of the week in which SPID Migrations are performed.

Req X38 Maintenance Window Day of the Week – Tunable Parameter Default

NPAC SMS shall default the Maintenance Window Day of the Week tunable parameter to “SU” (Sunday).

Req X39 Maintenance Window Day of the Week – Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the Maintenance Window Day of the Week tunable parameter.

Req X40 Maintenance Window Start Time Hour - Tunable Parameter

NPAC SMS shall provide a Regional Maintenance Window Start Time Hour tunable parameter, which is defined as the hour in which the weekly Service Provider maintenance window begins.

Req X41 Maintenance Window Start Time Hour – Tunable Parameter Default

NPAC SMS shall default the Maintenance Window Start Time Hour tunable parameter to midnight (Central Time Zone).

Req X42 Maintenance Window Start Time Hour – Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the Maintenance Window Start Time Hour tunable parameter.

Req X43 Online SPID Migration Lead Time - Tunable Parameter

NPAC SMS shall provide a Regional Online SPID Migration Lead Time tunable parameter, which is defined as the minutes before the maintenance window that online SPID Migrations will be performed.

Req X44 Online SPID Migration Lead Time – Tunable Parameter Default

NPAC SMS shall default the Online SPID Migration Lead Time tunable parameter to 90 minutes.

Req X45 Online SPID Migration Lead Time – Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the Online SPID Migration Lead Time tunable parameter.

Req X46 Online SPID Migration – Database Updates

NPAC SMS shall perform SPID database updates for any SPID Migration that provides online operations 90 minutes (defined by Online SPID Migration Lead Time tunable) before the start of the weekly service provider maintenance window (defined by Maintenance Window Day Of The Week + Maintenance Window Start Time Hour tunables).

Req X47 Preliminary SPID Migration SMURF Files Lead Time - Tunable Parameter

NPAC SMS shall provide a Regional Preliminary SPID Migration SMURF Files Lead Time tunable parameter, which is defined as the number of days before a SPID Migration scheduled date when the Preliminary SMURF files are automatically generated.

Req X48 Preliminary SPID Migration SMURF Files Lead Time – Tunable Parameter Default

NPAC SMS shall default the Online SPID Migration SMURF Lead Time tunable parameter to 10 days.

Req X49 Preliminary SPID Migration SMURF Files Lead Time – Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the Preliminary SPID Migration SMURF Files Lead Time tunable parameter.

Req X50 Generation of Preliminary SMURF files

NPAC SMS shall generate and distribute Preliminary SMURF files for a SPID Migration tunable days (tunable Preliminary SPID Migration SMURF Files Lead Time) prior to the scheduled date for the SPID Migration.

Req X51 Generation of Final SMURF files

NPAC SMS shall generate and distribute the Final SMURF files for a SPID Migration at the start of the Service Provider Maintenance Window, in which the SPID Migration will be executed.

Req X52 Offline-Only SPID Migration Flag

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify a SPID Migration and set the Offline-Only indicator.

NOTE: The migration will be treated as offline when the indicator is set to TRUE, and treated as online when set to FALSE. There are no restrictions on multiple updates to the indicator.

Req X53 SPID Migration Suspended Status

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify a SPID Migration to a status of Suspended.

Req X54 Suspended SPID Migrations – No Automatic Online Migration

NPAC SMS shall skip SPID Migrations with a status of suspended when automatically executing online SPID Migrations.

Req X55 Suspended SPID Migrations – No Manual Online Migration

NPAC SMS shall reject requests via the NPAC Administrative Interface, to execute online SPID Migrations with a status of suspended.

**Req X56 SPID Migration Suspension/Un-suspension – No Quota Change**

NPAC SMS shall not adjust its quota on a maintenance day when a SPID Migration scheduled to this date is suspended or un-suspended.

**Req X57 Automatic suspension when pre-migration validations fail**

NPAC SMS shall suspend a SPID migration if the network data validations fail during the preprocessing of the SPID migration.

Req X58 SPID Migration - FTP Site Directory Structure

NPAC SMS shall include the scheduled date of the SPID Migration as a subdirectory where SPID Migration SMURF files are stored if the Service Provider tunable SPID Migration Date Subdirectory Indicator is set to TRUE.

Req X59 SPID Migration – FTP Site Date Subdirectory - Service Provider Tunable

NPAC SMS shall provide a Service Provider SPID Migration FTP Date Subdirectory Indicator tunable parameter which defines whether a subdirectory for each SPID Migration will be created.

Req X60 SPID Migration – FTP Site Date Subdirectory - Service Provider Indicator Default

NPAC SMS shall default the Service Provider SPID Migration FTP Date Subdirectory Indicator tunable parameter to FALSE.

Req X61 SPID Migration – FTP Site Date Subdirectory – Service Provider Indicator Modification

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider SPID Migration FTP Date Subdirectory Indicator tunable parameter.

Per LNPAWG Action Item 120809-04 that was discussed during the Jan ’10 LNPAWG meeting, it was agreed that requirement RR3-263 (update Old SP value of current SVs during a SPID Migration) can be deleted because of data inaccuracy issues. This will be implemented along with NANC 408.

Req X62 SPID Migration – Service Provider GUI Login Restriction

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to identify each Service Provider GUI user’s login as either authorized or not-authorized for SPID Migration GUI access.

Req X63 SPID Migration Update – Online-to-Offline Restriction Window – Tunable Parameter

NPAC SMS shall provide a SPID Migration Online-to-Offline Restriction Window tunable parameter, which is defined as the number of calendar days between the current date (exclusive) and the SPID Migration date (inclusive), that a change is **not** allowed to the Service Provider’s data associated with SPID Migration data that would cause the SPID Migration to move from online-to-offline.

Note: An example of the Service Provider’s data associated with SPID Migration data is the addition of an LRN where the first six digits of the LRN are the same value as one of the NPA-NXX records specified in the SPID Migration data. Both Service Providers and NPAC Personnel would receive an error message when attempting to create such an LRN.

Note: NPAC Personnel will have override capability within the restriction window for emergency purposes.

Req X64 SPID Migration Update – Online-to-Offline Restriction Window – Tunable Parameter Default

NPAC SMS shall default the SPID Migration Online-to-Offline Restriction Window tunable parameter to fourteen (14) calendar days.

Req X65 SPID Migration Update – Online-to-Offline Restriction Window – Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the SPID Migration Online-to-Offline Restriction Window tunable parameter.

Req X66 SPID Migration Update – SPID Migration Date Restriction Window – Tunable Parameter

NPAC SMS shall provide a SPID Migration Date Restriction Window tunable parameter, which is defined as the number of calendar days (inclusive) that a SPID Migration is allowed prior to the SPID Migration Effective Date.

Note: NPAC Personnel will have override capability within the restriction window for emergency purposes.

Req X67 SPID Migration Update – SPID Migration Date Restriction Window – Tunable Parameter Default

NPAC SMS shall default the SPID Migration Date Restriction Window tunable parameter to three (3) calendar days.

Req X68 SPID Migration Update – SPID Migration Date Restriction Window – Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the SPID Migration Date Restriction Window tunable parameter.

IIS:

IIS Change: add a new flow for the SPID Migration Action.

B.x.y Online SPID Migration Using SPID Migration Action

This scenario reflects the message flow for a SPID Migration from the NPAC SMS to the SOA and the NPAC SMS to the Local SMS. This action is used to change SPID ownership of NPA-NXX, NPA-NXX-X, and LRN during a SPID Migration.

1. M-ACTION Request lnpSpidMigration (from NPAC SMS to SOA if SP SOA tunable TRUE) or SMURF file processing (from NPAC SMS to SOA FTP site if SP tunable FALSE)
2. M-ACTION Response lnpSpidMigration (from SOA to NPAC SMS if SP SOA tunable TRUE) or SMURF file processing (from NPAC SMS to SOA FTP site if SP tunable FALSE)
3. M-ACTION Request lnpSpidMigration (from NPAC SMS to LSMS if SP LSMS tunable TRUE) or SMURF file processing (from NPAC SMS to SOA FTP site if SP tunable FALSE)
4. M-ACTION Response lnpSpidMigration (from LSMS to NPAC SMS if SP LSMS tunable TRUE) or SMURF file processing (from NPAC SMS to SOA FTP site if SP tunable FALSE)

GDMO:

**GDMO: (new)**

This new migration ACTION would fall under the LNPNetwork MO.

-- x.0 LNP SPID Migration Action

lnpSpidMigration ACTION

BEHAVIOUR

lnpSpidMigrationDefinition,

lnpSpidMigrationBehavior;

MODE CONFIRMED;

WITH INFORMATION SYNTAX LNP-ASN1.LnpSpidMigrationAction;

WITH REPLY SYNTAX LNP-ASN1.LnpSpidMigrationReply;

REGISTERED AS {LNP-OIDS.lnp-action x};

lnpSpidMigrationDefinition BEHAVIOUR

DEFINED AS !

The lnpSpidMigration is the action that is used on the NPAC SMS via

the SOA to NPAC SMS interface and the NPAC SMS to Local SMS interface

to initiate SPID ownership changes related to a SPID Migration.

!;

lnpSpidMigrationBehavior BEHAVIOUR

DEFINED AS !

Preconditions: This action is issued from an lnpNetwork object.

Postconditions: After this action has been executed by the NPAC, the

SOA or LSMS receiving this message will update all applicable local

records for NPA-NXX.

The SOA or LSMS must change the SPID attribute on the applicable

records to the ***migrating-to-sp*** value.

The action success or failure and reasons for failure will be

returned in the Action Reply.

NPA-NXX Filters will not be applied to SPID Migration messages sent

over the interface.

Migration creation timestamp will be set when the migration is

requsted via the NPAC GUI (LTI, Admin GUI).

Migration due date will be set to the start time of the maintenance

window associated with the migration.

Migration activation timestamp will be set when the NPAC starts

processing the migration (a time prior to the start of the

maintenance window).

-- x.0 LNP SPID Migration Package

lnpSpidMigrationPkg PACKAGE

BEHAVIOUR lnpSpidMigrationPkgBehavior;

ACTIONS

lnpSpidMigration;

REGISTERED AS {LNP-OIDS.lnp-package xx};

lnpSpidMigrationPkgBehavior BEHAVIOUR

DEFINED AS !

This package provides for conditionally including the

lnpSpidMigration action.

!;

**GDMO: (modified in yellow)**

-- 11.0 LNP Network Managed Object Class

lnpNetwork MANAGED OBJECT CLASS

DERIVED FROM "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2 : 1992":top;

CHARACTERIZED BY

lnpNetworkPkg;

CONDITIONAL PACKAGES

lnpDownloadPkg PRESENT IF

!the object is instantiated on the NPAC SMS!,

lnpSpidMigrationPkg PRESENT IF

!the object is instantiated on the NPAC SMS!;

REGISTERED AS {LNP-OIDS.lnp-objectClass 11};

-- 1.0 LNP Download Action

lnpDownload ACTION

BEHAVIOUR

lnpDownloadDefinition,

lnpDownloadBehavior;

MODE CONFIRMED;

WITH INFORMATION SYNTAX LNP-ASN1.DownloadAction;

WITH REPLY SYNTAX LNP-ASN1.DownloadReply;

REGISTERED AS {LNP-OIDS.lnp-action 1};

lnpDownloadBehavior BEHAVIOUR

DEFINED AS !

Downloading data for SPID Migrations is not included in a recovery

response.

ASN.1:

LnpSpidMigrationReply ::= SEQUENCE {

status ENUMERATED {

success (0),

failed (1)

},

error-text GraphicString255 OPTIONAL

}

LnpSpidMigrationAction ::= SEQUENCE {  
migration-from-sp              [0] ServiceProvId,  
migration-to-sp                [1] ServiceProvId,  
migration-npa-nxx-data         [2] MigrationNPANXXData,  
migration-creation-timestamp   [3] GeneralizedTime,  
migration-due-date             [4] GeneralizedTime,  
migration-activation-timestamp [5] GeneralizedTime  
}  
  
  
MigrationNPANXXData ::= SET OF SEQUENCE {  
npa-nxx-id    NPA-NXX-ID,  
npa-nxx-value NPA-NXX  
}  
  
  
Sample ACTION:  
===========================   
LocalSMS-SpidMigrationAction ::= {  
migration-from-sp "XXXX"  
migration-to-sp "YYYY"  
migration-npa-nxx-data ::= {  
npa-nxx-id 6001  
npa-nxx-value "500100"  
npa-nxx-id 6002  
npa-nxx-value "500101"  
migration-creation-timestamp "20070101000000Z"  
migration-due-date "20071211000000Z"  
migration-activation-timestamp "20071212000000Z"  
}