North American Numbering Council (NANC)
Inter-Service Provider LNP Operations Flows

• NOTE: For a more detailed description of each process step within these flows, please refer to the accompanying Inter-Service Provider LNP Operations Flows Narratives (Version 3.0)

• NOTE:
Pursuant to FCC Order 07-188, released on November 8, 2007, Local Number Portability (LNP) obligations are extended to interconnected Voice over Internet Protocol (VoIP) providers. The North American Numbering Council (NANC) identifies three classes of interconnected VoIP providers, defined as follows:

  Class 1: A standalone interconnected VoIP provider that obtains numbering resources directly from the North American Numbering Plan Administrator (NANPA) and the Pooling Administrator (PA) and connects directly to the PSTN (i.e., not through a PSTN LEC partner’s end office switch). Class 1 standalone interconnected VoIP providers must follow the Main Flows for the LNP provisioning process, serving as the New Network Service Provider (NNSP) or Old Network Service Provider (ONSP), whichever is applicable.

  Class 2: An interconnected VoIP provider that partners with a facilities-based Public Switched Telephone Network (PSTN) Local Exchange Carrier (LEC) to obtain numbering resources and connectivity to the PSTN via the LEC partner’s end office switch. Although a Class 2 interconnected VoIP provider is not considered a reseller in the context of the FCC definition of a Simple Port (refer to FCC Order 07-188 for Simple Port definition), Class 2 interconnected VoIP providers must follow the Reseller Flows for the LNP provisioning process, serving as the New Local Service Provider (NLSP) or Old Local Service Provider (OLSP), whichever is applicable.

  Class 3: A non-facilities-based reseller of interconnected VoIP services that utilizes the numbering resources and facilities of another interconnected VoIP provider (analogous to the “traditional” PSTN reseller). Although a Class 3 interconnected VoIP provider is not considered a reseller in the context of the FCC definition of a Simple Port (refer to FCC Order 07-188 for Simple Port definition), Class 3 interconnected VoIP providers must follow the Reseller Flows for the LNP provisioning process, serving as the New Local Service Provider (NLSP) or Old Local Service Provider (OLSP), whichever is applicable.

Version 3.0
Inter- Service Provider LNP Operations Flows
- Main Flow -

1. End User Contact with NLSP
2. End User agrees to change to NLSP
3. NLSP obtains end user authorization
4. (Optional) NLSP requests CSR from OLSP
5. Are both NNSP and ONSP wireless?
   - Yes
   - No
6. LSR-FOC
   - Service Provider Communication
   - Figure 2
7. ICP
   - Service Provider Communication
   - Figure 3
8. Are NNSP and ONSP the same SP?
   - Yes
   - No
9. NNSP coordinates all porting activities.
10. Is NPAC processing required?
    - Yes
    - No
11. Perform intra provider port or modify existing SW

12. Create
   - Service Provider Port Request
   - Figure 4
13. NNSP and ONSP create and process service orders
14. Was port request canceled?
    - Yes
    - No
15. Did ONSP place the order in conflict?
    - Yes
    - No
16. NPAC logs request to place the order in conflict, including cause code
17. NPAC notifies NNSP and ONSP that port is canceled
18. NNSP coordinates physical changes with ONSP
19. Is the unconditional 10 digit trigger being used?
    - Yes
    - No
20. End

Figure 1
Version 3.0
Inter-Service Provider LNP Operations Flows
- Wireline LSR/FOC Process -

1. Is end-user porting all TNs?
   - Yes: NLSP sends LSR or LSR information to NNSP for resale service
   - No: NLSP notes “not all TNs being ported in the remarks field of LSR

2. Is NLSP a reseller?
   - Yes: Notify Reseller
   - No: NNSP sends LSR/SPSR to ONSP

3. Is ONSP a reseller or is a Type 1 wireless number involved?
   - Yes: ONSP sends FOC to NNSP
   - No: NNSP forwards FOC or FOC information to NLSP

4. Notify Reseller
   - (conditional) ONSP sends LSR, LSR information, or Loss Notification to OLSP

5. ONSP sends FOC to NNSP

6. Is NLSP a reseller?
   - Yes: Notify Reseller
   - No: NNSP forwards FOC or FOC information to NLSP

7. Notify Reseller
   - (conditional) OLSP sends FOC or FOC information to ONSP

8. ONSP sends FOC to NNSP

9. NNSP forwards FOC or FOC information to NLSP

10. Is NLSP a reseller?
    - Yes: Notify Reseller
    - No: NNSP forwards FOC or FOC information to NLSP

11. NNSP forwards FOC or FOC information to NLSP

12. Return to Figure 1

Figure 2
Version 3.0
Inter-Service Provider LNP Operations Flows
- Wireless ICP Process -

ICP

Is NLSP a Reseller?

Yes

NNSP sends WPR to ONSP

No

3

Is a Type 1 wireless number involved?

Yes

ONSP sends WPRR rejection to NNSP

No

4

ONSP sends WPR or WPR information to NLSP

5

Change code owner to Old Wireline SP in NPAC and possibly LERG as necessary

6

Re-start process, return to Figure 1

7

Is OLSP a reseller?

Yes

ONSP Sends WPRR to NNSP

No

8

Is WPRR a delay?

Yes

9

ONSP sends WPR or WPR information to ONSP

No

10

Is OLSP a reseller?

Yes

11

ONSP Sends WPRR to NNSP

No

12

Is WPRR confirmed?

Yes

13

NNSP forwards WPRR or WPRR information to NLSP

No

14

15

16

OLSP sends WPRR or WPR information to ONSP

17

18

Return to Figure 1

WPRR is a resolution response

17

Figure 3

Version 3.0
Inter-Service Provider LNP Operations Flows
- Subscription Version Create Flow -

1. Create
   - NPAC notifies NPAC with Create message
   - Is Create message valid?
     - Yes
     - NPAC notifies appropriate service provider that Create message is invalid
     - NPAC starts T1 timer
     - T1 Expired?
       - Yes
       - NPAC notifies NNSP and ONSP that T1 has expired and then starts T2 timer
       - No
       - Received Second Create?
         - Yes
         - NPAC notifies appropriate service provider that Create message is invalid
         - No
         - Did NNSP send Create?
           - Yes
           - NPAC notifies NNSP that T2 has expired
           - No
           - Is Create message valid?
             - Yes
             - NPAC notifies appropriate service provider that Create message is invalid
             - No
             - NPAC notifies the ONSP that porting proceeds under the control of the NNSP
           - No
           - Has cancel window for pending SVs expired?
             - Yes
             - Notify Reseller
             - No
             - Return to Figure 1
     - No
     - NPAC notifies appropriate service provider that Create message is invalid
2. NPAC notifies NPAC with Create message
3. NPAC notifies appropriate service provider that Create message is invalid
4. NPAC starts T1 timer
5. T1 Expired?
   - Yes
   - NPAC notifies NNSP and ONSP that T1 has expired and then starts T2 timer
   - No
   - Received Second Create?
     - Yes
     - NPAC notifies appropriate service provider that Create message is invalid
     - No
     - Is Create message valid?
       - Yes
       - NPAC notifies appropriate service provider that Create message is invalid
       - No
       - NPAC notifies the ONSP that porting proceeds under the control of the NNSP
     - No
     - Has cancel window for pending SVs expired?
       - Yes
       - Notify Reseller
       - No
       - Return to Figure 1
6. Received Second Create?
   - Yes
   - NPAC notifies appropriate service provider that Create message is invalid
   - No
   - NPAC notifies appropriate service provider that Create message is invalid
7. Is Create message valid?
   - Yes
   - NPAC notifies the ONSP that porting proceeds under the control of the NNSP
   - No
   - NPAC notifies appropriate service provider that Create message is invalid
8. Return to Figure 1
9. NPAC notifies appropriate service provider that Create message is invalid
10. NPAC notifies NNSP and ONSP that T1 has expired and then starts T2 timer
11. T2 Expired?
    - Yes
    - NPAC notifies appropriate service provider that Create message is invalid
    - No
    - Received Second Create?
      - Yes
      - NPAC notifies appropriate service provider that Create message is invalid
      - No
      - Is Create message valid?
        - Yes
        - NPAC notifies appropriate service provider that Create message is invalid
        - No
        - NPAC notifies the ONSP that porting proceeds under the control of the NNSP
      - No
      - Has cancel window for pending SVs expired?
        - Yes
        - Notify Reseller
        - No
        - Return to Figure 1
12. Received Second Create?
    - Yes
    - NPAC notifies appropriate service provider that Create message is invalid
    - No
    - Is Create message valid?
      - Yes
      - NPAC notifies appropriate service provider that Create message is invalid
      - No
      - NPAC notifies the ONSP that porting proceeds under the control of the NNSP
13. Is Create message valid?
    - Yes
    - NPAC notifies appropriate service provider that Create message is invalid
    - No
    - NPAC notifies the ONSP that porting proceeds under the control of the NNSP
14. NPAC notifies appropriate service provider that Create message is invalid
15. Did NNSP send Create?
    - Yes
    - NPAC notifies NNSP that T2 has expired
    - No
    - NPAC notifies the ONSP that porting proceeds under the control of the NNSP
16. NPAC notifies NNSP that T2 has expired
17. Has cancel window for pending SVs expired?
    - Yes
    - Notify Reseller
    - No
    - Return to Figure 1
18. Notify Reseller
19. Return to Figure 1
20. Return to Figure 1

Figure 4
Version 3.0
Inter-Service Provider LNP Operations Flows
- Reseller Notification -

1. Notify Reseller

2. Is OLSP a reseller?
   - Yes
   - No

3. Does OLSP need message?
   - Yes: ONSP sends or provides information and/or message to OLSP
   - No

4. Is NLSP a reseller?
   - Yes
   - No

5. Does NLSP need message?
   - Yes
   - No

6. NNSP sends or provides information and/or message to NLSP

7. Return

Figure 5
Inter- Service Provider LNP Operations Flows
- Provisioning Without Unconditional 10-Digit Trigger -

1. NNSP activates port (locally)
2. NNSP and ONSP make physical changes (where necessary)
3. NNSP notifies NPAC to activate the port
4. NPAC downloads (real time) to all service providers
5. NPAC records date and time in history file
6. ONSP removes translations in central office or switch/HLR
7. NPAC logs failures and non-responses and notifies the NNSP and ONSP
8. All service providers update routing data (real time download)
9. NNSP may verify completion

Figure 6 Version 3.0
InterService Provider LNP Operations Flows
- Provisioning With Unconditional 10-Digit Trigger -

1. ONSP activates unconditional 10-digit trigger in the central office
2. NNSP activates central office translations
3. NNSP and ONSP make physical changes (where necessary)
4. NNSP notifies NPAC to activate the port
5. NPAC downloads (real time) to all service providers
6. NPAC records date and time in history file
7. NPAC logs failures and non-responses and notifies the NNSP and ONSP
8. All service providers update routing data (real-time download)
9. ONSP removes appropriate translations
10. NNSP may verify completion

Figure 7 Version 3.0
Inter-Service Provider LNP Operations Flows
- Conflict Flow For The Service Creation Provisioning Process -

1. Is conflict restricted?
   - Yes: NPAC rejects the conflict request
   - No: NNSP contacts ONSP to resolve conflict. If no agreement is reached begin normal escalation

2. NPAC rejects the conflict request

3. Notify Reseller

4. Was conflict resolved within conflict expiration window?
   - Yes: Was port request canceled to resolve conflict?
   - No: Notify Reseller

5. Was conflict resolved within conflict expiration window?
   - Yes: Was port request canceled to resolve conflict?
   - No: Notify Reseller

6. Notify Reseller

7. Was port request canceled to resolve conflict?
   - No: Notify Reseller
   - Yes: Was resolution message from ONSP?

8. Was resolution message from ONSP?
   - No: Did NNSP send resolution message during the restriction window?
   - Yes: Was the Conflict Cause Code 50 or 51?

9. Was the Conflict Cause Code 50 or 51?
   - No: Notify Reseller
   - Yes: NPAC rejects the conflict resolution request from NNSP

10. Did NNSP send resolution message during the restriction window?
    - No: Notify Reseller
    - Yes: NPAC notifies both NNSP and ONSP of conflict off via SOA

11. NPAC notifies both NNSP and ONSP of conflict off via SOA

12. Was the Conflict Cause Code 50 or 51?
    - No: Notify Reseller
    - Yes: Notify Reseller
Inter-Service Provider LNP Operations Flows
- Cancellation Flow For Provisioning Process -

1. End-user request to cancel
   - Did end-user contact NLSP?
     - Yes: NLSP sends cancel request to NNSP
     - No: Is NLSP a reseller?
       - Yes: NNSP sends SUPP to ONSP noting cancellation as soon as possible and prior to activation
       - No: OLSP obtains end-user authorization

2. Did end-user contact NLSP?
   - Yes: Is NLSP a reseller?
     - Yes: NNSP sends SUPP to ONSP noting cancellation as soon as possible and prior to activation
     - No: NNSP sends cancel request to NPAC
   - No: OLSP obtains end-user authorization

3. Is NLSP a reseller?
   - Yes: NNSP sends SUPP to ONSP noting cancellation as soon as possible and prior to activation
   - No: OLSP sends cancel request to NPAC

4. NNSP sends cancel request to NPAC

5. Notify Reseller: NPAC updates subscription to cancel pending, logs status change and notifies NNSP and ONSP

6. NNSP sends cancel request to NPAC

7. OLSP obtains end-user authorization

8. Is OLSP a reseller?
   - Yes: OLSP sends cancel request ONSP
   - No: ONSP sends cancel request to NPAC

9. ONSP sends cancel request to NPAC

10. Did NNSP send cancel to NPAC?
    - Yes: NPAC updates subscription to cancel, logs status change and notifies NNSP and ONSP
    - No: Did NNSP send cancel to NPAC?

11. Did the provider requesting cancel send a Create message to NPAC?
    - Yes: NPAC rejects the cancel request
    - No: NPAC waits for either cancel ACK from ONSP or expiration of second cancel window timer

12. NPAC waits for either cancel ACK from ONSP or expiration of second cancel window timer

13. Notify Reseller: NPAC updates subscription to cancel pending, logs status change and notifies NNSP and ONSP

14. Notify Reseller: NPAC updates subscription to cancel pending, logs status change and notifies NNSP and ONSP

15. NPAC Notifies ONSP that cancel ACK is missing

16. Did NPAC receive cancel ACK from ONSP within first cancel window timer?
    - Yes: Notify Reseller: NPAC updates subscription to cancel pending, logs status change and notifies NNSP and ONSP
    - No: NPAC Notifies ONSP that cancel ACK is missing

17. NPAC Notifies ONSP that cancel ACK is missing

18. NPAC Notifies ONSP that cancel ACK is missing

19. NPAC Notifies ONSP that cancel ACK is missing

20. Notify Reseller: NPAC updates subscription to cancel pending, logs status change and notifies NNSP and ONSP

21. NPAC receives cancel ACK from NNSP within first cancel window timer
    - Yes: Notify Reseller: NPAC updates subscription to cancel pending, logs status change and notifies NNSP and ONSP
    - No: NPAC Notifies ONSP that cancel ACK is missing

22. NPAC receives cancel ACK from NNSP within second cancel window timer
    - Yes: Notify Reseller: NPAC updates subscription to cancel pending, logs status change and notifies NNSP and ONSP
    - No: NPAC Notifies ONSP that cancel ACK is missing

23. NPAC receives cancel ACK from NNSP within second cancel window timer
    - Yes: Notify Reseller: NPAC updates subscription to cancel pending, logs status change and notifies NNSP and ONSP
    - No: NPAC Notifies ONSP that cancel ACK is missing

Figure 5

Figure 9
Inter-Service Provider LNP Operations Flows
- Cancellation Ack Missing from New Provider Provisioning Process

Did NPAC receive cancel message from NNSP?

No

NPAC notifies NNSP to cancel
2

NPAC updates subscription to cancel, logs conflict, and notifies NNSP and ONSP

Notify Reseller

Yes

Has conflict expiration window expired?

No

NPAC receives resolve conflict message from NNSP

Did NPAC receive resolve conflict message from NNSP?

No

NPAC updates subscription to cancel, logs cancel, and notifies NNSP and ONSP

Notify Reseller

Yes

Has NNSP conflict resolution restriction expired?

No

NPAC rejects the resolve conflict request from NNSP

Has NNSP conflict resolution restriction expired?

Yes

Notify Reseller

Figure 10

Version 3.0
Inter-Service Provider LNP Operations Flows
- Disconnect Process For Ported Telephone Numbers -

Figure 11

Version 3.0
Inter-Service Provider LNP Operations Flows
- Audit Process -

1. Service provider requests an audit from NPAC
2. NPAC issues queries to appropriate LSMSs
3. NPAC compares own subscription version to LSMS subscription version
4. NPAC downloads updates to LSMSs with subscription version differences
5. Are all audits completed?
   - Yes: Notify Reseller: NPAC reports audit completion and discrepancies to requestor
   - No: Repeat steps 2 to 4

End
NPAC updates its NPA-NXX database

NPA-NXX holder notifies NPAC of NPA-NXX code(s) being opened for porting

NPAC updates its NPA-NXX database

NPAC sends notice of code opening to all service providers

End

Figure 13

- First TN Ported in NPA-NXX -

NPAC successfully processes create request for TN subscription version

NPAC successfully processes create request for NPA-NXX-X

First subscription version activity in NPA-NXX?

Yes

End

No

Figure 14
Inter-Service Provider LNP Operations Flows
- Cancel-Undo Process -

1. Provider requests a cancel-undo

2. Is the subscription in cancel-pending status?
   - Yes
   - No

3. NPAC rejects the cancel-undo request

4. Did the provider requesting a cancel-undo issue a cancel for this subscription?
   - Yes
   - No

5. Notify Reseller
   - NPAC updates subscription to status prior to cancel and notify NNSP and ONSP

6. End

Figure 5

Figure 15
Version 3.0