



## Technical Note: Local Number Portability (LNP)

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### Topic

Extracting mobile location from carrier networks requires that the user consent, this is initially obtained via the opt-in process (by SMS or LXG Registration API). When the underlying mobile account subscription changes (due to account deactivation or phone number porting), the consent needs to be re-verified by the Developer; this document outlines the observables and procedures related to those activities.

This document covers:

- How to recognize when the LXG believes a number has been ported
- What steps to take once the condition is detected

### Intended audience

Application developers who have integrated to the LXG to extract mobile location for their Enterprise applications.

### Overview

#### Background

All wireless phone numbers are subject to being deactivated (this occurs when service is discontinued, eventually that phone number may be allocated to a different user), or “ported” from one carrier to another (or even to/from landlines).

As part of normal transaction-handling the LXG will detect the specific carrier response that indicates that the phone number is no longer associated to the queried network. Once that happens, a very specific sequence of API responses will be returned.

To protect the privacy of the end-user, all registrations will be deleted once a phone number is recognized to have been deactivated. Thus Developers will need to re-verify and re-execute the opt-in for that phone number to ensure that the user continues to provide consent to be located.

The following responses will be returned;

1. First, the carrier indicates that the phone is no longer associated to the queried network so no location is returned
  - a. getLocationX response: NOT\_FOUND
2. Within 24-hours, all existing opt-ins will be deleted, after which a location request will return an error
  - a. getLocationX response: Error 0005/“Phone number not subscribed to the ClassID”

getLocationX error 00005 will continue to be returned to getLocationX requests until the phone is re-registered (which should be done after validating that the user is the same person who provided consent with the deactivated carrier account), following the existing opt-in procedures as configured for the ClassID.



Note that this sequence will be triggered for all ClassIDs to which the phone is subscribed, so that one Developer's transaction may return NOT\_FOUND (as shown in Response #1) whereas another Developer will see only Error 00005 (Response #2).

By the same token, receiving a NOT\_FOUND response to a getLocationX request **does not** justify re-registration; this is a normal response to a phone that is off-network or not locate-able for any reason. The critical indicator of a port/deactivation condition is the Error 00005 response.

## Summary

Developers are urged to plan for number portability and deactivations by designing their apps to handle the following conditions.

### How to recognize the port/deactivation condition:

If your application encounters the **getLocationX Error 0005** under the following conditions

1. end user has previously fully completed the opt-in
2. an opt-out command has NOT been sent (either by user via MO-SMS "STOP" or by Developer via "CANCEL" command of subscribePhone operation)

If all of the above are true for the phone number in question, the port/deactivation condition may apply.

### Recommended course of action

If all of the above conditions are true, application Developers should:

1. Verify that the phone is still associated to the same user even after changing carriers
2. Re-execute all steps in your campaign's approved opt-in process, for example
  - a. MO-SMS: OPTIN/YES <CLSID>
  - b. Registration API (subscribePhone) with commands=OPTIN, then YES (as necessary)

Once the user has acknowledged and accepted to be located, the application should re-submit location queries.

## Questions?

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