**CRTC INTERCONNECTION STEERING COMMITTEE**

**TIF REPORT**

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| Date submitted | 2024-08-06 |
| Working Group | CSCN |
| Report # | 145A |
| File ID | CNRE145A |
| Report Title | TIF 119 Consensus Report CNRE145A: Inclusion of unused numbers from previously assigned CO Codes to the number pooling inventory |
| Outcome | Consensus |
| Related Task(s) | CSCN TIFs 119, 117, 118, 120 |
| Description | On 5 February 2024, the CRTC issued Telecom Regulatory Policy CRTC 2024-26 - *Implementing thousand-block pooling*.Paragraph 66 of the Policy directs the CISC to “examine the inclusion of unused numbers from previously assigned CO Codes in the number pooling inventory and file a report with the Commission by 6 August 2024.”Paragraph 67 of the Policy states that:“The report should also make recommendations on the detailed steps, roles and responsibilities, and timelines to implement the mechanism, including whether it should be implemented at the same time as the initial implementation of TBP or in a subsequent phase as soon as possible thereafter. It should also take into consideration the changes, if any, required to the existing bulk porting process or any other database, system, or process.”Accordingly, the CSCN, as a CISC working group, has undertaken the task of inclusion of unused numbers from previously assigned CO Codes in the pool. |
| Conclusions | See the attached report |
| Recommendations | See the attached report |
| Attachments | TIF 119 Consensus Report CNRE145A: Inclusion of unused numbers from previously assigned CO Codes to the number pooling inventory |

Canadian Interconnection Steering Committee (CISC)

Canadian Steering Committee on Numbering (CSCN)

TIF 119 Consensus Report CNRE145A: Inclusion of unused numbers from previously assigned CO Codes to the number pooling inventory

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# Scope

The scope of this report is limited to those questions set out in paragraphs 66 and 67 of Telecom Regulatory Policy CRTC 2024-26, *Implementing thousand-block pooling*, (the Policy) that pertain to the implementation of Thousands-Block Pooling (TBP) on previously assigned Central Office (CO) Codes (in-service CO Codes). Questions that are not within this scope are identified and will be addressed by the Canadian Steering Committee on Numbering (CSCN) later.

# Background

The Policy was issued on 24 Feb 2024. It contained directions to Canadian carriers, the Canadian Numbering Administrator (CNA), the Canadian Local Number Portability Consortium (CLNPC), and the Canadian Numbering Administration Consortium (CNAC) regarding a schedule for TBP implementation and associated reporting requirements. It also (at paragraphs 66 and 67) contained a request that CISC file a report examining the inclusion of unused numbers from in-service CO Codes and, in particular, whether it should be implemented at the same time as the initial implementation of TBP or in a subsequent phase as soon as possible thereafter. In addition, the CISC was requested to advise on the best mechanism to accomplish the implementation of TBP on in-service CO Codes considering the following issues:

* what level of contamination is acceptable;
* whether there should be a general cleanup or other process, or both, and whether the process(es) should be voluntary or mandatory;
* what other criteria may be relevant, such as the population or population growth of a given exchange;
* whether number blocks should be returned if they are not used after a specific period of time;
* how to mitigate the impact of potential encumbrances that might hinder the reuse of telephone numbers (e.g., Short Message Service [SMS] listings, National Do Not Call List listings, 4-1-1 listings, the 90-day disconnection blackout period, and burned numbers);
* whether and how to curtail or prohibit the one and done approach in the case of IoT and other services;
* how the snap-back process would work with any new mechanism(s);
* limitations applicable to smaller carriers; and
* any other relevant factor.

The report was requested by 6 August 2024.

# Overview

The CSCN proposes that there be a scheduled roll-out for TBP in Canada, as opposed to a flash cut for all Local Number Portability (LNP) capable Exchange Areas. The main benefit of a scheduled roll-out is that systems and processes can be tested with a limited demand. Any implementation issues that are discovered in the initial phase of roll-out will not affect the general business of number assignment in the rest of the country. Moreover, a scheduled roll-out will mean that not all carriers will need to support all TBP functions at the same time, minimizing the chance that small, regional carriers will need to make the necessary network and system changes before they are actually needed. (In general, all TSPs will need to implement or acquire the ability to route calls in a TBP environment as soon as TBP implementation begins in the regions in which they operate. However, certain internal functions such as a TBP-capable number inventory system will not be needed until a carrier applies for additional numbering resources in a TBP-enabled Exchange Area.)

The roll-out plan will first focus on a limited implementation in a few Exchange Areas (or exchanges). These Exchange Areas will be selected where there is sufficient ongoing demand for numbers to allow processes to be fully tested, but not so large that carriers’ forecasts require full CO Codes (in which case TBP processes would not be tested). The CSCN expects to include Exchange Areas in various regions of the country to involve different Incumbent Local Exchange Area Carriers (ILECs) and any regional carriers that wish to participate.

The next phase of the roll-out plan will include LNP-capable Exchange Areas within Numbering Plan Areas (NPA) complexes that are the closest to exhaust. Focusing industry efforts in these NPA complexes will have a more immediate effect on the expected life of the currently available numbering resources than in other NPA complexes.

Subsequently, the roll-out plan will address the rest of the country with the aim of reaching all LNP-capable Exchange Areas in an expedient but efficient manner. One consideration in the development plan will be the projected exhaust date of the NPA complex, but there may be other considerations.

The CSCN proposes to test inclusion of numbers from previously assigned CO Codes in the first phase of the roll-out. This is dependent (among other things) on the readiness of the CNA and CLNPC systems and processes, and on carriers to donate blocks from in-service codes. The CSCN expects that these dependencies will be satisfied but, if any will not be satisfied for a significant time, the roll-out should proceed for new codes alone.

Donation of blocks from previously assigned CO Codes will be encouraged but not mandatory. If a new CO Code must be issued in the absence of a donated block in pooled Exchange Area, that new code will be classified as a pooled CO Code and any blocks the requesting carrier does not need will be placed in a pool for that Exchange Area. As long as it is in an Exchange Area where there is reasonable continuing demand for numbers from growth or new entrants, it is likely to be used efficiently. With some experience in TBP, the CSCN and CNA (as Pooling Administrator) will be in a better position to assess if relying on voluntary donations is limiting the benefits of TBP in a meaningful way. The reporting of number utilization in the future, as recommended in CNRE144B (*CSCN Response to Telecom Regulatory Policy CRTC 2024-26, Paragraph 51*) can be used to monitor the effectiveness of the voluntary donation process.

# Timing of implementation

The CSCN has agreed that eligible blocks may be returned prior to the availability of blocks in an Exchange Area on a voluntary basis commencing in the first phase of the roll-out consistent with the implementation schedule. The CSCN recognizes that this may not satisfy demand at which point applicants will have to apply for a replenishment CO Code.

When a replenishment CO Code is requested, the applicant will choose the number of blocks they require. The remaining Blocks will remain in the pool. In this way, implementing TBP to replenishment CO Codes will improve numbering efficiency on a prospective basis.

# Implementation options

In this section, the CSCN addresses the specific items from Telecom Regulatory Policy CRTC 2024-26.

# Level of Contamination

Contamination occurs when at least one Telephone Number (TN) within a block of TNs is not available for assignment to end users or customers. The contamination level is the number of TNs unavailable for assignment divided by 10,000, expressed as a percentage.[[1]](#footnote-2) In the US, blocks contaminated up to and including ten percent are eligible for donation.

Prior to donating any Thousands-Block, a carrier must determine if the contamination level of the block is within the eligible range for donation. Telephone numbers classified as Administrative, Aging, Assigned, Unassigned/Unreported Resold TNs, Reserved or Ported Out are not available for assignment and would therefore be included in the calculation of the contamination level. The contamination level will be reported to the CNA with the block return and the CNA will validate the contamination level reported by the donating carrier against the Number Portability Administration Centre/Service Management System (NPAC/SMS).

There may be diminishing returns for higher contamination percentages. The higher the contamination level, the fewer available numbers in the Thousands-Block. Higher contamination levels may also create a significant increase in the amount of work for carriers. The amount of work is dependent on the carrier’s Inventory Management Systems. The higher the contamination percentage, the more likely a carrier will have to do more intra-service provider TN ports prior to returning blocks which increases cost for a declining value. A lower contamination level would see a reduced number of blocks eligible for the pool. The CSCN believes that a ten percent contamination level is a good compromise.

**Recommendation 1:** The CSCN recommends that the CRTC approve a maximum of 10% contamination as a block donation criterion for the return of blocks by carriers as directed in Telecom Regulatory Policy CRTC 2024-26.

# Cleanup of previously assigned codes/Initial donation

Cleanup of previously assigned codes is defined as a donation of excess blocks of inventory which are below the contamination threshold and for which the carrier does not forecast a requirement within the next 12 months.

Excess inventory is determined in part by current utilization and forecasted demand. In CNRE144B (*CSCN Response to Telecom Regulatory Policy CRTC 2024-26, Paragraph 51*), the CSCN recommended semi-annual utilization reports be submitted with forecasts. These reports will support analysis regarding whether additional blocks are likely to be available for donation in Exchange Areas.

The CSCN supports the voluntary inclusion of unused numbers from previously assigned codes in the Exchange Area pools which are subject to the initial implementation of TBP to ensure that this aspect of TBP can be fully tested in the first phase.

The improvement in numbering efficiency associated with TBP does not depend on cleaning up all CO Codes.  It will be realized when there is a large enough pool of available Thousands-Blocks for each Exchange Area to meet the demand for new numbering resources. The optimal size of the pool will depend on the quantity of TNs forecasted and the quantity of footprint CO Codes expected.  A larger pool will provide no benefit to prospective numbering efficiency.

The CSCN is sensitive to the costs and benefits of clean-up activities.  Some CO Codes will have uncontaminated blocks, while many will not. Some ILEC CO Codes may have been in service for decades and may have relatively low utilization for a number of reasons (e.g. customers migrating to wireless phones and giving up their landlines, low TN demand).  CO Codes may have low utilization but blocks may not meet the criteria for donation.

Block donation (contaminated blocks) will have associated porting costs. Moreover, when the first block in a CO Code is donated, individual record storage charges will apply to both the CO Code and any retained blocks thus increasing the cost of record storage in the BIRRDS database. The donor of a single block from a previously held CO Code will see a 10-fold increase (one CO Code record and nine retained block records) in record storage charges.  The actual increase in record storage charges will depend on the number of blocks retained by the CO Code holder. To the extent that donations create a larger pool than is required to meet demand, these additional storage costs will generate no commensurate public benefit.

Carriers have an incentive to clean up their own CO Codes to the extent that the activity delays NPA exhaust, because NPA relief is a disruptive and expensive activity.  For this reason, the CSCN expects that voluntary donations will be sufficient to maintain the pools.  As pool administrator, the CNA would be in a position of identifying when the pool size for a given Exchange Area is insufficient, and to encourage code-holders to conduct additional clean-up activities.  The CNA could choose to engage CRTC staff if it appears that a carrier is not engaging in the voluntary donation process in good faith.

Each successive group of Exchange Areas to be rolled out will follow a process similar to that described in Appendix A.

Carriers donating blocks will be required to comply with a block return checklist similar to Appendix B, complete details to be included in the revised guidelines.

The CSCN plans to develop a national rollout plan for CRTC review and approval, which will include an initial TBP implementation for selected groups of Exchange Areas, in accordance with CRTC deadlines.

**Recommendation 2:** The CSCN recommends that the CRTC:

1. directs LECs and wireless carriers to implement a phased approach to TBP based on groups of Exchange Areas; and
2. requests that the CISC propose the Exchange Areas to be included in the initial rollout within 6 months of the directive regarding this report.

**Recommendation 3:** The CSCN recommends that the CRTC directs LECs and wireless carriers to adopt a voluntary block donation process as part of the initial implementation of TBP.

# Return of Number Blocks Requested but Not Put in Service within 6 Months

Currently, a CO Code assigned to a carrier must be placed In-Service within 6 months after the initially published Effective Date. Otherwise, the Code Holder must return the CO Code to the Administrator for reassignment or apply for an extension. (The CO Code reclamation procedures are in Section 6.5.2 of *Canadian Central Office Code (NXX) Assignment Guideline*.)

The CSCN has concluded that the same reclamation process should apply to Thousands-Blocks that are not put into service in 6 months. The *Central Office Code (NXX) Assignment Guideline* will need to be modified to reflect this.

**Recommendation 4:** The CSCN recommends that the CRTC request the CISC to modify the *Central Office Code (NXX) Assignment Guideline* to indicate that blocks not put into service within 6 months of assignment be subject to reclamation, by 6 months prior to the TBP implementation date.

# Hindrances to reuse of telephone numbers

The Commission asked the committee to consider:

* how to mitigate the impact of potential encumbrances that might hinder the reuse of telephone numbers (e.g., Short Message Service [SMS] listings, National Do Not Call List listings, 4-1-1 listings, the 90-day disconnection blackout period, and burned numbers); and
* whether and how to curtail or prohibit the one and done approach in the case of IoT and other services.

Because this issue does not pertain to the implementation of TBP on previously assigned Central Office (CO) Codes, it is outside the scope of this report.

# Changes to snap-back

Currently, when a service using a ported number is disconnected, the number automatically reverts (or snaps back) to the CO Code holder, making it available for assignment to a new customer. In a TBP environment, the snap-back process must be modified as follows:

* When a block has been donated to the pool and subsequently assigned to another carrier, ported numbers must snap back to the new owner of the block.
* If a donated block has not yet been assigned to a new block holder, a previously ported out number must snap back to the CO Code holder. However, rather than making the number available for re-assignment, the carrier must treat it as a “vacant number” until the block is assigned at a later date.
* When the service associated with a ported number is disconnected, the TN will snap back to the block holder where the block is assigned to a carrier.

This process will be documented in the implementation plans and guidelines that will be submitted to the Commission for approval.

**Recommendation 5:** The CSCN recommends that the CRTC requests the CISC to modify number porting process documentation to reflect the revised snap-back process to accommodate TBP by 6 months prior to the TBP implementation date.

# Considerations for smaller carriers

The phased roll-out of TBP, combined with voluntary block donations, provides some flexibility to smaller carriers with respect to their own preparations for TBP.

Smaller carriers may choose to postpone their acquisition of TBP-capable numbering resource management systems (and adoption of related processes) until they are ready to acquire additional numbering resources in a TBP-enabled Exchange Area or donate blocks to the pool. Since smaller carriers have lower demand, this could extend the date by which these changes are required significantly.

However, all carriers including small carriers must utilize a TBP-capable query database prior to the activation of the first block record anywhere where they are the N-1 carrier. This is required for carriers to route certain calls to the terminating carrier and will therefore be unavoidable when the first Exchange Area becomes TBP ready.

# Bulk porting (Paragraph 67 of Telecom Regulatory Policy CRTC 2024-26)

CLNPC has confirmed that no changes to mass updates and mass porting functions are required that are not already supported in the NPAC.

# Other considerations

One limitation of the donation process is that the code holder will retain the CO Code and the associated LRN. Therefore, it is not a solution for the situation where a carrier is entering its first Exchange Area in an LIR (or in the case of a wireless carrier, entering a new Local Calling Area), and requires a new CO Code in order to obtain an LRN, even though there may be sufficient blocks available in the pool to accommodate its predicted demand.

An alternative arrangement would involve a voluntary transfer of a CO Code from a carrier that has additional codes in that Exchange Area. The existing code holder would retain a block(s) within the transferred CO Code for its own customers (including predicted demand). The new carrier could use the CO Code to obtain a footprint LRN.

As another alternative, a Proposed CLEC may wish to consider a facilitated LRN from another carrier operating in the LIR depending on the extent to which the CLEC wishes to rely on the services of that carrier. The Commission identified this alternative as an option and encouraged its use.[[2]](#footnote-3) However, the Commission’s rules need to be updated in order for this alternative to be useful.

In *Rogers Wireless Partnership Part VII application regarding the requirement for a central office code in each served exchange* (Telecom Decision CRTC 2007-23), the CRTC stated the following regarding the conditions of entry for a CLEC: “It also determines that CLECs must acquire at least a single CO Code and assign a single LRN per LIR in which they provide local service, rather than per ILEC exchange.”[[3]](#footnote-4) The Commission effectively nullified this requirement in the Policy, where it ruled that “…effective the date of TBP implementation, LECs are not required to obtain a CO Code in every exchange in which they offer local service, and wireless carriers are not required to obtain a CO Code per local calling area;…”[[4]](#footnote-5) In order that facilitated LRNs are not effectively precluded and to clarify that blocks are still required rather than entire CO Codes, the CSCN proposes new language for this requirement, as follows:

Effective the date of TBP implementation, Type I & II CLECs must acquire at least 1 Thousands-Block and establish an LRN, either by obtaining a footprint CO Code or by acquiring a facilitated LRN from a third party in every LIR in which they offer local service.

Effective the date of TBP implementation, wireless service providers must acquire at least 1 Thousands-Block and establish an LRN, either by obtaining a footprint CO Code or by acquiring a facilitated LRN from a third party in every LCA in which they offer wireless service.

**Recommendation 6:** The CSCN recommends that the CRTC request that the CISC amend process documentation and the numbering guidelines to reflect that, effective the date of TBP implementation, Type I & II CLECs must acquire at least 1 Thousands-Block and establish an LRN (either by obtaining a footprint CO Code or by acquiring a facilitated LRN from a third party) in every LIR in which they offer local service.

**Recommendation 7:** The CSCN recommends that the CRTC request that the CISC amend process documentation and the numbering guidelines to reflect that, effective the date of TBP implementation, wireless service providers must acquire at least 1 Thousands-Block and establish an LRN, either by obtaining a footprint CO Code or by acquiring a facilitated LRN from a third party in every LCA in which they offer wireless service.

# Conclusions

The CSCN is confident that a phased-rollout of TBP, including voluntary block donations from in-service CO Codes, is the prudent approach to implementation of TBP, as it allows the improved numbering efficiency of TBP to be realized, while avoiding unnecessary risks. However, the timely approval of these recommendations is critical in planning the implementation.

For these recommendations to be implemented by 6 October 2025, the CSCN requests a determination on this report by 31 March 2025.

# Recommendations

The CSCN requests that the Commission accept this report and approve the recommendations herein by 31 March 2025.

# Terms and Acronyms

|  |  |
| --- | --- |
| Administrative Numbers | A TN that has been set aside for internal administrative purposes.Examples of Administrative Numbers are: Test Numbers, Employee/Official Numbers, Location Routing Numbers (LRNs), Temporary Local Directory Numbers (TLDNs) and Soft Dial Tone Numbers. |
| Aging Numbers | Disconnected TNs temporarily unavailable for re-assignment to another customer for a specified period of time as further specified in Appendix F of the *Central Office Code (NXX) Assignment Guideline*.For example, numbers previously assigned to residential customers may be aged for no less than 45 days and no more than 90 days. |
| Assigned Numbers | Numbers working in the Public Switched Telephone Network under an agreement such as a contract or tariff at the request of specific End Users or customers for their use, or numbers not yet working but having a customer service order pending. Assigned TNs also include numbers ported out for the purposes of transferring the service to another service provider. If the carrier has provided numbering resources to another carrier or non-carrier and has received utilization information in the format prescribed from the receiving carrier or non-carrier, the received TNs that are reported as assigned to End Users are included.  |
|  Available Numbers | Numbers thatare available for assignment to subscriber access lines, or their equivalents, within an Exchange Area and are not classified as Assigned, Unassigned/Unreported Resold TNs, Administrative, Aging, or Reserved. Available Numbers is a residual category that can be calculated by subtracting a sum of numbers in the Assigned, Unassigned/Unreported Resold TNs, Administrative, Aging, and Reserved primary categories from the total of numbers in the carrier’s inventory of a CO Code or block. |
| Contamination | Contamination occurs when at least one Telephone Number (TN) within a Thousands-Block (NPA-NXX-X) of TNs is not Available for Assignment to end users or customers. Blocks contaminated up to and including 10 percent are eligible for donation/return. For purposes of this provision, a TN is not Available for Assignment if it is classified as Administrative, Aging, Assigned, Unassigned/Unreported Resold TNs, or Reserved. |
| Effective Date | The date by which routing and rating within the Public Switching Telephone Network (PSTN) shall be working for the Assigned block (NPA-NXX-X) or the Assigned Central Office (CO) Code (NPA-NXX). Also, the date by which the block becomes an active block or the CO Code becomes an active CO Code.  |
| Exchange Area Number Pool | Used in TBP to describe a reservoir of unassigned blocks (NPA-NXX-X) in an Exchange Area administered by the Pooling Administrator (PA) for the purposes of assignment to carriers participating in TBP. |
| End User | A residential, business, institutional, or governmental entity that subscribes to a service, uses that service for its own purposes, and does not resell such services to other entities.  |
| Facilitated LRN | Due to 6-digit routing, typically a service provider entering a new area would be assigned a new CO Code and would establish an LRN based on a TN from the CO Code and apply the default routing to that CO Code.A Facilitated LRN is when a new area entrant uses the resources of an alternate service provider, already established in the Exchange Area, that can provide interconnection and routing without a need for the new entrant to obtain a new CO Code. |
| Intra-Service Provider (ISP) Port | A process which allows a carrier to retain unavailable Telephone Numbers (TN) in contaminated blocks (NPA-NXX-X) that are being Returned to an Exchange Area Number Pool. Specifically, numbers assigned to customers from Returned blocks that are contaminated shall be ported back to the returning carrier to enable it to continue to provide service to those customers. An ISP Port can also be used to move a TN(s) from one Switching Entity/Point of Interconnection (POI) serving an Exchange Area to another Switching Entity/POI serving the same Exchange Area where Location Routing Number (LRN)-Local Number Portability (LNP) is in use. |
| Non-carrier | An entity that receives TNs and is not an End User or a carrier.  |
| Reserved TN | A non-working number which has been allocated to a specific customer. |
| Return/Returning | The process by which carriers contribute Telephone Numbers (TN) to an Exchange Area Number Pool. In the context of these guidelines, carriers shall use the block (NPA-NXX-X) return process to return blocks to appropriate Exchange Area Number Pool. |
| Unassigned/Unreported Resold TNs  | Numbers that are made available for use by another carrier or non-carrier, where:1. the carrier providing the numbering resources has not obtained utilization information in the format prescribed from the receiving carrier or non-carrier, in which case all TNs made available to the receiving carrier or non-carrier are included; or
2. the carrier providing the numbering resources has obtained utilization information in the format prescribed from the receiving carrier or non-carrier, in which case the received TNs that are reported as not assigned to End Users are included.
 |
| Unavailable Numbers | Numbers that are not Available numbers. |

# Contributions

| **Contribution Name** | **Submitter** | **Date Posted** |
| --- | --- | --- |
| CNCO227A - Teksavvy contribution - TIF 119 - Proposed TIF 119 (Report on inclusion of unused numbers) | Diane Dolan | 2024-03-06 |
| CNCO233A - TekSavvy contribution - TIF 119 - Initial discussion of inclusion of unused numbers from previously assigned CO Codes in TBP | Diane Dolan | 2024-04-09 |
| CNCO233B - TekSavvy contribution with CSCN remarks- TIF 119 - Initial discussion of inclusion of unused numbers from previously assigned CO Codes in TBP | Diane Dolan | 2024-04-16 |
| CNCO236A - COMsolve contribution - TIF 118 - TBP Block Return Checklist | Ed Antecol | 2024-04-18 |
| CNCO233C - CSCN CDT contribution - TIF 119 - Initial discussion of inclusion of unused numbers from previously assigned CO Codes in TBP | Contribution Development Team | 2024-05-06 |
| CNCO243A - TELUS contribution - TIF 119 - Proposed format for report | John MacKenzie | 2024-05-08 |
| CNCO243B - Teksavvy contribution - TIF 119 - Draft Report for TIF 119 | Diane Dolan | 2024-05-24 |
| CNCO243C - TELUS contribution - TIF 119 - Draft report for TIF 119 | John MacKenzie | 2024-05-31 |
| CNCO243D - Teksavvy contribution - TIF 119 - Draft report for TIF 119 | Diane Dolan | 2024-06-10 |
| CNCO243E - CSCN contribution - TIF 119 - Draft report for TIF 119 | CSCN | 2024-06-12 |
| CNCO256A - CNA contribution for TIF 119 - Exchange Areas & Counts of OCNs, Codes and Codes Assigned previous years [2024-07-03] | Kelly Walsh | 2024-07-03 |
| CNCO243F - CSCN contribution - TIF 119 - Draft report for TIF 119 | CSCN | 2024-07-03 |
| CNCO256B - CNA contribution for TIF 119 - Exchange Areas & Counts of OCNs, Codes and Codes Assigned previous years [2024-07-04] | Kelly Walsh | 2024-07-04 |
| CNCO257A - COMsolve contribution - TIF 119 - Proposal for a Voluntary CO Code Transfer Process for Establishing a new LRN | Ed Antecol | 2024-07-04 |
| CNCO243G - CSCN contribution - TIF 119 - Draft report for TIF 119 | CSCN | 2024-07-10 |
| CNCO243H - TELUS contribution - TIF 119 - Draft report for TIF 119 | John MacKenzie | 2024-07-16 |
| CNCO243I - TekSavvy contribution - TIF 119 - Draft report for TIF 119 | Diane Dolan | 2024-07-17 |
| CNCO243J - CSCN contribution - TIF 119 - Draft report for TIF 119 | CSCN | 2024-07-17 |
| CNCO243K - TekSavvy/TELUS contribution - TIF 119 - Draft report for TIF 119 | Diane Dolan / John MacKenzie | 2024-07-19 |
| CNCO243L - CSCN contribution - TIF 119 - Draft report for TIF 119 | CSCN | 2024-07-19 |
| CNCO243M - TELUS contribution - TIF 119 - Draft report for TIF 119 | John MacKenzie | 2024-07-23 |
| CNCO243N - CSCN contribution - TIF 119 - Draft report for TIF 119 | CSCN | 2024-07-23 |
| CNCO243O - TELUS contribution - TIF 119 - Draft report for TIF 119 | John MacKenzie | 2024-07-24s |

Appendix A

**Exchange Area Number Pooling Implementation**

The following outlines the Exchange Area Number Pooling Implementation Procedures:

**1.0 Exchange Area Number Pooling Implementation Procedures**

This section describes the responsibilities of the Pooling Administrator (PA) and Service Providers (SP) when Thousands-Block Number Pooling (TBP) is to be implemented in one or more Exchange Areas in accordance with the implementation plan.

The decision to establish an Exchange Area Number Pool in any given location(s) shall be in accordance with a Thousands-Block implementation plan filed by CSCN and approved by the CRTC.

1. **Outline of Milestones**

At least 3 months prior to the expected Implementation and Pool Start/Allocation Date for one or more Exchange Areas as set out in the approved Thousands-Block implementation plan, the PA shall:

1. obtain a list of SPs that have Local Number Portability (LNP)-capable Switching Entities/Points of Interconnection (POI) in the geographic area where TBP is to be implemented;
2. schedule a meeting and assure that the SPs are aware of their requirement to participate in TBP and encourage their attendance and participation, and
3. Present a template of the implementation milestones (Table 1) which identifies the milestones that SPs shall be required to meet in order to implement TBP by the mandated or agreed upon Implementation Date.

The PA and participating SPs determine the dates of the milestones on Table 1 at the initial planning meeting.

|  |  |  |
| --- | --- | --- |
| Milestone | Description | Date |
| 1 | Forecast Report Date |  |
| 2 | Block Protection and Block Donation/Return Identification Date |  |
| 3 | Block Disconnect Date  |  |
| 4 | PA Assessment of Industry Inventory Surplus/Deficiency |  |
| 5 | Implementation and Pool Start/Allocation Date  |  |

**2.1 Forecast Report Date**

The Forecast Report Date is the deadline for SPs to report their forecasted block demand to the PA using a form equivalent to the current TBCOCAG Appendix 4. This forecast shall be used by the PA to establish the Exchange Area Number Pools and by SPs to determine quantity of blocks to return.

**2.2 Block Protection and Donation/Disconnect Identification Date**

SPs shall identify all blocks that to be donated/returned to the Exchange Area Number Pools. These blocks must not exceed the Contamination threshold.

SPs shall protect blocks to be returned from further Contamination as of the Block Protection and Donation/Disconnect Identification Date. (Note: If the interval between the Block Protection and Donation/Disconnect Identification Date and the Implementation and Pool Start/Allocation Date is at least 90 days, then numbers in aging pools associated with blocks to be donated/returned do not require an ISP port.)

**2.3 Block Disconnect Date**

The interval between the Block Protection and Donation/Disconnect Identification Date and the Block Disconnect Date shall be determined by industry consensus. This time interval requires considerable verification work by SPs so that all Available TNs are identified. Therefore, the length of the interval between the Block Protection and Donation/Disconnect Identification Date and the Block Disconnect Date should depend upon the quantity of contaminated blocks to be donated/returned. However, in no case shall the interval be less than 30 calendar days.

SPs shall submit all Part 1A block disconnects to the PA by the Block Disconnect Date.

**2.4 PA Assessment of Industry Inventory Surplus/Deficiency**

For each Exchange Area Number Pooling implementation, the PA shall evaluate whether there shall be enough blocks donated/returned to create an Exchange Area Number Pool with enough supply to meet the aggregate forecasted demand for TNs for six (6) months beyond the Implementation and Pool Start/Allocation Date. If the PA determines there shall be an insufficient supply to meet this demand, the PA shall allow SPs with a forecasted demand the option to apply for additional CO Codes from the North American Numbering Plan Administrator (NANPA) when requesting blocks.

The PA shall post the assessment of the Exchange Area Number Pool(s) to the PA website for SPs to view the results of the surplus/deficiency determination on the eighth calendar day after the Block Disconnect Date.

**2.5 Implementation and Pool Start/Allocation Date**

The Implementation and Pool Start/Allocation Date is the date the PA may start allocating blocks from the Exchange Area Number Pool(s) to SPs. This is also the start date for SPs to send applications for blocks to the PA. In the US, carriers file semi-annual telephone number utilization reports along with their NRUF and forecasted demand. Having an assessment of number utilization by Exchange Area is the starting point for any necessary clean-up process.

As excess inventory is determined in part by forecasted demand, the CSCN recommends semi-annual utilization reports be submitted to the CNA which will trigger further clean-up as appropriate.

The Implementation and Pool Start/Allocation Date may be as few as five business days following the Block Disconnect Date: two calendar days are necessary to allow the NPAC download of ISP Ports to occur and two business days to allow the PA to compile the necessary data; the additional three business days are for the initialization of the data in BIRRDS. The Pool Start/Allocation Date may also be established beyond five business days following the Block Disconnect Date, depending on local circumstances.

The CSCN recommends that the donation of blocks should be on a volunteer basis during the initial roll-out phase. The number utilization reports for carriers who have donated blocks will reflect their cleanup efforts. The number utilization reports for carriers who chose not to donate blocks may reflect an excess of numbering resources in an Exchange Area where TBP has been implemented. This may trigger an audit when the carrier requests additional numbering resources in the TBP Exchange.

The requirement for mandatory donations of excess numbers will be assessed after the initial implementation period. The CSCN believes that Utilization reporting is an important metric for monitoring effectiveness of the TBP regime. The amount of excess numbering resources identified on carriers’ utilization reports will be used in the determination of mandatory donations.

Appendix B

**Block Return Checklist for Carriers Prior to Submitting a Part 1A for a Block Return**

**Note**: Carriers may retain a block if they can demonstrate

that:

a) the block is required to meet the carrier’s 12 months projected forecast beyond the Implementation and Pool Start/Allocation Date, or

b) there are technical reasons which justify retaining the block such as TNs that are Assigned to non-portable services (e.g., mass calling CO Code), or

c) the block is an initial block, or footprint block

1. Run reports to verify that there are not more than 100 Unavailable TNs in any block which the carrier is considering Returning.
2. Verify Available TNs in blocks which they intend to Return to assure they are not assigned in Switching Entities/POIs, billing systems, etc. Which blocks of the excess inventory to be donated is at the discretion of the carrier subject to the contamination thresholds and not based on individual block usage history.
3. Protect the block from further assignments.
4. Carriers shall complete ISP Ports on Unavailable TNs in contaminated blocks which they are Returning, including (i) TNs assigned to other carriers and non-carriers (i.e., Intermediate Numbers), (ii) TNs used for administrative purposes (i.e., Administrative Numbers), and (iii) TNs assigned to customers (i.e., Assigned Numbers). (Not Numbers in Aging Pool). If ISP Ports in the NPAC are not completed and a Returned contaminated block is Assigned, there may be service disruptions including double assignments, for those Contaminated TNs.
5. If a pending Local Number Portability (LNP) Port exists for an Unavailable TN(s), with no underlying active port or TN, within a contaminated block that is being Returned, the two carriers involved in the LNP Port shall work cooperatively to resolve the pending LNP Port. This process could be accomplished by having the recipient carrier of the LNP Port cancel the pending LNP Port so that the Returning Carrier can perform the ISP(s) for block return purposes. Afterwards, the recipient Carrier of the LNP Port would then re-establish the pending LNP Port. Another alternative would be to have the Carriers involved attempt to advance the pending LNP Port through contact with the NPAC (utilizing automated clean-up).
6. A carrier Returning a block containing a test line number shall disconnect the test line number prior to submitting the Part 1A to Return of the block. The test line shall be re-Assigned to a number in a block retained by, or Assigned to, the carrier.
7. A carrier Returning a block that contains an LRN shall migrate any ported numbers or pooled blocks utilizing the LRN to another LRN within a block retained by or Assigned to the carrier and delete the LRN in the NPAC and BIRRDS.
8. Ensure that all Returned blocks are within CO Codes that have been identified as LNP capable in the iconectiv BIRRDS and the NPAC and that the associated (donor) Switching Entities/POIs are LNP-capable and ready to process terminating traffic.
9. When the CO Code is already a Pooled Central Office (CO) Code (NPA-NXX), Carriers shall create a ‘D’ view on the NXD block screen for the each of the blocks in BIRRDS prior to submitting the Part 1A Block Return to the PA.
10. Converting an assigned CO Code from non-pooled to pooled as part of the process for Returning one or more blocks: At the time the PA approves a block Return application, the PA shall update the Block Control Record (BCR) record in BIRRDS with the Effective Date indicated on the Part 3A Pooling Administrator’s Response/Confirmation. The carrier shall build the records for any blocks being retained on the NXD screen for after the PA has processed the Return request.
11. The donated/returned blocks shall be ready for allocation and use on the date indicated by the carrier on the Part 1A or on the Implementation and Pool Start/Allocation Date, as applicable.

 On the Part 1A there will be a field for carriers to confirm that ISP Ports have been completed and a field for carriers to confirm that the block has been protected from further TN assignments.

**Implementation Notes**

1. Prior to the Block Return Effective Date, a carrier may need to retrieve a block it had previously returned to the Exchange Area Number Pool. As long as the Return Effective Date has not yet passed, the Carrier may cancel the Thousands-Block Part 1A Return in the Pooling Administration System.
2. Subsequent to the Block Return Effective Date but before the block has been Assigned to another carrier, the carrier may need to retrieve a block it had previously returned to the pool by submitting a Part 1A to the PA. For example, the carrier may have made an error in reporting the block’s Contamination level or failed to protect the block from further number assignments.
3. If the block has already been assigned to a new carrier and needs a number back, they should work with the new carrier to get the number back.

For reference:

7.1.16 TBCOCAG: In instances where a pooled Unavailable TN is Assigned to more than one customer served by different SPs (i.e., the Thousands-Block Holder and the CO Code Holder of the Pooled CO Code) due to an error made by the CO Code Holder, the conflict shall be resolved as follows:

1. If the TN was Assigned before the Thousands-Block was donated/returned and the CO Code Holder made an error in the population of Unavailable TNs in the LNP database (NPAC) at the time of Donation/return, the customer of the original SP (i.e., the customer to whom the TN was originally Assigned) shall retain assignment of the TN and the Thousands-Block Holder shall assign its customer a new TN.
2. If the TN was not Assigned at the time of the Donation/return and the CO Code Holder failed to protect the Thousands-Block from further assignment in their databases and Assigned the TN after the Thousands-Block was donated/returned, the customer of the Thousands-Block Holder shall retain assignment of the TN, and the CO Code Holder that Assigned the TN to its customer in error shall assign its customer a new TN.

**\*\*\* END OF DOCUMENT \*\*\***

1. A simpler method is to divide the quantity of unassignable numbers by 10. For instance, a block with 27 numbers unavailable for assignment would have a contamination level of 2.7%. [↑](#footnote-ref-2)
2. Policy, para 24 “… the Commission considers that facilitated LRNs should be permitted and encourages carriers to use that approach where it makes sense for number preservation.” [↑](#footnote-ref-3)
3. Decision 2007-23, para 24 (emphasis added). [↑](#footnote-ref-4)
4. Policy, para 85. [↑](#footnote-ref-5)