Final Version NPGNG6v1F – 25/10/99

Number Portability Task Force: PT6: Testbook

BIPT

1 Contents

2 Scope

The purpose of the PT6 document is to prove that the scenarios resulting from PT2 and PT3 can work, by defining the test activities needed for the support of geographic and non-geographic number portability in Belgium.

This PT6 document has three major parts:

- Part 1 describes the technical prototype tests that will be used to test the interface between two operators and the field tests that will be used to test the interface in a live environment and the functions of the transit operator.
- Part 2 describes the integrated field trial tests that will be used to test both the technical and the operational aspects of geographic number portability.
- Part 3 describes the integrated field trial tests that will be used to test both the technical and the operational aspects of non-geographic number portability.

The scope of Number Portability in this document is limited to geographic and non-geographic Number Portability, as described in the law of 21 March 1991 article 105bis §6.

Remarks:

- Acceptance testing of the internal CRDC software is outside the scope of PT6. This will be handled by the “Tijdelijke Vereniging voor Nummeroverdraagbaarheid”.
- Billing related testing has to be done by each operator internally.
- Carrier selection calls are not considered in PT6, since the carrier-selected operator is considered as the originating operator.
- The correct application of reject reasons for the initiation phase of the porting process (fraud, slamming,…) will not be tested within PT6.
- The functions of the PT3 processes will be tested but not the implementation of them. As such, each function will be considered as a black box.
- The tests related to directory service listing are outside the scope of PT6.

The table below describes the different phases of testing that have to be performed.

Table 1, Overview of the different test phases and their associated deliverables

Deliverable	What to test	Kind of tests	Test environment
Part 1	Network	Interface tests	Test switch
		Field tests	Live network
Part 2	Network + Process	Integrated Field Trial	
Part 3	Non-geographic number porting process	Integrated Field Trial	Live network

3 References

[1] ETSI ETR 266 Methods for Testing and Specification (MTS); Test Purpose style guide
[2] NPTF - PT1 Deliverable: Service Description
[3] NPTF - PT2 Deliverable: Network Architecture and Signalling
[4] NPTF - PT3 Deliverable: Database and operational aspects
[5] NG NPTF - PT1 Deliverable: Service Description
[6] NG NPTF - PT2 Deliverable: Network Architecture and Signalling
[7] NG NPTF - PT3 Deliverable: Database and operational aspects

4 Definitions and Abbreviations

4.1 Definitions

For general definitions, please refer to documents [2] and [5]. Specific definitions for this document are listed below.

Technical Prototype: The Technical Prototype will allow for the testing of the call handling and protocol aspects of geographic number portability on the interface between two operators.

Field Test: The Field Test will allow for the testing of the call handling and protocol aspects of geographic number portability on the interface between two operators, in a live environment as well as the tasks of the transit operator.

Integrated Field Trial: The Integrated Field Trial will allow for the testing of both the technical and operational aspects of geographic number portability between two or more operators.

Test Suite: A combination of tests that represents a real-life scenario. The test suites do not constitute an exhaustive list of all possible scenarios but rather an end-to-end verification of the most common cases.

4.2 Abbreviations

For general abbreviations, please refer to documents [2] and [5]. Specific abbreviations for this document are listed below.

ACM	Address Complete Message
ANM	Answer Message
CPG	Call Progress Message
DNA	Directory Number of Party A
DNB	Directory Number of Party B
GNP	Geographic Number Portability
IAM	Initial Address Message
IFT	Integrated Field Trial
LO1	Licensed Operator 1
LO1	Licensed Operator 1
LO2	Licensed Operator 2
LO2	Licensed Operator 2
NGNP	Non-Geographic Number Portability
REL	Release Message
RLC	Release Complete Message

Part 1
Technical Prototype

5 Test configurations

The following diagrams illustrate the porting configurations used in the technical prototype tests.

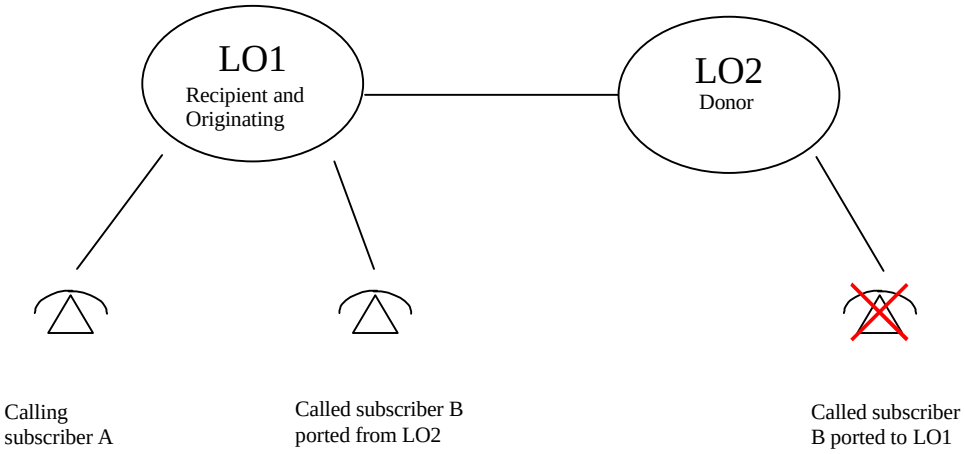


Figure 1, Configuration type A

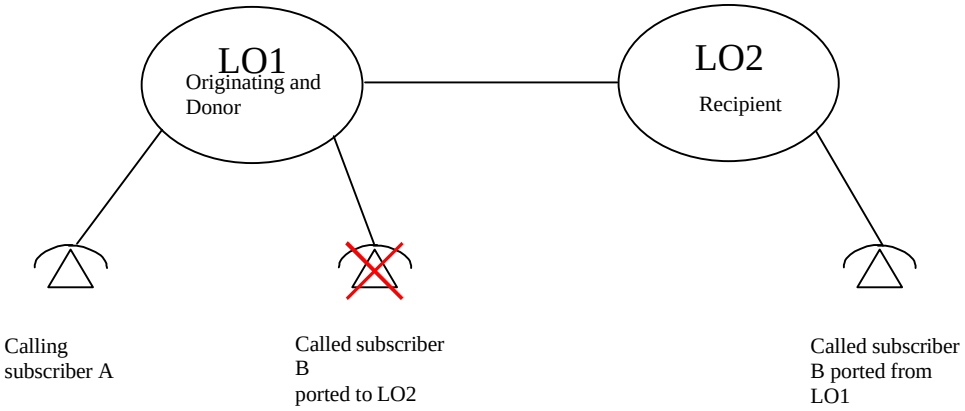


Figure 2, Configuration type B

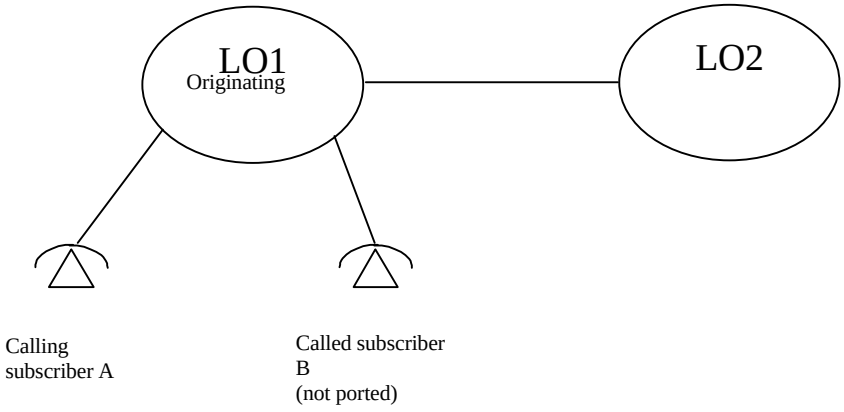


Figure 3, Configuration type C

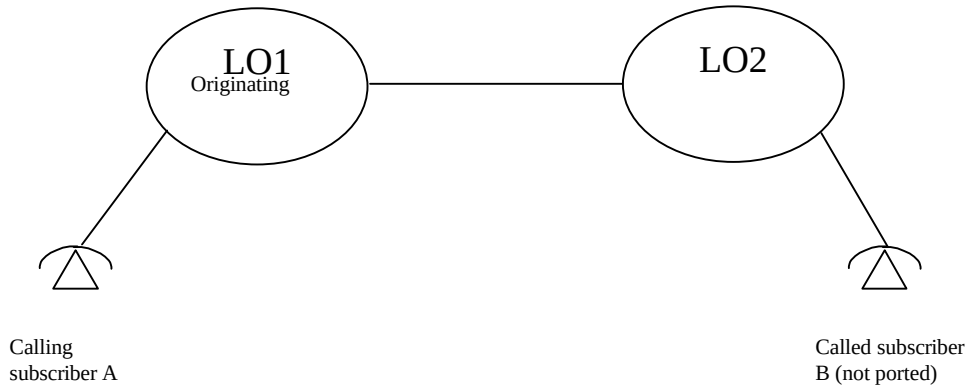


Figure 4, Configuration type D

6 Test suites for technical prototype tests

Table 2 gives the list of combinations that are possible on a particular interface. LO1 chooses an interface (first column), LO2 selects an interface (first row). The combination of interfaces results into 6 different scenario's (TS1 .. TS6). With each scenario, a Test Suite is identified.

Table 2, Overview of test suites for technical prototype tests

LO1/LO2	DN only	Cpqyz + DN	C00xx + DN
DN only	TS1	TS4	TS5
Cpqyz + DN	TS4	TS2	TS6
C00xx + DN	TS5	TS6	TS3

The following table defines which tests are to be performed in the Test Suites.

Table 3, Test list per test suite

Test list	TS1	TS2	TS3	TS4	TS5	TS6
Test 1.1						
Test 1.2	X			X	X	
Test 1.3						
Test 2.1.1						
Test 2.1.2		X		X		X
Test 2.2.1						
Test 2.2.2			X		X	X
Test 3.1	X					
Test 3.2				X		
Test 3.3					X	

Remarks:

- Test Suites TS1, TS2 and TS3: All tests to be executed in both directions
- Test Suites TS4, TS5 and TS6: The tests are to be performed in one direction only, depending on the respective role of LO1 and LO2.
- The following test cases were considered as being not relevant: 1.1, 1.3, 2.1.1 and 2.2.1.

7 Test descriptions for the Technical Prototype Tests

Assumptions:

- It is assumed that the basic call handling procedures and timings are applied.
- Tests will be executed from normal phone extensions, without having any supplementary service activated, unless explicitly mentioned in the test description.

7.1 Test Summary

7.1.1 "DN only" tests :

- Test case 1.1: LO1 sends a call for his own numbering range to LO2 (called party is not ported). LO2 sends call back to LO1

  This test case is considered as not relevant.
- Test case 1.2: LO1 sends a call for his own numbering range to LO2 (called party is ported). LO2 routes call to destination within own network.
- Test case 1.3: LO1 sends a call within the numbering range of LO2 (called party is not ported). LO2 routes call to destination within own network.

  This test case is considered as not relevant.

7.1.2 "RN + DN" tests :

7.1.2.1 CPQYZ + DN tests :

- Test case 2.1.1: LO1 sends a call with a RN (=Cpqyz) with pqyz in his own numbering range, to LO2. LO2 sends call back to LO1.

  This test case is considered as not relevant.
- Test case 2.1.2: LO1 sends a call with a RN (=Cpqyz) with pqyz in the numbering range of LO2, to LO2. LO2 routes call to destination within own network.

1.1.1.1 C00XX + DN tests :

- Test case 2.2.1: LO1 sends a call with a C00xx identifying LO1, to LO2.LO2 sends call back to LO1.

  This test case is considered as not relevant.
- Test case 2.2.2: LO1 sends a call with a C00xx identifying LO2, to LO2. LO2 routes call to destination within own network.

7.1.3 Hybrid tests :

- Test case 3.1: LO1 sends a call within the numbering range of LO2 (called party is ported back to LO1). LO2 routes call back to LO1 (sending DN only). LO1 routes the call to the correct destination in own network.
- Test case 3.2: LO1 sends a call within the numbering range of LO2 (called party is ported back to LO1). LO2 routes call back to LO1 (sending Cpqyz+ DN). LO1 routes the call to the correct destination in own network.
- Test case 3.3: LO1 sends a call within the numbering range of LO2 (called party is ported back to LO1). LO2 routes call back to LO1 (sending C00xx + DN). LO1 routes the call to the correct destination in own network.

7.2 Legend of the Test Description form

The test template is based on the template in Reference [1].

Test identifier	Unique identifier for a test case. The identifier consists of an alphanumeric part and a numeric part. The alphanumeric part identifies the type of test : - NGNP : Non-geographic Number Portability Test - GNP : Geographic Number Portability Test - TP : Technical Prototype Test - FT : Field Test - IFT : Integrated Field Trial Test
Type of Test	See above
Priority	- DNA : Deviation Not Allowed. When this test is to be executed, the execution will be performed exactly as described. Currently, only DNA tests have been identified. Other priorities might occur when new tests are identified.
Version	Version of the test description. Every change to the description will upgrade the version number.
Date	Date of the last update of the test description.
Configuration	Refers to the configuration of the test environments listed in section 4.
Reference to requirements	Reference to the requirements under test in this test case.
Test summary	Short description of the test to be performed. What is to be tested?
Initial conditions	Conditions to be met before the test can be executed.
Constraints	Conditions that make the execution of this test impossible.
Checks to be performed	Items to be checked during test execution.
Verdict criteria	Criteria that determine whether a test passes or fails.
Comments and observations	In this field, parameters that have to be checked during test execution are identified.
Detailed Test Info	Contains information on the expected messages sequences.
Expected messages contents	Description of the contents of some message parameters.

7.3 Technical Prototype Tests

The tests listed in the test suites are described in this section.

Test identifier : GNP - TP 1.1

Type of Test: Geographic Number Portability: Technical Prototype: test case n°: 1.1.
Priority : DNA (Deviation Not Allowed)
Version : 1.0 Date : 15/06/1999
Configuration : Type : C
Reference to requirements : See reference [3]

Test summary :
LO1 sends a call for his own numbering range to LO2 (called party is not ported). LO2 sends call back to LO1.

Initial conditions :

- Cg (Calling party) A (DNA) is situated within LO1 network
- Cd (Called Party) B (DNB) is situated in LO1 network (and not ported from LO2 to LO1)
- LO1 sends “DN only” on the interface to LO2
- LO2 sends “DN only” on the interface to LO1

Constraints :

Check to be performed :

1. A (DNA) calls B (DNB)
2. LO1 sends DNB on the interface to LO2
3. LO2 retrieves that DNB is not ported and located in LO1’s network and routes the call back to LO1, sending DNB on the interface to LO1
4. LO1 routes the call to the correct Terminating Exchange within own network
5. CHECK A: Can Ringing Tone be heard?
6. B answers the call
7. CHECK B: is the connection established (conversation phase)?
8. A clears the call
9. CHECK C: are the circuits idle?

Verdict criteria :

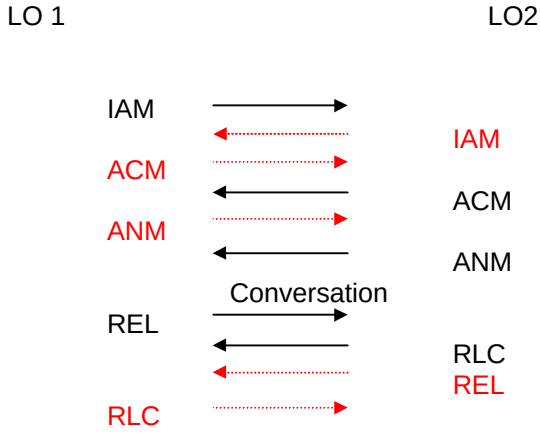
CHECK A : YES and
CHECK B : YES and
CHECK C : YES
Then : PASS
Otherwise : FAIL

Comments and Observations :
This test can result in a loop between LO1 and LO2. If this happens, the looping time-out has to be checked. Check that all circuits become idle afterwards.

Detailed test information :

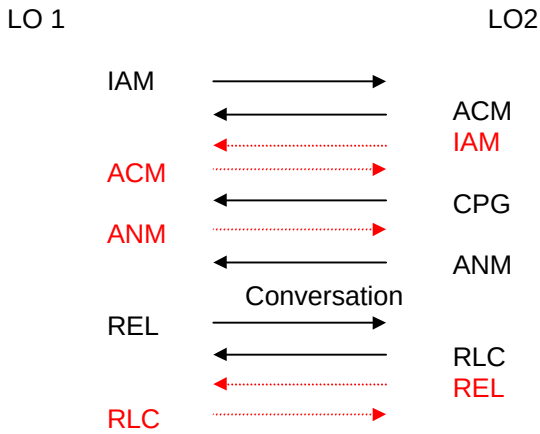
1. Expected Messages Sequence: One of the following cases has to be executed.

A) Normal Case :



Or

B) Case : “Early ACM” :



2. Expected Messages Contents :

IAM :
- Called Party Number :
  - Address signals : PQYZKHDU or PXYZKHDU (=DNB)
  - Nature of Address :
    - 02 (Unknown)
    or
    - 03 (National Significant Number)

ACM :
- Backward Call Indicator :
  - subscriber free (case A)
  or
  - no indication (case B)

CPG :
- Backward Call Indicator :
  - subscriber free

REL :
- Release Cause :
  - Normal call clearing
  or

- Normal unspecified or - Timer Expired (in case of looping)

Test identifier : GNP - TP 1.2

Type of Test: Geographic Number Portability: Technical Prototype: test case n°: 1.2.
Priority : DNA (Deviation Not Allowed)
Version : 1.0 Date : 15/06/1999
Configuration : Type : B
Reference to requirements : See reference [3]

Test summary :
LO1 sends a call for his own numbering range to LO2 (called party is ported). LO2 routes call to destination (in own network)

Initial conditions :

- Cg (Calling party) A (DNA) is situated within LO1 network
- Cd (Called Party) B (DNB) is ported from LO1 to LO2
- LO1 sends “DN only” on the interface to LO2

Constraints :

Check to be performed :

1. A (DNA) calls B (DNB)
2. LO1 sends DNB on the interface to LO2
3. LO2 retrieves that DNB is ported from LO1 and routes the call to the correct Destination Exchange within own network
4. CHECK A : Can Ringing Tone be heard ?
5. B answers the call
6. CHECK B : is the connection established (conversation phase) ?
7. A clears the call
8. CHECK C : are the circuits idle ?

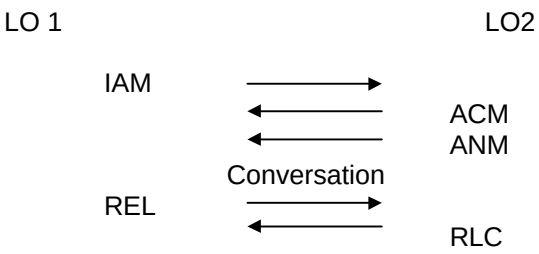
Verdict criteria :

CHECK A : YES and
CHECK B : YES and
CHECK C : YES
Then : PASS
Otherwise : FAIL

Comments and Observations :

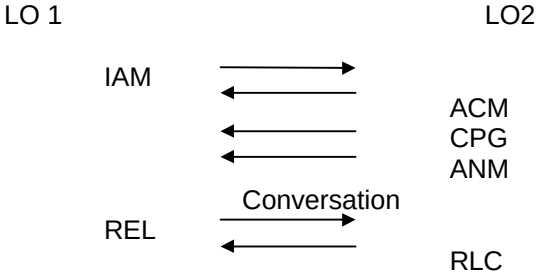
Detailed test information :

2. 1. Expected Messages Sequence : One of the following cases has to be executed.
A) Normal Case :



Or

B) Case : “Early ACM” :



2. Expected Messages Contents :

IAM :
- Called Party Number :
  - Address signals : PQYZKHDU or PXYZKHDU (=DNB)
  - Nature of Address :
    - 02 (Unknown)
    or
    - 03 (National Significant Number)

ACM :
- Backward Call Indicator :
  - subscriber free (Case A)
  or
  - no indication (Case B)

CPG :
- Backward Call Indicator :
  - subscriber free

REL :
- Release Cause :
  - Normal call clearing
  or
  - Normal unspecified

Test identifier : GNP - TP 1.3

Type of Test: Geographic Number Portability : Technical Prototype : test case n° : 1.3.
Priority : DNA (Deviation Not Allowed)
Version : 1.0 Date : 15/06/1999
Configuration : Type : D
Reference to requirements : See reference [3]

Test summary :
LO1 sends a call within the numbering range of LO2 (called party is not ported). LO2 routes call to destination within own network.

Initial conditions :

- Cg (Calling party) A (DNA) is situated within LO1 network
- Cd (Called Party) B (DNB) is situated (not ported) in LO2
- LO1 sends “DN only” on the interface to LO2
- LO2 sends “DN only” on the interface to LO1

Constraints :

Check to be performed :

1. A (DNA) calls B (DNB)
2. LO1 sends DNB on the interface to LO2
3. LO2 retrieves that DNB is not ported and situated in own network.
4. LO2 routes the call to the correct Destination Exchange within own network
5. CHECK A : Can Ringing Tone be heard ?
6. B answers the call
7. CHECK B : is the connection established (conversation phase) ?
8. A clears the call
9. CHECK C : are the circuits idle ?

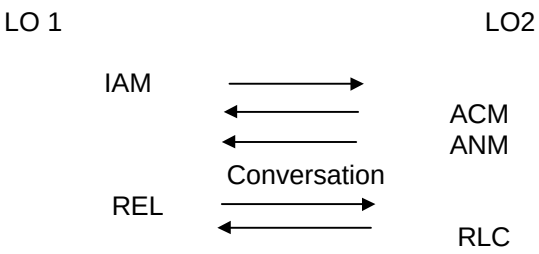
Verdict criteria :

CHECK A : YES and
CHECK B : YES and
CHECK C : YES
Then : PASS
Otherwise : FAIL

Comments and Observations :

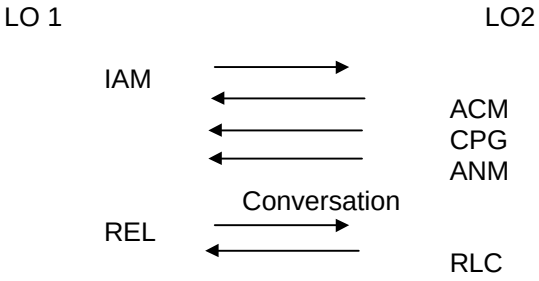
Detailed test information :

3. 1. Expected Messages Sequence : One of the following cases has to be executed.
A) Normal Case :



Or

B) Case : “Early ACM” :



2. Expected Messages Contents :

IAM :
- Called Party Number :
  - Address signals : PQYZKHDU or PXYZKHDU (=DNB)
  - Nature of Address :
    - 02 (Unknown)
    or
    - 03 (National Significant Number)

ACM :
- Backward Call Indicator :
  - subscriber free (Case A)
  or
  - no indication (Case B)

CPG :
- Backward Call Indicator :
  - subscriber free

REL :
- Release Cause :
  - Normal call clearing
  or
  - Normal unspecified

Test identifier : GNP - TP 2.1.1

Type of Test: Geographic Number Portability : Technical Prototype : test case n° : 2.1.1.
Priority : DNA (Deviation Not Allowed)
Version : 1.0 Date : 15/06/1999
Configuration : Type : A
Reference to requirements : See reference [3]

Test summary :
LO1 sends a call with a RN (=Cpqyz) and with pqyz in his own numbering range, to LO2. LO2 sends call back to LO1.

Initial conditions :

- Cg (Calling party) A (DNA) is situated within LO1 network
- Cd (Called Party) B (DNB) is ported from LO2 to LO1
- LO1 sends “Cpqyz + DNB” on the interface to LO2
- LO2 sends “Cpqyz + DNB ” on the interface to LO1
- ‘C’pqyz identifies the Recipient Exchange within LO1 network with pqyz belonging to numbering range of LO1

Constraints :

Check to be performed :

1. A (DNA) calls B (DNB)
2. LO1 sends Cpqyz + DNB on the interface to LO2
3. LO2 routes the call back to LO1 and sends Cpqyz + DNB on the interface to LO1
4. LO1 routes the call to the correct Recipient Exchange within own network
5. CHECK A : Can Ringing Tone be heard ?
6. B answers the call
7. CHECK B : is the connection established (conversation phase) ?
8. A clears the call
9. CHECK C : is the circuit idle ?

Verdict criteria :

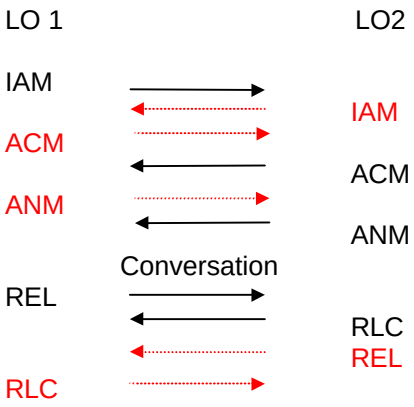
CHECK A : YES and
CHECK B : YES and
CHECK C : YES
Then : PASS
Otherwise : FAIL

Comments and Observations :
This test can result in a loop between LO1 and LO2. If this happens, the looping time-out has to be checked. Check that all circuits become idle afterwards.

Detailed test information :

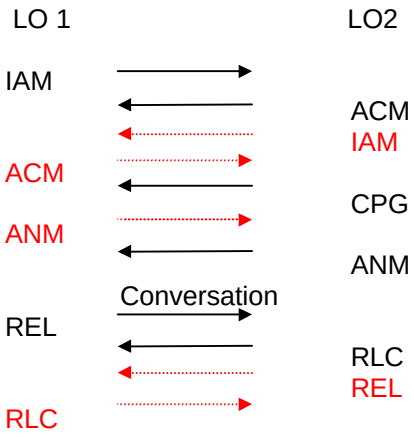
1. Expected Messages Sequence : One of the following cases has to be executed.

A) Normal Case :



Or

B) Case : “Early ACM” :



2. Expected Messages Contents :

IAM :
- Called Party Number :
  - Address signals : ‘C’pqyzPQYZKHDU or ‘C’pxyzPXYZKHDU
    - with : ‘C’ : hexadecimal digit
    - pqyz or pxyz : identifier of the Recipient Exchange
    - PQYZKHDU or PXYZKHDU = DNB
  - Nature of Address :
    - 02 (Unknown)

ACM :
- Backward Call Indicator :
  - subscriber free (case A)

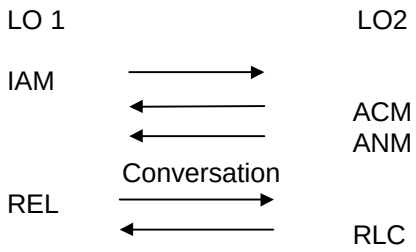
or - no indication (case B) CPG : - Backward Call Indicator : - subscriber free REL : - Release Cause : - Normal call clearing or - Normal unspecified

Test identifier : GNP - TP 2.1.2
Type of Test: Geographic Number Portability : Technical Prototype : test case n° : 2.1.2. Priority : DNA (Deviation Not Allowed) Version : 1.0 Date : 15/06/1999 Configuration : Type : B Reference to requirements : See reference [3]
Test summary : LO1 sends a call with a RN (=Cpqyz) with pqyz in the numbering range of LO2, to LO2 . LO2 routes call to destination within own network.
Initial conditions : - Cg (Calling party) A (DNA) is situated within LO1 network - Cd (Called Party) B (DNB) is ported from LO1 to LO2 - LO1 sends “Cpqyz + DNB” on the interface to LO2 - ‘C’pqyz identifies the Recipient Exchange within LO2 network with pqyz belonging to numbering range of LO2 Constraints : Check to be performed : 1. A (DNA) calls B (DNB) 2. LO1 sends Cpqyz + DNB on the interface to LO2 3. LO2 routes the call to the correct Recipient Exchange within own network 4. CHECK A : Can Ringing Tone be heard ? 5. B answers the call 6. CHECK B : is the connection established (conversation phase) ? 7. A clears the call 8. CHECK C : is the circuit idle ?
Verdict criteria : CHECK A : YES and CHECK B : YES and CHECK C : YES Then : PASS Otherwise : FAIL
Comments and Observations :

Detailed test information :

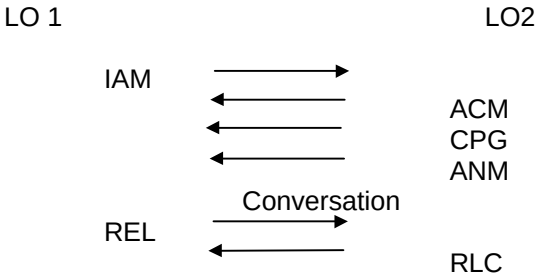
4. 1. Expected Messages Sequence : One of the following cases has to be executed.

A) Normal Case :



Or

B) Case : “Early ACM” :



2. Expected Messages Contents :

IAM :
- Called Party Number :
  - Address signals : ‘C’pqyzPQYZKHDU or ‘C’pxyzPXYZKHDU
    - with : ‘C’ : hexadecimal digit
    - pqyz or pxyz : identifier of the Recipient Exchange
    - PQYZKHDU or PXYZKHDU = DNB
  - Nature of Address :
    - 02 (Unknown)

ACM :
- Backward Call Indicator :
- subscriber free (Case A)

  or

  - no indication (Case B)

CPG :
- Backward Call Indicator :
  - subscriber free

REL :
- Release Cause :
  - Normal call clearing

  or

  - Normal unspecified

Test identifier : GNP - TP 2.2.1

Type of Test: Geographic Number Portability : Technical Prototype : test case n° : 2.2.1.
Priority : DNA (Deviation Not Allowed)
Version : 1.0 Date : 15/06/1999
Configuration : Type : A
Reference to requirements : See reference [3]

Test summary :
LO1 sends a call with a C00xx identifying LO1, to LO2. LO2 sends call back to LO1.

Initial conditions :

- Cg (Calling party) A (DNA) is situated within LO1 network
- Cd (Called Party) B (DNB) is ported from LO2 to LO1
- LO1 sends “C00xx + DNB” on the interface to LO2
- ‘C’00xx identifies the LO1 network.

Constraints :

Check to be performed :

1. A (DNA) calls B (DNB)
2. LO1 sends C00xx + DNB on the interface to LO2
3. LO2 routes the call back to LO1 and sends C00xx + DNB on the interface to LO1
4. LO1 routes the call to the correct Recipient Exchange within own network
5. CHECK A : Can Ringing Tone be heard ?
6. B answers the call
7. CHECK B : is the connection established (conversation phase) ?
8. A clears the call
9. CHECK C : is the circuit idle ?

Verdict criteria :

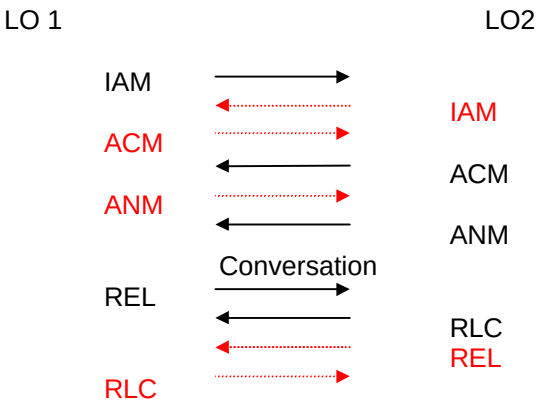
CHECK A : YES and
CHECK B : YES and
CHECK C : YES
Then : PASS
Otherwise : FAIL

Comments and Observations :
This test can result in a loop between LO1 and LO2. If this happens, the looping time-out has to be checked. Check that all circuits become idle afterwards.

Detailed test information :

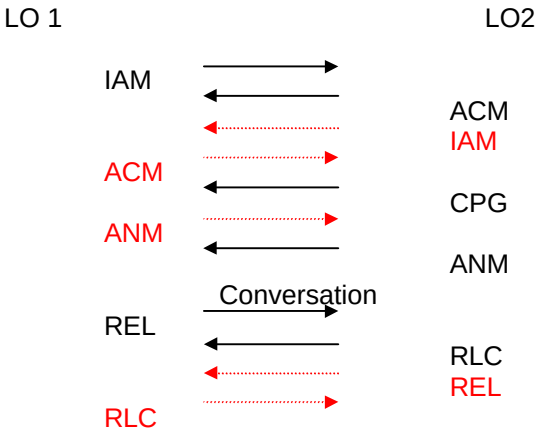
1. Expected Messages Sequence : One of the two following cases has to be executed.

A) Normal Case :



Or

B) Case : “Early ACM” :



2. Expected Messages Contents :
IAM :
- Called Party Number :
  - Address signals : ‘C’00xxPQYZKHDU or ‘C’00xxPXYZKHDU
    - with : ‘C’ : hexadecimal digit
    - 00xx : identifier of the LO1 network
    - PQYZKHDU or PXYZKHDU = DNB
  - Nature of Address :
    - 02 (Unknown)

ACM :
- Backward Call Indicator :

- subscriber free (case A)
or
- no indication (case B)

CPG :
- Backward Call Indicator :
  - subscriber free

REL :
- Release Cause :
  - Normal call clearing
  or
  - Normal unspecified

Test identifier : GNP - TP 2.2.2

Type of Test: Geographic Number Portability : Technical Prototype : test case n° : 2.2.2.
Priority : DNA (Deviation Not Allowed)
Version : 1.0 Date : 15/06/1999
Configuration : Type : B
Reference to requirements : See reference [3]

Test summary :
LO1 sends a call with a C00xx identifying LO2, to LO2. LO2 routes call to destination within own network.

Initial conditions :

- Cg (Calling party) A (DNA) is situated within LO1 network
- Cd (Called Party) B (DNB) is ported from LO1 to LO2
- LO1 sends “C00xx + DNB” on the interface to LO2
- ‘C’00xx identifies the LO2 network

Constraints :

Check to be performed :

1. A (DNA) calls B (DNB)
2. LO1 sends C00xx + DNB on the interface to LO2
3. LO2 routes the call to the correct Recipient Exchange within own network
4. CHECK A : Can Ringing Tone be heard ?
5. B answers the call
6. CHECK B : is the connection established (conversation phase) ?
7. A clears the call
8. CHECK C : is the circuit idle ?

Verdict criteria :

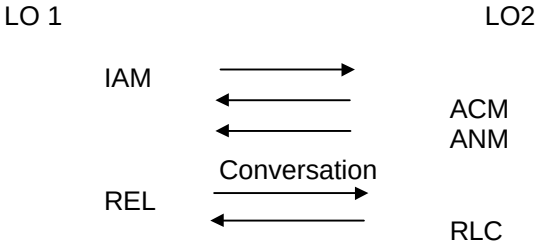
CHECK A : YES and
CHECK B : YES and
CHECK C : YES
Then : PASS
Otherwise : FAIL

Comments and Observations :

Detailed test information :

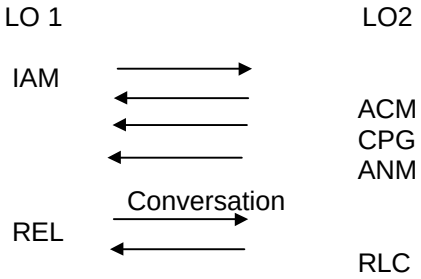
1. Expected Messages Sequence : : One of the two following cases has to be executed.

A) Normal Case :



Or

B) Case : “Early ACM” :



2. Expected Messages Contents :

IAM :
- Called Party Number :
  - Address signals : ‘C’00xxPQYZKHDU or ‘C’00xxPXYZKHDU
    - with : ‘C’ : hexadecimal digit
    - 00xx : identifier of the LO2 network
    - PQYZKHDU or PXYZKHDU = DNB
  - Nature of Address :
    - 02 (Unknown)

ACM :
- Backward Call Indicator :
  - subscriber free (Case A)

  or
  - no indication (Case B)

CPG :
- Backward Call Indicator :
  - subscriber free

REL :
- Release Cause :
  - Normal call clearing

  or
  - Normal unspecified

Test identifier : GNP - TP 3.1

Type of Test: Geographic Number Portability : Technical Prototype : test case n° : 3.1.
Priority : DNA (Deviation Not Allowed)
Version : 1.0 Date : 15/06/1999
Configuration : Type : A
Reference to requirements : See reference [3]

Test summary :
LO1 sends a call within the numbering range of LO2 (called party is ported to LO1). LO2 routes call back to LO1 (sending DN only). LO1 routes the call to the correct destination in own network.

Initial conditions :

- Cg (Calling party) A (DNA) is situated within LO1 network
- Cd (Called Party) B (DNB) is ported from LO2 to LO1
- LO1 sends “DN only” on the interface to LO2
- LO2 sends “DN only” on the interface to LO1

Constraints :

Check to be performed :

1. A (DNA) calls B (DNB)
2. LO1 sends DNB on the interface to LO2
3. LO2 retrieves that DNB is ported to LO1 and routes the call back to LO1, sending DNB on the interface to LO1
4. LO1 routes the call to the correct Recipient Exchange within own network
5. CHECK A : Can Ringing Tone be heard ?
6. B answers the call
7. CHECK B : is the connection established (conversation phase) ?
8. A clears the call
9. CHECK C : are the circuits idle ?

Verdict criteria :

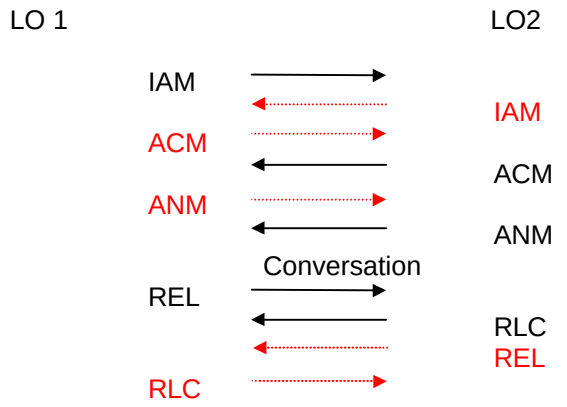
CHECK A : YES and
CHECK B : YES and
CHECK C : YES
Then : PASS
Otherwise : FAIL

Comments and Observations :

Detailed test information :

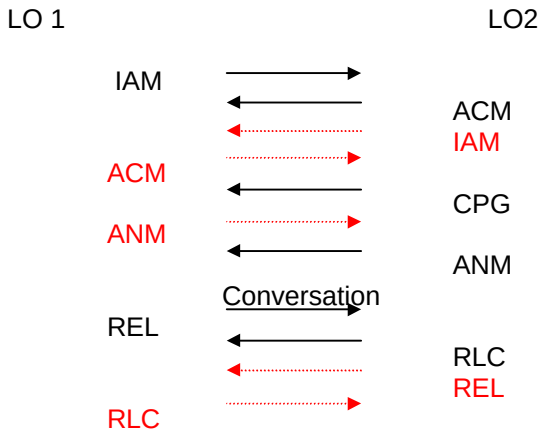
1. Expected Messages Sequence : One of the following cases has to be executed :

A) Normal Case :



Or

B) Case : “Early ACM” :



2. Expected Messages Contents :

IAM :
- Called Party Number :
  - Address signals : PQYZKHDU or PXYZKHDU (=DNB)
  - Nature of Address :
    - 02 (Unknown)
    or
    - 03 (National Significant Number)

ACM :
- Backwards Call Indicator :
  - subscriber free (case A)
  or

- no indication (case B)

CPG :

- Backwards Call Indicator :
  - subscriber free

REL :

- Release Cause :
  - Normal call clearing

  or
  - Normal unspecified

Test identifier : GNP - TP 3.2

Type of Test: Geographic Number Portability : Technical Prototype : test case n° : 3.2.
Priority : DNA (Deviation Not Allowed)
Version : 1.0 Date : 15/06/1999
Configuration : Type : A
Reference to requirements : See reference [3]

Test summary :
LO1 sends a call within the numbering range of LO2 (called party is ported to LO1). LO2 routes call back to LO1 (sending Cpqyz + DN). LO1 routes the call to the correct destination in own network.

Initial conditions :

- Cg (Calling party) A (DNA) is situated within LO1 network
- Cd (Called Party) B (DNB) is ported from LO2 to LO1
- LO1 sends “DN only” on the interface to LO2
- LO2 sends “Cpqyz + DN” on the interface to LO1

Constraints :

Check to be performed :

1. A (DNA) calls B (DNB)
2. LO1 sends DNB on the interface to LO2
3. LO2 retrieves that DNB is ported to LO1 and routes the call back to LO1, sending Cpqyz + DNB on the interface to LO1
4. LO1 routes the call to the correct Recipient Exchange within own network
5. CHECK A : Can Ringing Tone be heard ?
6. B answers the call
7. CHECK B : is the connection established (conversation phase) ?
8. A clears the call
9. CHECK C : are the circuits idle ?

Verdict criteria :

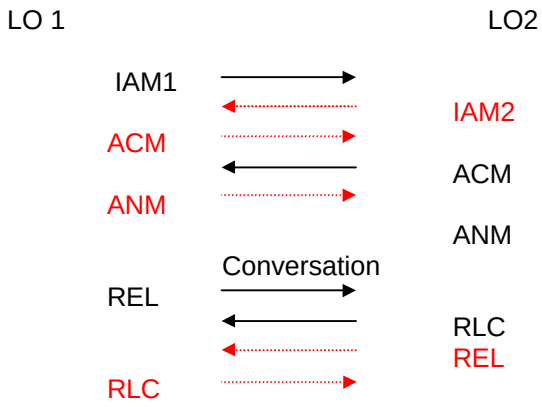
CHECK A : YES and
CHECK B : YES and
CHECK C : YES
Then : PASS
Otherwise : FAIL

Comments and Observations :

Detailed test information :

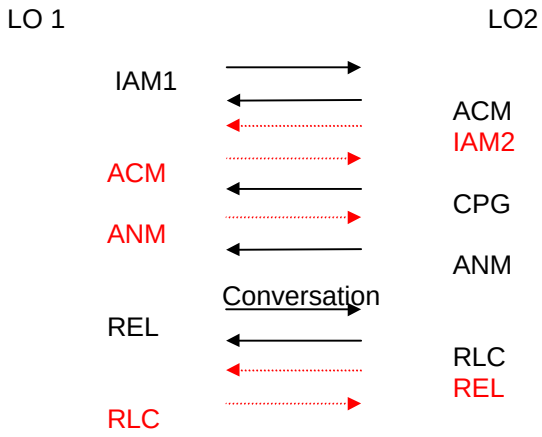
1. Expected Messages Sequence : One of the following cases has to be executed :

A) Normal Case :



Or

B) Case : “Early ACM” :



2. Expected Messages Contents :

IAM1 :
- Called Party Number :
  - Address signals : PQYZKHDU or PXYZKHDU (=DNB)
  - Nature of Address :
    - 02 (Unknown)
    or
    - 03 (National Significant Number)

IAM2 :
- Called Party Number :
  - Address signals : ‘C’pqyzPQYZKHDU or ‘C’pxyzPXYZKHDU
    - with : ‘C’ : hexadecimal digit

- pqyz or pxyz : identifier of the Recipient Exchange
- PQYZKHDU or PXYZKHDU = DNB

- Nature of Address :
  - 02 (Unknown)

ACM :
- Backwards Call Indicator :
  - subscriber free (case A)

  or
  - no indication (case B)

CPG :
- Backwards Call Indicator :
  - subscriber free

REL :
- Release Cause :
  - Normal call clearing

  or
  - Normal unspecified

Test identifier : GNP - TP 3.3

Type of Test: Geographic Number Portability : Technical Prototype : test case n° : 3.3.
Priority : DNA (Deviation Not Allowed)
Version : 1.0 Date : 15/06/1999
Configuration : Type : A
Reference to requirements : See reference [3]

Test summary :
LO1 sends a call within the numbering range of LO2 (called party is ported to LO1). LO2 routes call back to LO1 (sending C00xx + DN).LO1 routes the call to the correct destination in own network.

Initial conditions :

- Cg (Calling party) A (DNA) is situated within LO1 network
- Cd (Called Party) B (DNB) is ported from LO2 to LO1
- LO1 sends “DN only” on the interface to LO2
- LO2 sends “C00xx + DN” on the interface to LO1

Constraints :

Check to be performed :

1. A (DNA) calls B (DNB)
2. LO1 sends DNB on the interface to LO2
3. LO2 retrieves that DNB is ported to LO1 and routes the call back to LO1, sending C00xx + DNB on the interface to LO1
4. LO1 routes the call to the correct Recipient Exchange within own network
5. CHECK A : Can Ringing Tone be heard ?
6. B answers the call
7. CHECK B : is the connection established (conversation phase) ?
8. A clears the call
9. CHECK C : are the circuits idle ?

Verdict criteria :

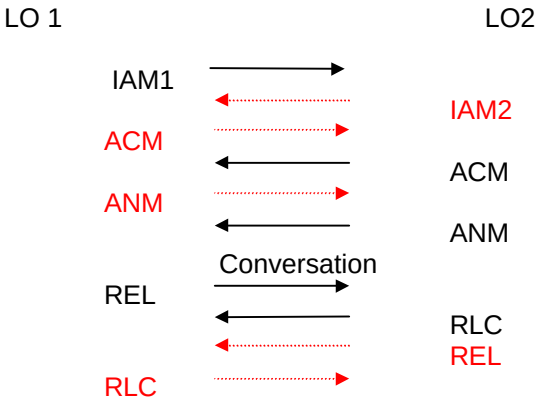
CHECK A : YES and
CHECK B : YES and
CHECK C : YES
Then : PASS
Otherwise : FAIL

Comments and Observations

Detailed test information :

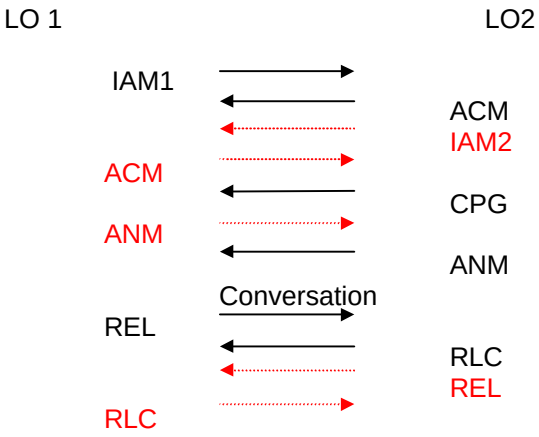
1. Expected Messages Sequence : One of the following cases has to be executed :

A) Normal Case :



Or

B) Case : “Early ACM” :



2. Expected Messages Contents :

IAM1 :
- Called Party Number :
  - Address signals : PQYZKHDU or PXYZKHDU (=DNB)
  - Nature of Address :
    - 02 (Unknown)
    or
    - 03 (National Significant Number)

IAM2 :
- Called Party Number :
  - Address signals : ‘C’00xxPQYZKHDU or ‘C’00xxPXYZKHDU
    - with : ‘C’ : hexadecimal digit

- 00xx : identifier of the LO1 network
- PQYZKHDU or PXYZKHDU = DNB

- Nature of Address :
  - 02 (Unknown)

ACM :
- Backwards Call Indicator :
  - subscriber free (case A)

  or
  - no indication (case B)

CPG :
- Backwards Call Indicator :
  - subscriber free

REL :
- Release Cause :
  - Normal call clearing

  or
  - Normal unspecified

7.4 Field Tests for geographic number portability

7.4.1 Without Transit Operator

The Prototype tests of the Test Suites defined in section 5 will have to be performed again, but now in a live environment.

7.4.2 With Transit Operator

The following figure shows all theoretically possible combinations on the incoming and outgoing interface of the transit operator.

Figure 5, Possible combinations of signalling options for transit operators

Part 2
Integrated Field Trial

8 Test Cases

In this section a list of the individual test cases is given. The next sections document these in detail.

8.1 Series 1: Initiation phase tests

- Successful initiation phase (GNP – IFT1.1)
- NPR Reject by CRDC (GNP – IFT1.2)
- NPR Reject by Donor (GNP – IFT1.3)

8.2 Series 2: Technical phase tests

- GNP Activation: Successful technical phase (GNP – IFT2.1)
- GNP Activation: NP Exec Rejects by CRDC (GNP – IFT2.2)
- GNP Activation: NP nonRFS flow (GNP – IFT2.3)
- Change NP: successful change number port (GNP – IFT2.4)
- Change NP: NP Change Reject by CRDC (GNP – IFT2.5)
- Change NP: NP Change Reject by Donor (GNP – IFT2.6)
- Cancel NP: successful cancel number port (GNP – IFT2.7)
- Cancel NP: NP cancel Reject by CRDC (GNP – IFT2.8)
- Hold NP: successful hold number port (GNP – IFT2.9)
- Hold NP: NP Hold Reject by CRDC (GNP – IFT2.10)
- Disconnection: successful disconnection (GNP – IFT2.11)
- Disconnection: NP disconnect reject by CRDC (GNP –IFT2.12)

8.3 Series 3: Operational phase tests

- Customer Care: Other operator routs action request to recipient (GNP – IFT3.1)
- Customer Care: Recipient issues action request to donor (GNP – IFT3.2)
- Customer Care: Recipient issues action request to other operator (GNP – IFT3.3)

8.4 Series 4: Maintenance phase tests

- Update Routing: successful update routing (GNP – IFT4.1)
- Update Routing: Update Reject by CRDC (GNP – IFT4.2)

8.5 Series 5: Synchronisation phase tests

- GNP Database Audit: Successful Audit request (GNP – IFT5.1)
- GNP Database Audit: Audit Reject by CRDC (GNP – IFT5.2)
- GNP synchronisation: Bulk synchronisation (GNP – IFT5.3)
- GNP synchronisation: Activated numbers synchronisation (GNP – IFT5.4)
- GNP synchronisation: Porting synchronisation (GNP – IFT5.5)

8.6 Series 6: Management phase tests

- Successful Log Request (GNP – IFT6.1)

9 Test descriptions for the Integrated Field Trial tests

9.1 General comments

All tests described in this document are to be performed on the live network(s). At each test step where the network is touched this needs to be executed as such compliant to the PT2 requirements (see reference [3]).

9.2 Legend to the Test Description form

Test identifier	Unique identifier for a test case. The identifier consists of an alphanumeric part and a numeric part. The alphanumeric part identifies the type of test: - NGNP: Non-geographic Number Portability Test - GNP: Geographic Number Portability Test - TP: Technical Prototype Test - FT: Field Test - IFT: Integrated Field Trial Test
Type of Test	See above
Priority	- DNA: Deviation Not Allowed. When this test is to be executed, the execution will be performed exactly as described. - …
Version	Version of the test description. Every change to the description will upgrade the version number.
Date	Date of the last update of the test description.
Reference to requirements	Reference to the requirements under test in this test case.
Test summary	Short description of the test to be performed. What needs to be tested?
Initial conditions	Conditions to be met before the test can be executed.
Constraints	Conditions that make the execution of this test impossible.
Checks to be performed	Items to be checked during test execution.
Verdict criteria	Criteria that determine whether a test passes or fails.
Comments and observations	In this field, parameters that have to be checked during test execution are identified. This field will also mention if the network is touched for this test. This is referred to as “network impact”.
Detailed Test Information	Contains information on the expected message sequences.
Expected messages contents	Description of the contents of some message parameters.

9.3 Integrated Field Trial tests

This section lists all the tests used for the integrated field trial.

9.3.1 GNP – IFT1.1

Test identifier: GNP – IFT1.1

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 1.1.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

Subscriber requests service from the recipient operator and makes a valid request to port his telephone number. Recipient requests number from central database and receives a positive confirmation. Test of the initiation phase.

Initial conditions:

Customer has service from a donor operator (D). No reject reasons from the donor apply to the service of the customer.

Constraints:

None

Check to be performed:

1. Customer requests service from R (different from D) and requests to port his number to R.
2. R identifies data elements needed to make request (routing code, NP due date, donor ID, recipient ID).
3. R issues NPR to CRDC.
4. CHECK A: verify by CRDC that NPR is a valid request.
5. CRDC processes request and acknowledges NPR.
6. CHECK B: verify and measure by recipient the delay between NPR and NPR acknowledgement and checks if serial number is supplied by CRDC.
7. CRDC forwards request to donor.
8. Donor processes request and returns NPR-accept.
9. CHECK C: check by CRDC if donor returns NPR accept.
10. CRDC forwards NPR accept to recipient.
11. CHECK D: check by recipient if NPR accept is forwarded to recipient. Measure delay between NPR from recipient to CRDC and reply from CRDC to recipient. (T1 timer)

Verdict criteria:

CHECK A: YES and

CHECK B: YES and

CHECK C: YES and

CHECK D: YES

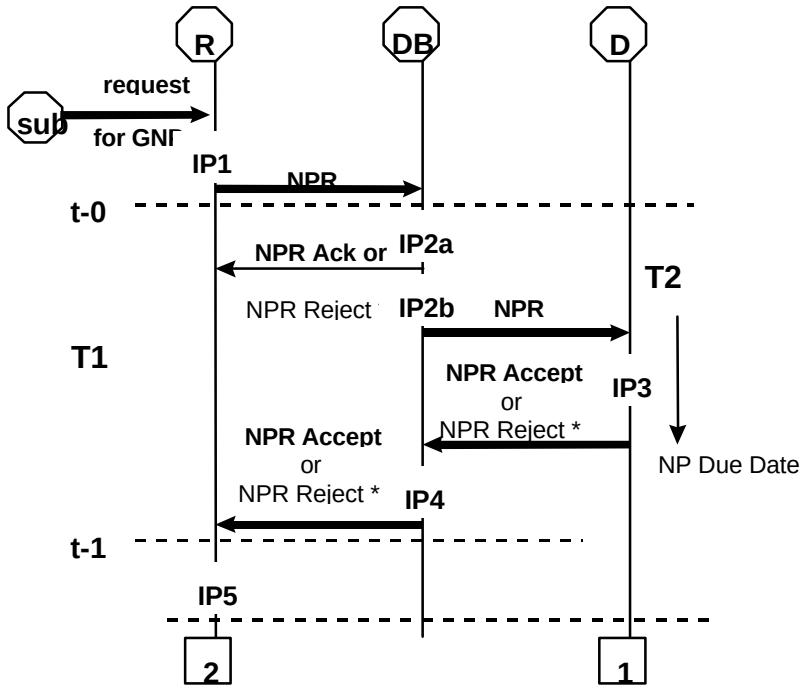
Then: PASS

Otherwise: FAIL

Comments and Observations:

Record the measured timings (response time of CRDC and T1)

Detailed test information: Schematic of the flow
The tested flow is shown in bold lines.



9.3.2 GNP – IFT1.2

Test identifier: GNP – IFT1.2

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 1.2.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

Subscriber requests service from the recipient operator and makes a valid request to port his telephone number. Recipient requests number from central database and receives a negative response. Test of the initiation phase.

Initial conditions:

Customer has service from a donor operator (D). No reject reasons from the donor apply to the service of the customer.

Constraints:

None

Check to be performed:

1. Customer requests service from R (different from D) and requests to port his number to R.
2. R identifies data elements needed to make request (routing code, NP due date, donor ID, recipient ID). R makes a distinct error in one of the data elements. E.g. the NP due date is set to the date of request.
3. R issues NPR to CRDC.
4. CHECK A: verify by CRDC that NPR is a non-valid request.
5. CRDC processes request and rejects NPR.
6. CHECK B: verify and measure by recipient the delay between NPR and NPR acknowledgement.

Verdict criteria:

CHECK A: YES and

CHECK B: YES

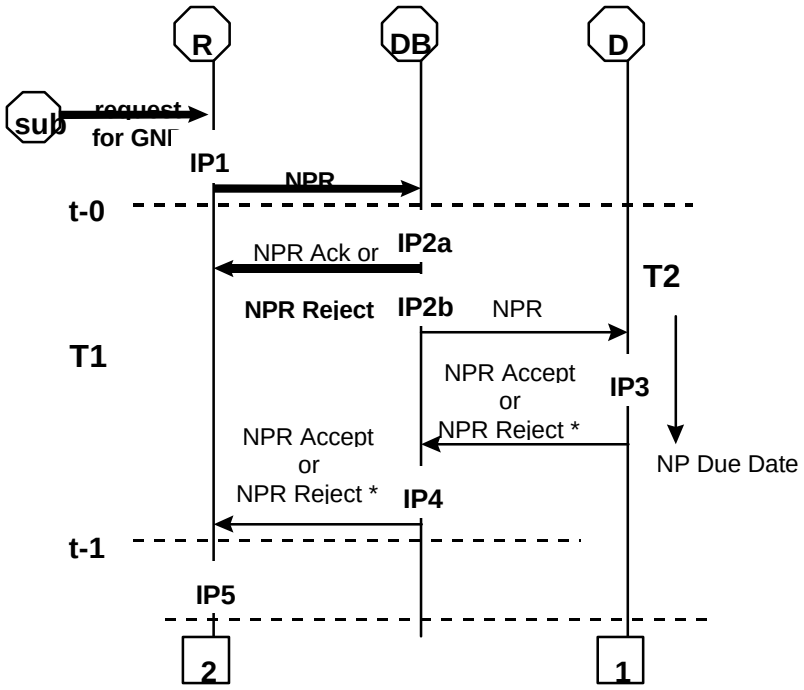
Then: PASS

Otherwise: FAIL

Comments and Observations:

Record the measured timings (response time of CRDC)

Detailed test information: Schematic of the flow
The tested flow is shown in bold lines.



9.3.3 GNP – IFT1.3

Test identifier: GNP – IFT1.3

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 1.3.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

Subscriber requests service from the recipient operator and makes a valid request to port his telephone number. Recipient requests number from central database and receives a negative response due to a rejection by the donor. Test of the initiation phase.

Initial conditions:

Customer has service from a donor operator (D). A reject reason from the donor applies to the service of the customer.

Constraints:

None

Check to be performed:

1. Customer requests service from R (different from D) and requests to port his number to R.
2. R identifies data elements needed to make request (routing code, NP due date, donor ID, recipient ID).
3. R issues NPR to CRDC.
4. CHECK A: verify by CRDC that NPR is a non-valid request.
5. CRDC processes request and acknowledges the NPR.
6. CHECK B: verify and measure by recipient the delay between NPR and NPR acknowledgement.
7. CRDC forwards request to donor.
8. Donor processes request and returns NPR-reject (e.g. non-valid number)
9. CHECK C: check by CRDC if donor returns NPR-reject.
10. CRDC forwards NPR-reject to recipient.
11. CHECK D: check by recipient if NPR-reject is forwarded to recipient. Measure delay between NPR from recipient to CRDC and reply from CRDC to recipient. (T1 timer)

Verdict criteria:

CHECK A: YES and

CHECK B: YES and

CHECK C: YES and

CHECK D: YES

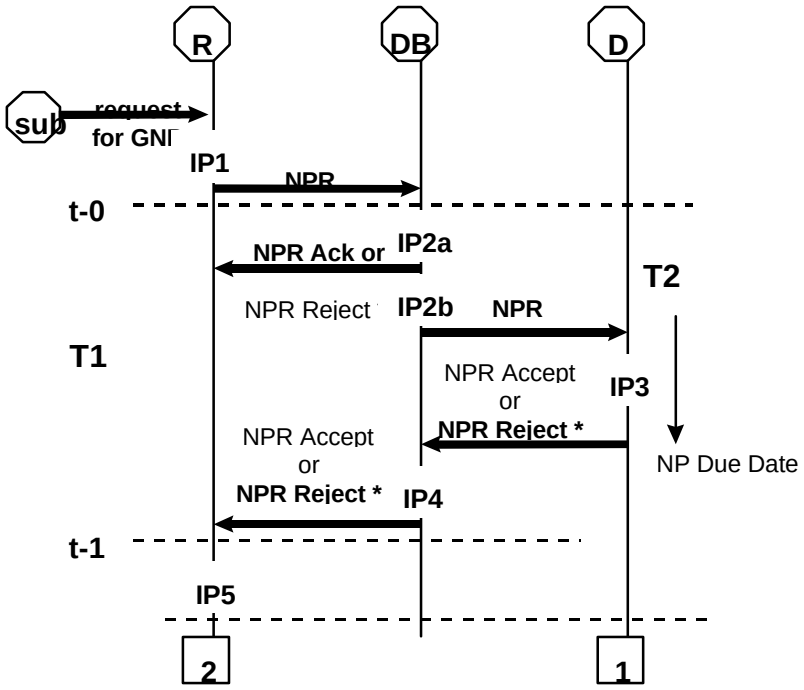
Then: PASS

Otherwise: FAIL

Comments and Observations:

Record the measured timings (response time of CRDC and T1)

Detailed test information: Schematic of the flow
The tested flow is shown in bold lines.



9.3.4 GNP – IFT2.1

Test identifier: GNP – IFT2.1

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 2.1.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

GNP activation as part of the technical phase. The activation is successful.

Initial conditions:

Customer has service from a donor operator (D). A successful initiation phase has been completed. Recipient has completed his work and is ready to ask for NP Exec.

Constraints:

None

Check to be performed:

1. Recipient identifies all data elements needed to make the execute request.
2. Recipient issues the NP Exec instruction to the CRDC.
3. CHECK A: verify by CRDC that NP Exec is a valid request.
4. CRDC processes the request and forwards the NP Exec to the donor.
5. Donor processes the request and returns a NP Ready message.
6. CHECK B: CRDC verifies if donor returns the NP Ready message.
7. CRDC processes the message and forwards it to the recipient.
8. CHECK C: Recipient verifies the NP Ready message and measures the timing between his NP Exec request and the NP Ready message (Timer T3)
9. Recipient then performs the network tests (which are successful in this test).
10. Recipient issues a NP RFS message to the CRDC.
11. CHECK D: CRDC verifies that the NP RFS is a valid request and measures the timing between the NP Ready message it forwarded to the Recipient and the NP RFS message (Timer T4).
12. CRDC broadcasts the NP RFS message to all identified operators.
13. CHECK E: Donor verifies that he received the NP RFS broadcast
14. CHECK F: Other operator verifies that he received the NP RFS broadcast.
15. Donor processes the NP RFS broadcast and issues a NP Activated message. Other operator processes the NP RFS broadcast and issues a NP Activated message.
16. CHECK G: CRDC verifies the NP Activated messages.

Verdict criteria:

CHECK A: YES and
CHECK B: YES and
CHECK C: YES and
CHECK D: YES and
CHECK E: YES and
CHECK F: YES and
CHECK G: YES
Then: PASS
Otherwise: FAIL

Comments and Observations:

Record the measured timings (response time of CRDC and timers T3 and T4).

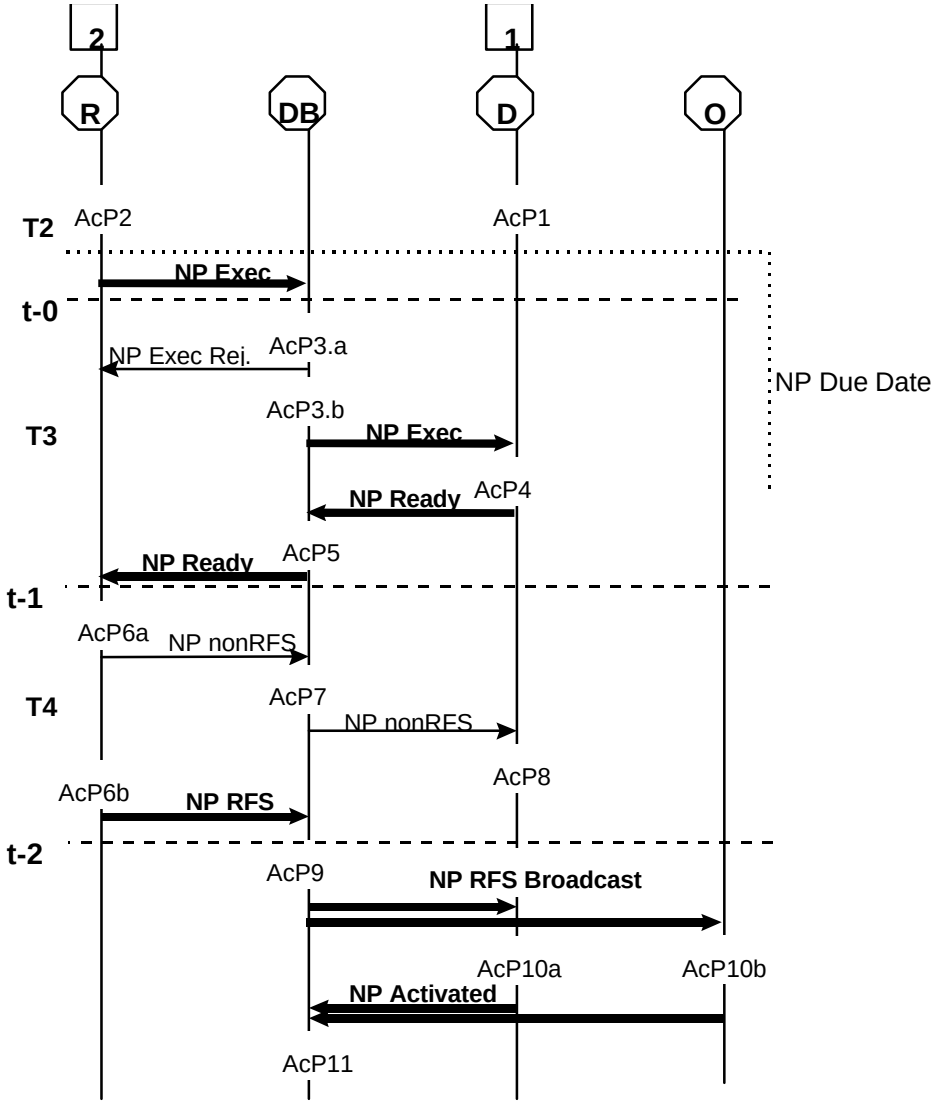
This test has network impact.

In step 9 the recipient performs RFS tests. These include at least three tests:

- An outbound call (call originating from the installed number). This test can already have been done prior to step 1.
- An inbound call originated in the recipient's network. This can be limited to one test in case of homogenous routing in the recipient's network, or through a series of tests originating from different areas in his network. This test can already have been done prior to step 1.
- An inbound call originated in another network. This can be the donor network, a transit network, or another domestic or foreign network. The purpose of this test is to verify that onward routing is properly installed in the donor network. This implies that the originating network used for this test is not aware of the ongoing porting process, as could be the case when different operators are affiliated or share IN-infrastructure.

Detailed test information: Schematic of the flow

The tested flow is shown in bold lines.



9.3.5 GNP – IFT2.2

Test identifier: GNP – IFT2.2

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 2.2.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

GNP activation as part of the technical phase. The activation request (NP Exec) is rejected by the CRDC.

Initial conditions:

Customer has service from a donor operator (D). A successful initiation phase has been completed. Recipient has completed his work and is ready to ask for NP Exec.

Constraints:

None

Check to be performed:

1. Recipient identifies all data elements needed to make the execute request and injects a violation (NP Exec is issued prior to the due date of the NPR)
2. Recipient issues the NP Exec instruction to the CRDC.
3. CHECK A: verify by CRDC that NP Exec is a non-valid request.
4. CRDC processes the request and returns the NP Exec Reject message to the recipient.
5. CHECK B: Recipient verifies that the NP Exec Reject message is a valid message and measures the timing between issuing the NP Exec and the NP Exec Reject messages.

Verdict criteria:

CHECK A: YES and

CHECK B: YES

Then: PASS

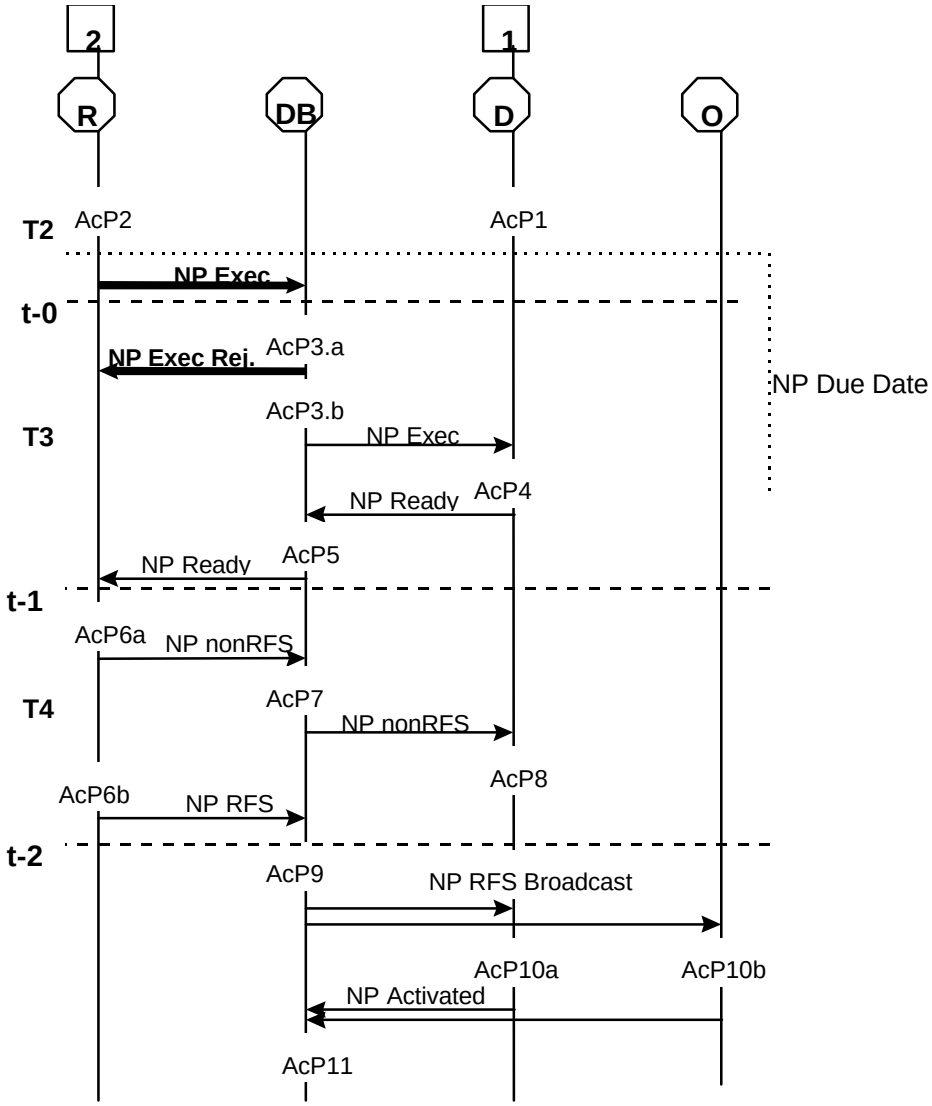
Otherwise: FAIL

Comments and Observations:

Record the measured timings (response time of CRDC)

Detailed test information: Schematic of the flow

The tested flow is shown in bold lines.



9.3.6 GNP – IFT2.3

Test identifier: GNP – IFT2.3

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 2.3.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

GNP activation as part of the technical phase. The activation is not successful after testing by the recipient and NP nonRFS needs to be issued.

Initial conditions:

Customer has service from a donor operator (D). A successful initiation phase has been completed. Recipient has completed his work and is ready to ask for NP Exec.

Constraints:

None

Check to be performed:

1. Recipient identifies all data elements needed to make the execute request.
2. Recipient issues the NP Exec instruction to the CRDC.
3. CHECK A: verify by CRDC that NP Exec is a valid request.
4. CRDC processes the request and forwards the NP Exec to the donor.
5. Donor processes the request and returns a NP Ready message.
6. CHECK B: CRDC verifies if donor returns the NP Ready message.
7. CRDC processes the message and forwards it to the recipient.
8. CHECK C: Recipient verifies the NP Ready message and measures the timing between his NP Exec request and the NP Ready message (Timer T3)
9. Recipient then performs the network tests (which are failing in this test).
10. Recipient issues a NP nonRFS message to the CRDC.
11. CHECK D: CRDC verifies that the NP nonRFS is a valid request and measures the timing between the NP Ready message it forwarded to the Recipient and the NP nonRFS message (Timer T4).
12. CRDC broadcasts the NP nonRFS message to the donor
13. CHECK E: Donor verifies that he received the NP nonRFS broadcast
14. Recipient and donor make contact to resolve the problem (outside the CRDC)
15. CHECK F: Recipient verifies that the Donor is participating in the problem solving effort
16. Recipient then performs the network tests (which are now successful). This test is aborted here since the remainder of the process is covered by test GNP – IFT2.1 step 10 and further

Verdict criteria:

CHECK A: YES and
CHECK B: YES and
CHECK C: YES and
CHECK D: YES and
CHECK E: YES and
CHECK F: YES
Then: PASS
Otherwise: FAIL

Comments and Observations:

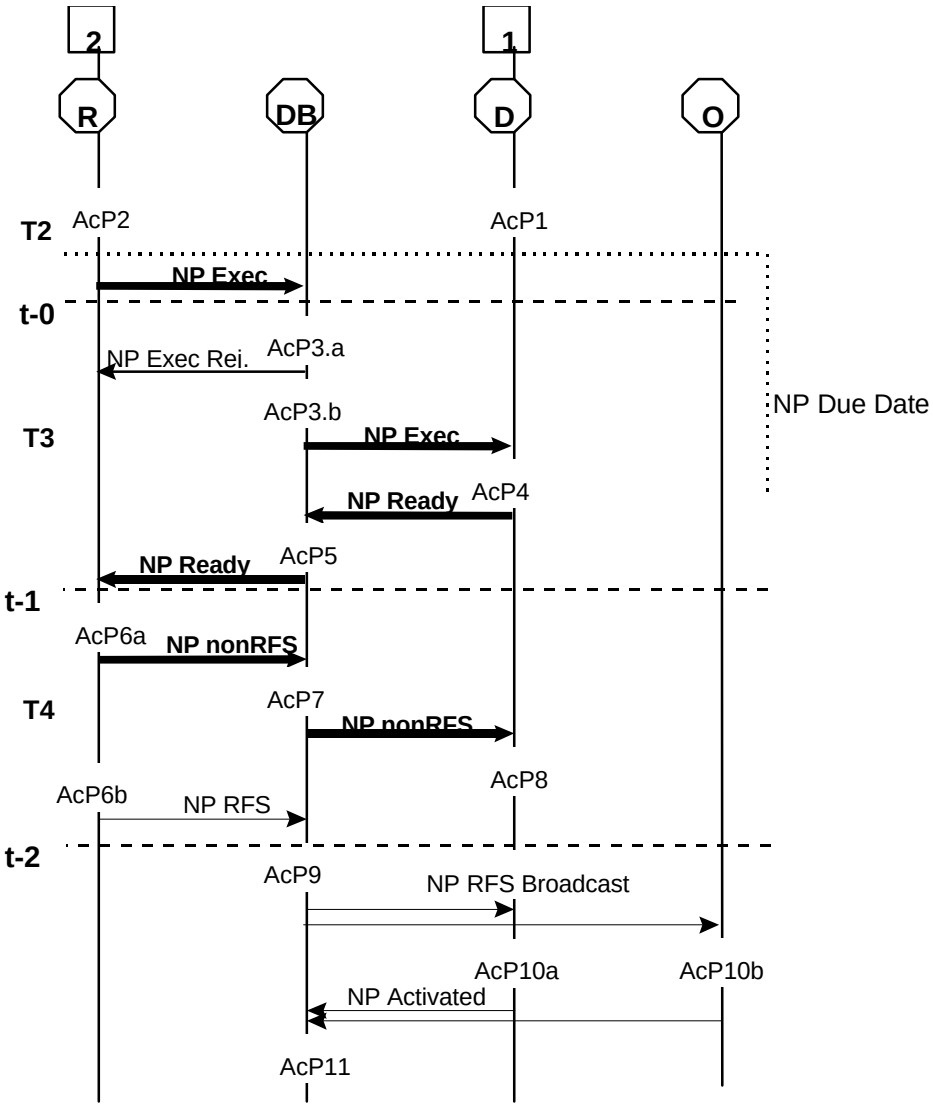
Record the measured timings (response time of CRDC and timers T3 and T4)

Record the elapsed trouble-shooting time.

This test has network impact.

Detailed test information: Schematic of the flow

The tested flow is shown in bold lines.



9.3.7 GNP – IFT2.4

Test identifier: GNP – IFT2.4

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 2.4.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

Recipient requests to change a NP-request that he issued correctly earlier on. Change request is accepted.

Initial conditions:

Recipient has issued a NPR and has received the NPR accept. The recipient has not yet sent the NP Exec.

Constraints:

None

Check to be performed:

1. Recipient issues NP change request, (e.g. requesting for a move of the due date further in the future).
2. CHECK A by CRDC that the NP change request is a valid request.
3. CRDC processes the request and forwards the request to the donor.
4. Donor processes the request and returns the NP Change Accept message.
5. CHECK B by CRDC that the NP Change Accept message is a valid message.
6. CRDC forwards the response to the recipient.
7. CHECK C by recipient to verify that he received an NP Change Accept response.

Verdict criteria:

CHECK A: YES and

CHECK B: YES and

CHECK C: YES

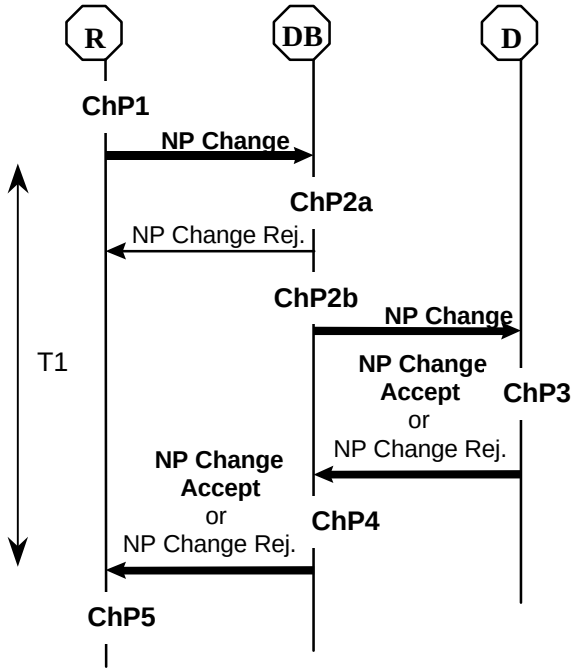
Then: PASS

Otherwise: FAIL

Comments and Observations:

Measure T1 timer

Detailed test information: Schematic of the flow
The tested flow is shown in bold lines.



9.3.8 GNP – IFT2.5

Test identifier: GNP – IFT2.5

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 2.5.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

Recipient requests to change a NP-request that he issued correctly earlier on. Change request is rejected by CRDC.

Initial conditions:

Recipient has issued a NPR and has received the NPR accept. The recipient has not yet sent the NP Exec.

Constraints:

None

Check to be performed:

1. Recipient issues NP change request, (e.g. requesting for a move of the due date violating the validation timer).
2. CHECK A by CRDC that the NP change request is a non-valid request.
3. CRDC processes the request and returns a NP Change Reject message to the recipient.
4. CHECK B by recipient to verify that he received a NP Change Reject response.

Verdict criteria:

CHECK A: YES and

CHECK B: YES and

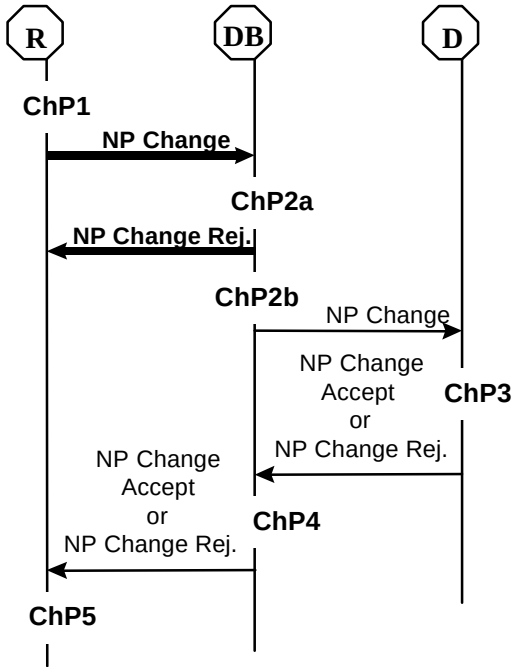
CHECK C: YES

Then: PASS

Otherwise: FAIL

Comments and Observations:

Detailed test information: Schematic of the flow
The tested flow is shown in bold lines.



9.3.9 GNP – IFT2.6

Test identifier: GNP – IFT2.6

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 2.6.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

Recipient requests to change a NP-request that he issued correctly earlier on. The donor rejects the Change request.

Initial conditions:

Recipient has issued a NPR and has received the NPR accept. The recipient has not yet sent the NP Exec.

Constraints:

None

Check to be performed:

1. Recipient issues NP change request, requesting a change of the due date (e.g. violating the timers for the type of installation).
2. CHECK A by CRDC that the NP change request is a valid request.
3. CRDC processes the request and forwards the request to the donor.
4. Donor processes the request and returns the NP Change Reject message.
5. CHECK B by CRDC that the NP Change Reject message is a valid message.
6. CRDC forwards the response to the recipient.
7. CHECK C by recipient to verify that he received an NP Change Reject response, and measure response time T1.

Verdict criteria:

CHECK A: YES and

CHECK B: YES and

CHECK C: YES

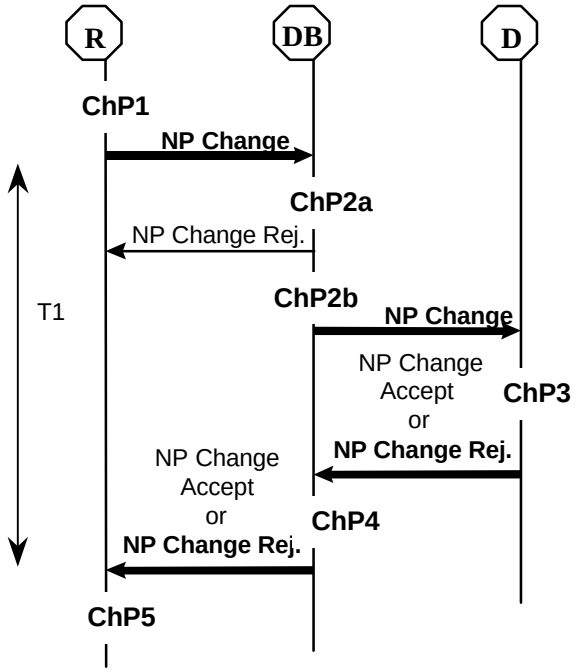
Then: PASS

Otherwise: FAIL

Comments and Observations:

Measure timer T1

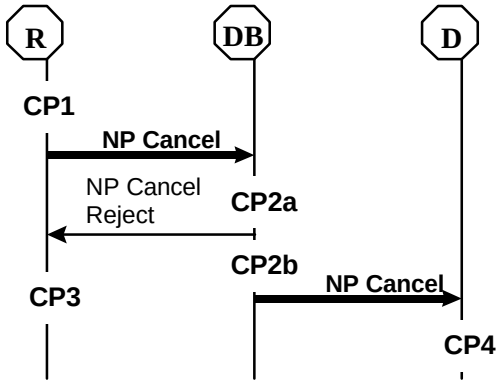
Detailed test information: Schematic of the flow
The tested flow is shown in bold lines.



9.3.10 GNP – IFT2.7

Test identifier: GNP – IFT2.7
Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 2.7. **Priority:** DNA (Deviation Not Allowed) **Version:** 1.0 Date: 30-Aug-99 **Configuration:** NA **Reference to requirements:** See reference [4]
Test summary: Recipient requests to cancel a NP-request that he issued correctly earlier on. The cancel is processed successfully..
Initial conditions: Recipient has issued a NPR and has received the NPR accept. The recipient has not yet sent the NP Exec. **Constraints:** None **Check to be performed:** 1. Recipient issues NP Cancel request. 2. CHECK A by CRDC that the NP cancel request is a valid request. 3. CRDC processes the request and forwards the request to the donor. 4. CHECK B by Donor that the NP cancel request is received.
Verdict criteria: CHECK A: YES and CHECK B: YES Then: PASS Otherwise: FAIL
Comments and Observations:

Detailed test information: Schematic of the flow
The tested flow is shown in bold lines.



9.3.11 GNP – IFT2.8

Test identifier: GNP – IFT2.8

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 2.8.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

Recipient requests to cancel a NP-request that he issued correctly earlier on. The cancel request is rejected by the CRDC.

Initial conditions:

Recipient has issued a NPR and has received the NPR accept,(e.g. the recipient has already sent the NP Exec).

Constraints:

None

Check to be performed:

5. Recipient issues NP Cancel request.
6. CHECK A by CRDC that the NP cancel request is not a valid request.
7. CRDC processes the request and returns a NP Cancel Reject message to the recipient.
8. CHECK B by Recipient that the NP cancel reject message is received.

Verdict criteria:

CHECK A: YES and

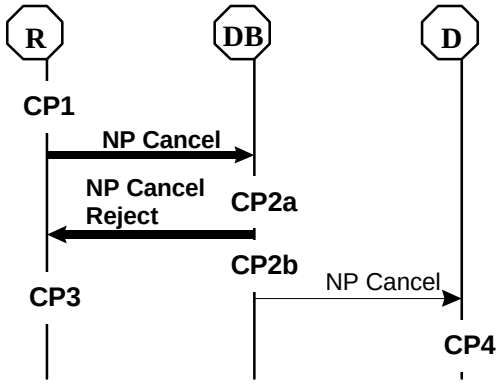
CHECK B: YES

Then: PASS

Otherwise: FAIL

Comments and Observations:

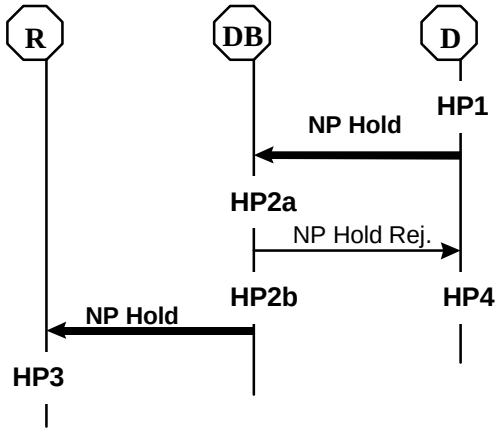
Detailed test information: Schematic of the flow
The tested flow is shown in bold lines.



9.3.12 GNP – IFT2.9

Test identifier: GNP – IFT2.9
Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 2.9. **Priority:** DNA (Deviation Not Allowed) **Version:** 1.0 Date: 30-Aug-99 **Configuration:** NA **Reference to requirements:** See reference [4]
Test summary: The donor requests an interruption of the porting process. The suspension is accepted.
Initial conditions: A successful initiation phase has been completed (NPR Accept has been issued). **Constraints:** The time is before the NP Due Date. **Check to be performed:** 1. The donor prepares and issues a NP Hold message to the CRDC. 2. CHECK A: The CRDC checks if the NP Hold message is valid. 3. The CRDC forwards the message to the recipient. 4. CHECK B: The recipient verifies the NP Hold message for correctness.
Verdict criteria: CHECK A: YES and CHECK B: YES Then: PASS Otherwise: FAIL
Comments and Observations:

Detailed test information: Schematic of the flow
The tested flow is shown in bold lines.



9.3.13 GNP – IFT2.10

Test identifier: GNP – IFT2.10

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 2.10.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

The donor requests an interruption of the porting process. The suspension is rejected by the CRDC.

Initial conditions:

A successful initiation phase has been completed (NPR Accept has been issued).

Constraints:

The time is before the NP Due Date.

Check to be performed:

1. The donor prepares and issues a NP Hold message to the CRDC. The message contains an error (e.g. the proposed NP Due Date falls in the past)
2. CHECK A: The CRDC checks if the NP Hold message is valid and rejects it.
3. The CRDC sends a NP Hold Reject message to the donor.
4. CHECK B: The donor verifies the NP Hold Reject message for correctness.

Verdict criteria:

CHECK A: YES and

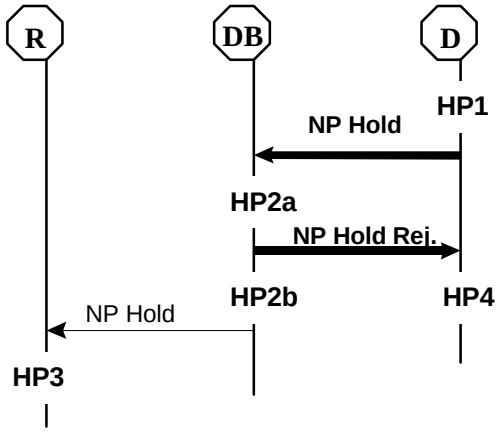
CHECK B: YES

Then: PASS

Otherwise: FAIL

Comments and Observations:

Detailed test information: Schematic of the flow
The tested flow is shown in bold lines.



9.3.14 GNP – IFT2.11

Test identifier: GNP – IFT2.11

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 2.11.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 06/07/1999

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

Customer requests disconnection of a ported number. Successful flow.

Initial conditions:

The number was successfully ported. The recipient has received a disconnection request from the customer and has completed the freeze period.

Constraints:

None

Check to be performed:

1. Recipient prepares and issues a NP Disconnect message to the CRDC.
2. CHECK A: CRDC verifies that the NP Disconnect message is valid.
3. CRDC forwards the message to the original donor.
4. Original donor processes the message, removes the onward routing on the network and issues an NP DiscDone message to the CRDC.
5. CHECK B: CRDC verifies that the NP DiscDone is a valid and appropriate message.
6. The CRDC forwards the NP DiscDone message to the recipient.
7. CHECK C: the recipient verifies that the NP DiscDone is a valid and appropriate message.
8. Recipient processes the message, performs the network changes and issues the NP Deactivated message to the CRDC
9. CHECK D: CRDC verifies that the NP Deactivated is a valid message.
10. The CRDC issues the NP Deactivate Broadcast message to all operators (except for the recipient).
11. CHECK E: one of the other operators verifies that it received the NP Deactivate Broadcast message.
12. All operators (except the recipient) respond with a NP DeactDone message.
13. CHECK F: CRDC checks the NP DeactDone messages from the different operators.

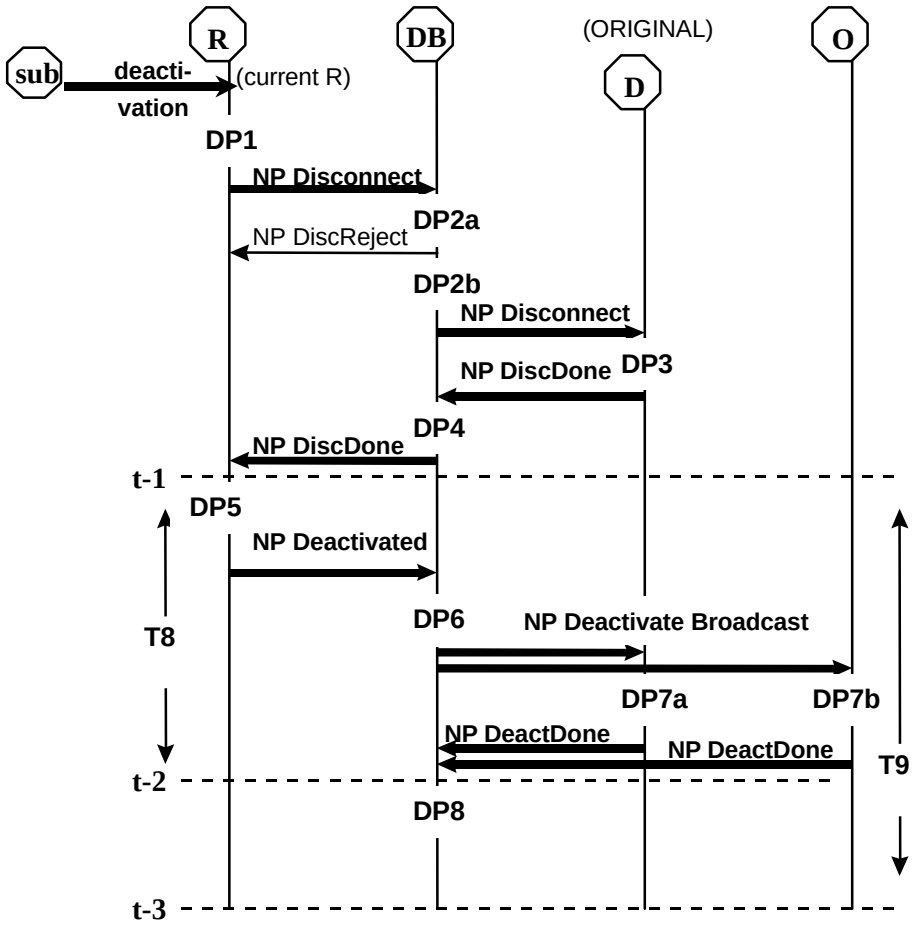
Verdict criteria:

CHECK A: YES and
CHECK B: YES and
CHECK C: YES and
CHECK D: YES and
CHECK E: YES and
CHECK F: YES
Then: PASS
Otherwise: FAIL

Comments and Observations:

This test has network impact.

Detailed test information: Schematic of the flow
The tested flow is shown in bold lines.



9.3.15 GNP – IFT2.12

Test identifier: GNP – IFT2.12

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 2.12.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

Customer requests disconnection of a ported number. CRDC rejects the message.

Initial conditions:

The number was successfully ported. The recipient has received a disconnection request from the customer and has completed the freeze period.

Constraints:

Check to be performed:

1. Recipient prepares and issues a NP Disconnect message to the CRDC that includes an error (e.g. the number is not a ported number).
2. CHECK A: CRDC verifies that the NP Disconnect message is valid but contains an error.
3. CRDC returns the NP DiscReject message
4. CHECK B: the recipient verifies that it received the NP DiscReject message.

Verdict criteria:

CHECK A: YES and

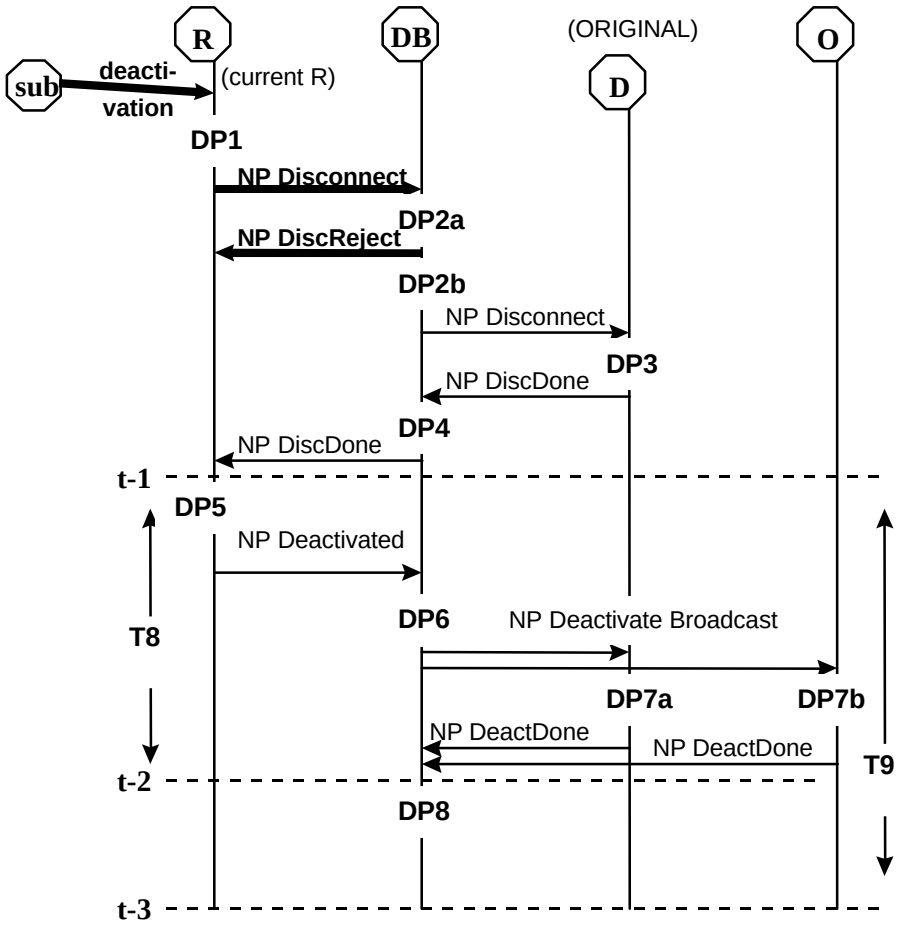
CHECK B: YES

Then: PASS

Otherwise: FAIL

Comments and Observations:

Detailed test information: Schematic of the flow
The tested flow is shown in bold lines.



9.3.16 GNP – IFT3.1

Test identifier: GNP – IFT3.1

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 3.1.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

Another operator receives a problem report (from one of his customers) regarding a ported number and initiates an action request to the recipient.

Initial conditions:

None

Constraints:

None

Check to be performed:

1. Other operator receives and records customer problem report.
2. Other operator verifies that problem is related to a ported number and identifies the recipient of the number.
3. Other operator sends a NP Action Request to the CRDC for the recipient.
4. Check A: CRDC checks if the NP Action Request is valid.
5. CRDC sends NP Action Request Acknowledgement to the other operator.
6. CHECK B: Other operator verifies the receipt of the NP Action Request Acknowledgement.
7. CRDC forwards the NP Action Request to the recipient.
8. CHECK C: Recipient verifies the receipt of the NP Action Request.

Verdict criteria:

CHECK A: YES and

CHECK B: YES and

CHECK C: YES

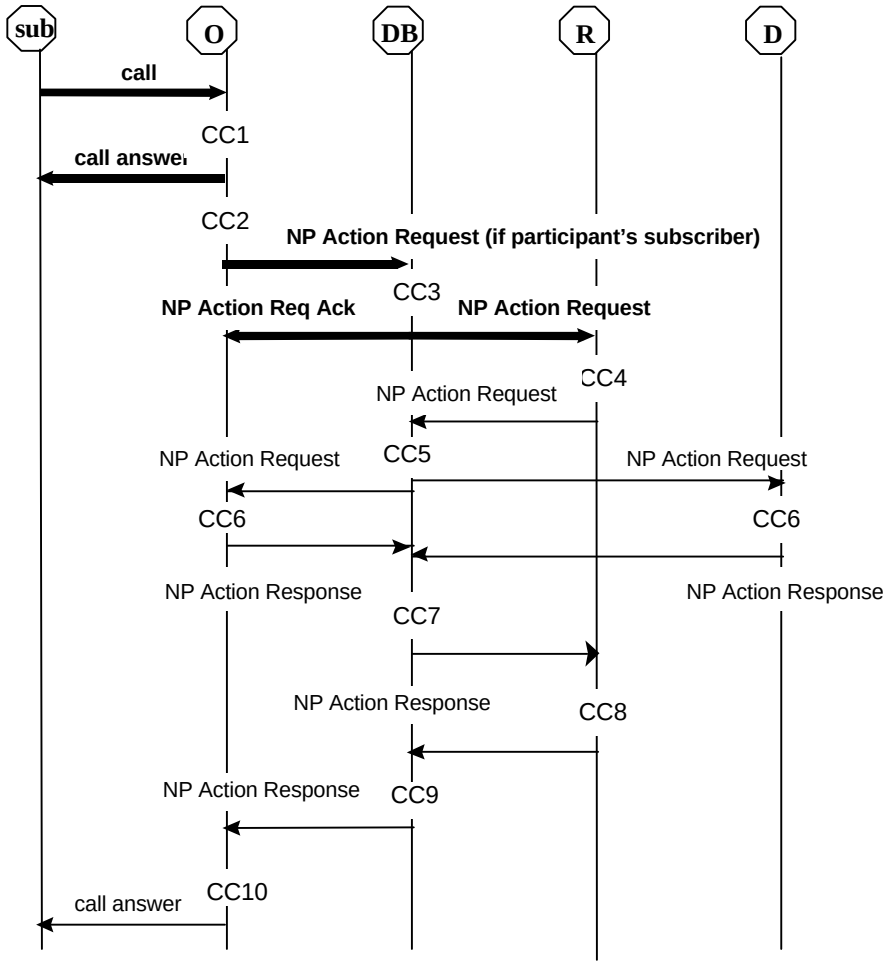
Then: PASS

Otherwise: FAIL

Comments and Observations:

It is useful to measure the time needed for the other operator to identify the recipient and to prepare the NP Action Request. This is the time needed between step 1 and step 3.

Detailed test information: Schematic of the flow
The tested flow is shown in bold lines.



9.3.17 GNP – IFT3.2

Test identifier: GNP – IFT3.2

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 3.2.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

Recipient has a problem with a number he ported in and issues an action request to the donor.

Initial conditions:

The recipient is at the start of the test the owner of the problem.

Constraints:

None

Check to be performed:

1. The recipient identifies the donor of the telephone number that is having a problem and issues and prepares a NP Action Request.
2. CHECK A: CRDC checks if NP Action Request is valid.
3. CRDC forwards NP Action Request to donor
4. Donor performs the requested checks or actions
5. Donor the issues a NP Action Response to the CRDC
6. CHECK B: CRDC checks if NP Action Response is a valid response.
7. CRDC forwards the NP Action Response to the recipient.
8. CHECK C: Recipient verifies if the NP Action Response refers correctly to the NP Action Request and measures the response time between step 2 and this step.
9. (if appropriate) Recipient forwards a NP Action Response (is different from the NP Action Response from steps 6 to 9) to the CRDC to be forwarded to the other operator who originated the initiating NP Action Request.
10. (if appropriate) CRDC forwards the NP Action Response to the other operator.
11. (if appropriate) CHECK D: Other operator verifies if the NP Action Response is relevant for the NP Action Request he issued to the recipient.

Verdict criteria:

CHECK A: YES and

CHECK B: YES and

CHECK C: YES and

(if appropriate) CHECK D: YES

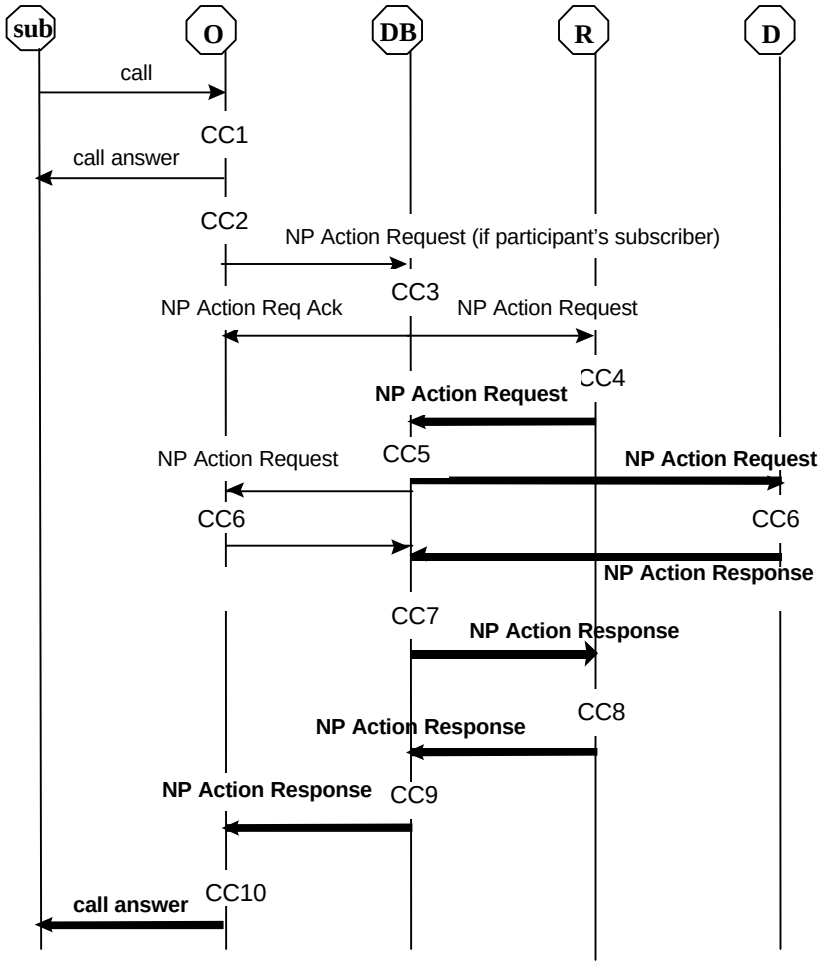
Then: PASS

Otherwise: FAIL

Comments and Observations:

Measure the response time between steps 2 and 9.

Detailed test information: Schematic of the flow
The tested flow is shown in bold lines.



9.3.18 GNP – IFT3.3

Test identifier: GNP – IFT3.3

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 3.3.

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

Recipient has a problem with a number he ported in and issues an action request to another operator.

Initial conditions:

The recipient is at the start of the test the owner of the problem.

Constraints:

None

Check to be performed:

1. The recipient identifies the other operator 2 who should solve the problem and prepares a NP Action Request.
2. Recipient issues NP Action Request to CRDC.
3. CHECK A: CRDC checks if NP Action Request is valid.
4. CRDC forwards NP Action Request to other operator 2.
5. Other operator 2 performs the requested checks or actions.
6. Other operator 2 issues a NP Action Response to the CRDC
7. CHECK B: CRDC checks if NP Action Response is a valid response.
8. CRDC forwards the NP Action Response to the recipient.
9. CHECK C: Recipient verifies if the NP Action Response refers correctly to the NP Action Request and measures the response time between step 2 and this step.
10. (if appropriate) Recipient forwards a NP Action Response (is different from the NP Action Response from steps 6 to 9) to the CRDC to be forwarded to the other operator 1 who originated the initiating NP Action Request (is another operator (from the one in steps 1 to 6).
11. (if appropriate) CRDC forwards the NP Action Response to the other operator 1.
12. (if appropriate) CHECK D: Other operator 1 verifies if the NP Action Response is relevant for the NP Action Request he issued to the recipient.

Verdict criteria:

CHECK A: YES and

CHECK B: YES and

CHECK C: YES and

(if appropriate) CHECK D: YES

Then: PASS

Otherwise: FAIL

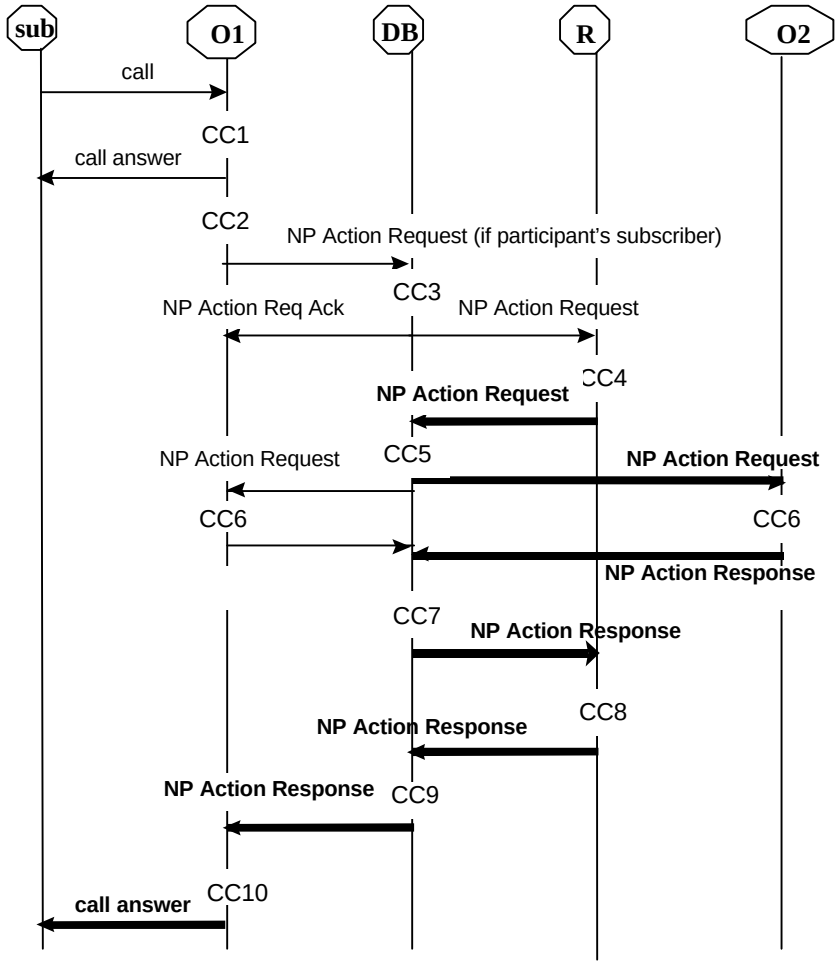
Comments and Observations:

Measure the response time between steps 2 and 9.

Detailed test information: Schematic of the flow

The tested flow is shown in bold lines.

Remark: in this diagram the other operator has been split in two roles: one that initiated the problem report, and one that is a participant in the trouble shooting process.



9.3.19 GNP – IFT4.1

Test identifier: GNP – IFT4.1

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 4.1

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

Recipient changes the routing of a ported number and informs the other operators of the new routing code. Successful update.

Initial conditions:

The telephone number has been successfully ported in.

Constraints:

Check to be performed:

1. Recipient prepares for an Update message
2. Recipient sends Update message to CRDC
3. CHECK A: CRDC checks the validity of the Update message
4. CRDC broadcasts the Update message to all operators.
5. CHECK B: One other operator sets up a call to the ported number and verifies with the recipient that the call is properly routed.
6. All operators modify their routing tables and send an Update Completed message back to the CRDC.
7. CHECK C: CRDC verifies the correctness of the Update Completed messages and measures the timer T8.
8. CHECK D: One other operator sets up a call to the ported number and verifies with the recipient that the call is properly routed.

Verdict criteria:

CHECK A: YES and

CHECK B: YES and

CHECK C: YES and

CHECK D: YES

Then: PASS

Otherwise: FAIL

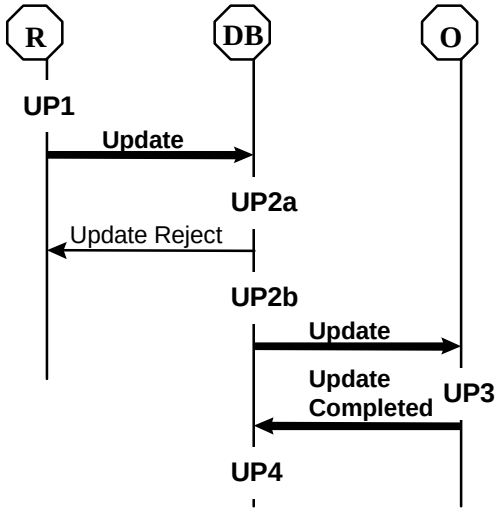
Comments and Observations:

The timer T8 is measured for each of the operators.

This test has network impact.

Detailed test information: Schematic of the flow

The tested flow is shown in bold lines.



9.3.20 GNP – IFT4.2

Test identifier: GNP – IFT4.2

Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 4.2

Priority: DNA (Deviation Not Allowed)

Version: 1.0 Date: 30-Aug-99

Configuration: NA

Reference to requirements: See reference [4]

Test summary:

Recipient changes the routing of a ported number and informs the other operators of the new routing code. The CRDC rejects the message.

Initial conditions:

The telephone number has been successfully ported in.

Constraints:

None

Check to be performed:

1. Recipient prepares for an Update message and inserts an error (e.g. number is not in the care of the recipient)
2. Recipient sends Update message to CRDC
3. CRDC verifies the Update message and rejects it by sending an Update Reject message
4. CHECK A: recipient verifies that it received the Update Reject.
5. CHECK B: One other operator sets up a call to the ported number and verifies with the recipient that the call is properly routed.

Verdict criteria:

CHECK A: YES and

CHECK B: YES

Then: PASS

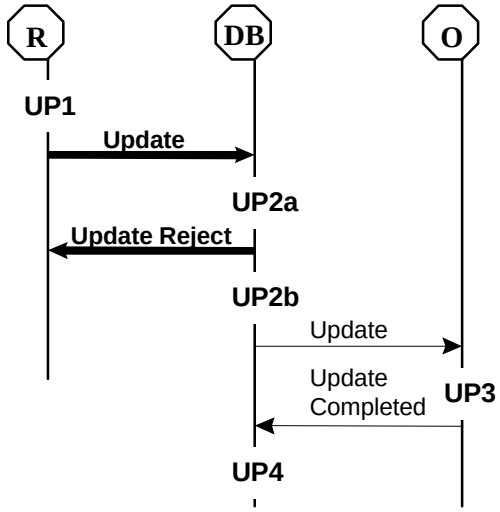
Otherwise: FAIL

Comments and Observations:

This test has network impact (even in case of reject the number still needs to be reachable and this is checked in this test).

Detailed test information: Schematic of the flow

The tested flow is shown in bold lines.

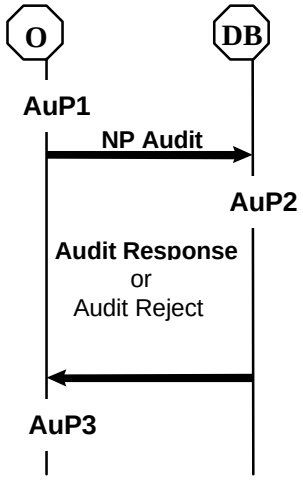


9.3.21 GNP – IFT5.1

Test identifier: GNP – IFT5.1
Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 5.1 **Priority:** DNA (Deviation Not Allowed) **Version:** 1.0 Date: 30-Aug-99 **Configuration:** NA **Reference to requirements:** See reference [4]
Test summary: An operator requests audit information for a specific number or number group and successfully receives the information.
Initial conditions: The telephone number (or number group) has been successfully ported. **Constraints:** None **Check to be performed:** 1. An operator prepares an NP Audit request and forwards the request to the CRDC 2. The CRDC processes the request and replies with an Audit Response message. 3. CHECK A: the recipient verifies that the Audit Response is correct.
Verdict criteria: CHECK A: YES Then: PASS Otherwise: FAIL
Comments and Observations:

Detailed test information: Schematic of the flow

The tested flow is shown in bold lines.

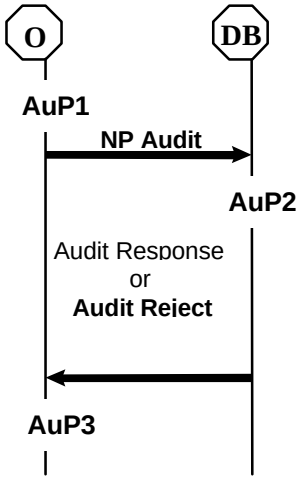


9.3.22 GNP – IFT5.2

Test identifier: GNP – IFT5.2
Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 5.2 **Priority:** DNA (Deviation Not Allowed) **Version:** 1.0 Date: 30-Aug-99 **Configuration:** NA **Reference to requirements:** See reference [4]
Test summary: An operator requests audit information for a specific number or number group and the request is rejected by the CRDC.
Initial conditions: None **Constraints:** None **Check to be performed:** 1. An operator prepares an NP Audit request with an error (e.g. requested number has never been ported) and forwards the request to the CRDC 2. The CRDC processes the request and replies with an Audit Reject message. 3. CHECK A: the recipient verifies that the Audit Reject is correct.
Verdict criteria: CHECK A: YES Then: PASS Otherwise: FAIL
Comments and Observations:

Detailed test information: Schematic of the flow

The tested flow is shown in bold lines.

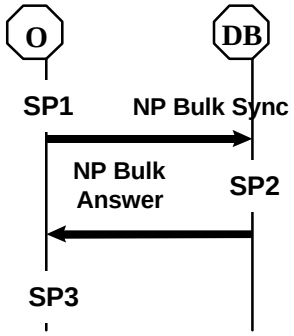


9.3.23 GNP – IFT5.3

Test identifier: GNP – IFT5.3
Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 5.3 **Priority:** DNA (Deviation Not Allowed) **Version:** 1.0 Date: 30-Aug-99 **Configuration:** NA **Reference to requirements:** See reference [4]
Test summary: An operator requests from the CRDC a copy of the CRDB for all the activated numbers.
Initial conditions: None **Constraints:** None **Check to be performed:** 1. An operator prepares a NP Bulk Sync request and issues it to the CRDC 2. CRDC verifies the request and returns a NP Bulk Answer file. 3. CHECK A: the operator verifies that he received a correct NP Bulk Answer file.
Verdict criteria: CHECK A: YES Then: PASS Otherwise: FAIL
Comments and Observations:

Detailed test information: Schematic of the flow

The tested flow is shown in bold lines.

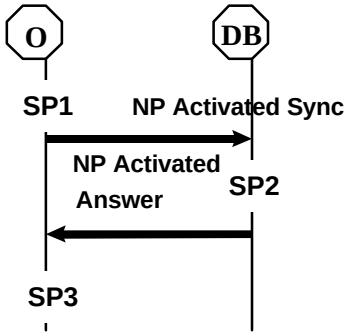


9.3.24 GNP – IFT5.4

Test identifier: GNP – IFT5.4
Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 5.4 **Priority:** DNA (Deviation Not Allowed) **Version:** 1.0 Date: 30-Aug-99 **Configuration:** NA **Reference to requirements:** See reference [4]
Test summary: An operator requests from the CRDC a copy of the broadcast messages from a given time-stamp.
Initial conditions: None **Constraints:** None **Check to be performed:** 1. An operator prepares a NP Activated Sync request and issues it to the CRDC 2. CRDC verifies the request and returns a NP Activated Answer file. 3. CHECK A: the operator verifies that he received a correct NP Activated Answer file.
Verdict criteria: CHECK A: YES Then: PASS Otherwise: FAIL
Comments and Observations:

Detailed test information: Schematic of the flow

The tested flow is shown in bold lines.

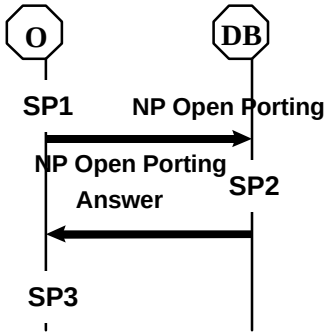


9.3.25 GNP – IFT5.5

Test identifier: GNP – IFT5.5
Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 5.5 **Priority:** DNA (Deviation Not Allowed) **Version:** 1.0 Date: 30-Aug-99 **Configuration:** NA **Reference to requirements:** See reference [4]
Test summary: An operator requests from the CRDC a copy of all messages for which the operator is recipient or donor.
Initial conditions: None **Constraints:** None **Check to be performed:** 1. An operator prepares a NP Open Porting request and issues it to the CRDC 2. CRDC verifies the request and returns a NP Open Porting Answer file. 3. CHECK A: the operator verifies that he received a correct NP Open Porting Answer file.
Verdict criteria: CHECK A: YES Then: PASS Otherwise: FAIL
Comments and Observations:

Detailed test information: Schematic of the flow

The tested flow is shown in bold lines.

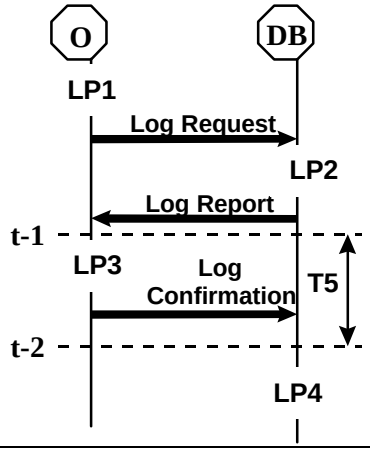


9.3.26 GNP – IFT6.1

Test identifier: GNP – IFT6.1
Type of Test: Geographic Number Portability: Integrated Field Trial: test case nr.: 6.1 **Priority:** DNA (Deviation Not Allowed) **Version:** 1.0 Date: 30-Aug-99 **Configuration:** NA **Reference to requirements:** See reference [4]
Test summary: An operator requests from the CRDC a request for logs and receives the logs.
Initial conditions: None **Constraints:** None **Check to be performed:** 1. An operator prepares a Log Request and issues it to the CRDC 2. CRDC verifies the request and returns a Log Report. 3. CHECK A: the operator verifies that he received a correct Log Report. 4. The operator then prepares and issues a Log Confirmation to the CRDC. 5. CHECK B: the CRDC checks that it received the Log Confirmation and measures timer T5.
Verdict criteria: CHECK A: YES and CHECK B: YES Then: PASS Otherwise: FAIL
Comments and Observations: The CRDC measures timer T5.

Detailed test information: Schematic of the flow

The tested flow is shown in bold lines.



10 Test Suites for the integrated field trial for geographic number portability

The test suites describe a number of common porting scenarios that will allow the participants to the number porting processes to verify their end-to-end processes. They also represent standard test scenarios that can be used to verify or measure the number porting processes.

As such not all suites are appropriate for all licensed operators in Belgium.

10.1 Unique number ports

10.1.1 Number port for a unique number, implemented at the donor as a PSTN line

- This end-to-end test is a basic test. It involves the successful completion of an initiation phase (GNP – IFT1.1) and a technical phase (GNP – IFT 2.1) for the situation where only one number is ported. The number is implemented in the donor network on a PSTN line.
- The timers to be checked here are the PSTN timers.

10.1.2 Number port for a unique number, implemented at the donor as an ISDN line (only number on the line)

- This test involves the successful completion of an initiation phase (GNP – IFT1.1) and a technical phase (GNP – IFT 2.1) for the situation where only one number is ported. The number is implemented in the donor network on an ISDN line.
- The timers to be checked here are the ISDN timers.

10.2 Group ports

10.2.1 Number port for a group of numbers, implemented at the donor as several PSTN lines

- This end-to-end test involves the successful completion of a series of initiation phases (GNP – IFT1.1) and technical phases (GNP – IFT 2.1) for the situation where a group of numbers is ported. The numbers are implemented in the donor network on PSTN lines.
- In this test a special focus is given to the capability of the process to keep the different numbers together in the internal processes of recipient and donor.

10.2.2 Number port for a group of numbers, implemented at the donor as one or more ISDN lines (full MSN for each line)

- Same as above, but here the numbers are implemented in the donor network on ISDN lines.

10.3 Complex installation ports

10.3.1 Number port for one number, implemented at the donor as an ISDN line (one number as part of a MSN)

- This test involves the successful completion of an initiation phase (GNP – IFT1.1) and a technical phase (GNP – IFT 2.1) for the situation where only one number is ported. The number is implemented in the donor network as one number of an ISDN MSN.
- This test will test the capability of the donor to release one number from an MSN in a timely fashion.

10.3.2 Number port, implemented at the donor as a complete PRA

- This test involves the successful completion of an initiation phase (GNP – IFT1.1) and a technical phase (GNP – IFT 2.1) for the situation where a group on numbers needs to be ported. The numbers are implemented in the donor network as all the numbers on a PRA.
- This is the standard test for PRA number ports. It will test capabilities of both recipient and donor to handle a multitude of numbers and a complex (manual) activation and de-activation process.

10.3.3 Number port for a partial range implemented at the donor as a PRA

- Same as above, but here the extra complexity is added that only a fraction of the PRA serving numbers are ported.

10.3.4 Number port for a hunt group

- This end-to-end test involves the successful completion of a series of initiation phases (GNP – IFT1.1) and technical phases (GNP – IFT 2.1) for the situation where a group of numbers is ported. The numbers are implemented in the donor network on PSTN lines or ISDN lines. A hunt group is implemented on these numbers

10.3.5 Number port for a DDI on a BA

10.4 Ports involving a transit

10.4.1 Number port with the participation of a transit operator

In this end-to-end test one of the tests from section 11.1 to section 11.3 is performed with the participation of a transit network between donor and recipient. One of the following two end-to-end tests is preferred:

- Number port for a unique number, implemented at the donor as a PSTN line
- Number port for a complete PRA.

Part 3
Integrated Field Trial for Non-geographic Numbers

11 Test Cases for non-geographic number portability

For Non-geographic number porting no specific test cases exist that are not covered by the test cases for geographic number porting. These are documented in part 2.

Remark:

- Please note that for non-geographic number porting, the timers to be validated also include the verification if the appropriate events occur within their proper time window during the day.

12 Test Suites for non-geographic number porting

The test suites describe a number of common porting scenarios that will allow the participants to the number porting processes to verify their end-to-end processes. They also represent standard test scenarios that can be used to verify or measure the number porting processes.

As such not all suites are appropriate for all service providers in Belgium.

12.1 Unique number ports

12.1.1 Number port for a unique number serving non-explosive traffic

- This end-to-end test is a basic test. It involves the successful completion of an initiation phase (GNP – IFT1.1, see part 2) and a technical phase (GNP – IFT 2.1, see part 2) for the situation where only one number is ported for which no explosive traffic is planned.
- The timers to be checked here are the timers for non-geographic numbers and all events need to fall within their designated time window during the day.

12.1.2 Number port for a unique number serving explosive traffic

- This end-to-end test is a basic test. It involves the successful completion of an initiation phase (GNP – IFT1.1, see part 2) and a technical phase (GNP – IFT 2.1, see part 2) for the situation where only one number is ported for which explosive traffic is planned.
- The timers to be checked here are the timers for non-geographic numbers and all events need to fall within their designated time window during the day.

12.2 Group ports

12.2.1 Number port for a group of numbers

- This end-to-end test involves the successful completion of a series of initiation phases (GNP – IFT1.1, see part 2) and technical phases (GNP – IFT 2.1, see part 2) for the situation where a group of numbers is ported
- In this test a special focus is given to the capability of the process to keep the different numbers together in the internal processes of recipient and donor.

12.3 Ports involving a transit

12.3.1 Number port with the participation of a transit operator

In this end-to-end test one of the tests from section 13.1 to section 13.2 is performed with the participation of a transit network between donor and recipient.

13 Annex A : Test Planning 1999 for the technical prototype tests

The table below gives an overview of the test planning for the interface tests.

Table 4, Test planning for technical prototype tests

	Belgacom	Telenet	Worldcom	Mobistar	Colt	KPN Belgium	BT	Codenet
Belgacom	-	W27	W28	W29	W30	W31	W32	W33
Telenet	W27	-	W29	W30	W31	W32	W33	W34
Worldcom	W28	W29	-	W31	W32	W33	W34	W27
Mobistar	W29	W30	W31	-	W33	W34	W27	W28
Colt	W30	W31	W32	W33	-	W27	W28	W29
Unisource	W31	W32	W33	W34	W27	-	W29	W30
BT	W32	W33	W34	W27	W28	W29	-	W31
Codenet	W33	W34	W27	W28	W29	W30	W31	-

- End of Document -