

**Agenda Item:** 10.3  
**Source:** Nokia  
**Title:** **Relocation Preparation procedure**  
**Document for:** Approval

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## 1. INTRODUCTION

For RELOCATION signalling procedure currently two elementary procedures are defined between Source RNC and CN, namely Relocation Required Indication and Relocation Execution.

In order to have more independent RANAP elementary procedures and to isolate the abnormal conditions to be internal to each elementary procedure, this contribution proposes that these two elementary procedures are combined into one new elementary procedure Relocation Preparation.

This new procedure would consist in successful case of RELOCATION REQUIRED message from RNC to CN and RELOCATION COMMAND from CN to RNC.

The descriptions of the unsuccessful operation and abnormal conditions are as well proposed.

Chapter 2 presents the proposed description for the new elementary procedure. The current subchapters RELOCATION REQUIRED INDICATION and RELOCATION EXECUTION are proposed to be replaced by the text in chapter 2.

## 2. RANAP PROCEDURES

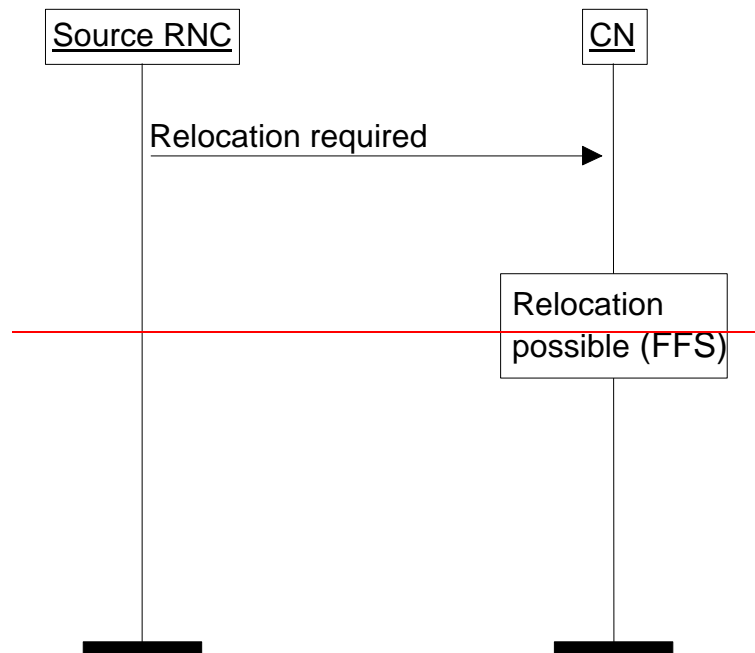
### 1.1.1.1.1.1 Relocation ~~required indication~~Preparation

#### 2.1.1.1.1 Successful operation

Procedure is initiated by the Serving RNC by sending a RELOCATION REQUIRED message to active CN nodes. Timer T(RELOCATION COMMAND) is started, upon transmitting the message. RELOCATION REQUIRED message allows a RNC to request that a relocation is to be carried out for a particular UE, having signalling connection via the serving RNC. ~~If a CN node can not realise the relocation a RELOCATION FAILURE message is returned.~~

ChapterXXXX gives the parameters included in the above message.

~~The signalling flow for relocation required indication is shown in Figure 3.~~



**Figure 3. Relocation required indication.**

The RELOCATION REQUIRED message shall be updated and repeated by the RNC with a periodicity of Txx until:

- A RELOCATION REQUIRED ACKNOWLEDGE message is received or;
- A RESET message is received, or;
- The reason for the original RELOCATION REQUIRED message disappears, or;
- All communication is lost with the UE, and the transaction is abandoned, or;
- The transaction ends, i.e. signalling connection to the CN node is released.

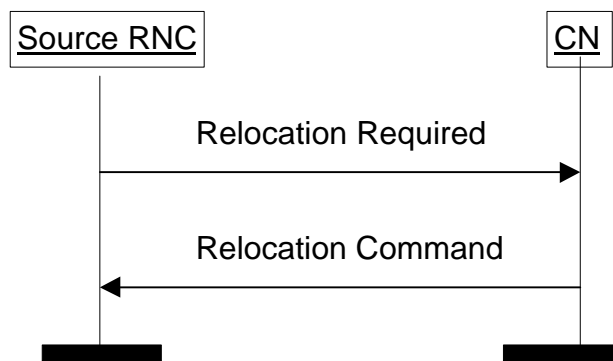
#### 4.1.1.22.1.1.2 Relocation execution

When the CN node is ready for the execution of the Relocation tThe CN sends RELOCATION COMMAND to the source RNC.

Upon reception of RELOCATION COMMAND belonging to ongoing procedure the RNC sets the amount of pending Transaction IDs for Relocation Preparation to 0 and resets the timer T(RELOCATION COMMAND). Depending on the case the source RNC either triggers the handover procedure in the air interface or commits the execution of the relocation in the target system.

Chapter XXX gives the parameters included in the above message (FFS).

The signalling flow between the source RNC and the CN is shown in Fig. XX.



**Figure 2. Relocation ~~execution~~ Preparation procedure between source RNC and CN.**

#### 2.1.1.2.1 Unsuccessful operation

If CN can not execute the Relocation Preparation procedure as requested in RELOCATION REQUIRED message CN shall abort the procedure and initiate a RELOCATION FAILURE procedure towards source the RNC.

If the RNC desires to cancel the ongoing Relocation procedure, the RNC shall wait for the completion of the Relocation Preparation procedure and after that initialise Relocation Failure Procedure towards the CN.

If a new Relocation Preparation procedure is decided to be initiated after having aborted the previous procedure, the pending Transaction ID count should be incremented by 1 and new transaction ID shall be used for the new procedure.

The maximum amount of pending transaction IDs for Relocation Preparation N(RELOCATION PREPARATION) shall be defined by the operator.

Messages which are related to aborted procedures shall be ignored.

#### 2.1.1.2.2 Abormal conditions

##### 2.1.1.2.2.1 Abnormal conditions in RNC

If timer T(RELOCATION COMMAND) expires the RNC shall abort the ongoing procedure.

If RNC receives a RELOCATION COMMAND message which is conflicting to the existing parameters within the SRNC, the SRNC shall abort the procedure and initiate Relocation Failure procedure towards the CN node, indicating the cause for the failure (Parameter Mismatch).

If the amount of pending transaction IDs for the Relocation Preparation equals to N(RELOCATION PREPARATION) the RNC shall initiate lu Release Request procedure towards the CN domain.

##### 2.1.1.2.2.2 Abnormal Conditions in CN

If CN receives a RELOCATION REQUIRED message which is conflicting to the existing parameters within the CN node, the CN shall abort the procedure and initaite Relocation Failure procedure towards source RNC, indicating the cause for the failure (Parameter Mismatch).