**3GPP TSG-RAN WG3 Meeting #114-e R3-216038**

**E-meeting, 1-11 Nov 2021**

**Title:** (TP to 37.340 CPAC BL CR) Updates of CPAC related procedures

###### Source: Huawei

**Agenda item:** 14.3

**Document Type:** Other

# 1. Introduction

This TP introduce the changes related to the progresses made during this meeting, including:

* **X2AP class 2 Data Address Indication procedure is used for MN to inform the source SN about “CPC triggered” and ”CPC executed” for MN initiated inter-SN CPC**
* **CPAC replace and Cancel procedures**

# 2. TP to TS 37.340 CPAC BL CR

## *----------Start of the Changes--------------*

## 10.3 Secondary Node Modification (MN/SN initiated)

### 10.3.1 EN-DC

The Secondary Node Modification procedure may be initiated either by the MN or by the SN and be used to modify, establish or release bearer contexts, to transfer bearer contexts to and from the SN or to modify other properties of the UE context within the same SN. It may also be used to transfer an NR RRC message from the SN to the UE via the MN and the response from the UE via MN to the SN (e.g. when SRB3 is not used). In case of CPA or CPC, this procedure is used to configure or modify CPA or CPC configuration. In case of CPAC, this procedure may also be triggered by the target SN to cancel part of the prepared PSCells.

The Secondary Node modification procedure does not necessarily need to involve signalling towards the UE.

*//skip the unchanged part*

### 10.3.2 MR-DC with 5GC

The SN Modification procedure may be initiated either by the MN or by the SN and be used to modify the current user plane resource configuration (e.g. related to PDU session, QoS flow or DRB) or to modify other properties of the UE context within the same SN. It may also be used to transfer an RRC message from the SN to the UE via the MN and the response from the UE via MN to the SN (e.g. when SRB3 is not used). In NGEN-DC and NR-DC, the RRC message is an NR message (i.e., *RRCReconfiguration*) whereas in NE-DC it is an E-UTRA message (i.e., *RRCConnectionReconfiguration*). In case of CPA or CPC, this procedure is used to configure or modify CPA or CPC configuration. In case of CPAC, this procedure may also be triggered by the target SN to cancel part of the prepared PSCells.The CPC configuration cannot be used to configure target PSCell in NE-DC or in NGEN-DC.

The SN modification procedure does not necessarily need to involve signalling towards the UE.

## *----------Start of the Next Change--------------*

## 10.4 Secondary Node Release (MN/SN initiated)

### 10.4.1 EN-DC

The Secondary Node Release procedure may be initiated either by the MN or by the SN and is used to initiate the release of the UE context at the SN. The recipient node of this request can reject it, e.g., if a SN change procedure is triggered by the SN.

In case of CPAC, this procedure may be initiated either by the MN or the target SN, and it is used to cancel all prepared PSCells at the target SN and initiate the relase of related UE context at the target SN.

It does not necessarily need to involve signalling towards the UE, e.g., in case of the RRC connection re-establishment due to Radio Link Failure in MN.

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### 10.4.2 MR-DC with 5GC

The SN Release procedure may be initiated either by the MN or by the SN and is used to initiate the release of the UE context and relevant resources at the SN. The recipient node of this request can reject it, e.g., if an SN change procedure is triggered by the SN.

In case of CPAC, this procedure may be initiated either by the MN or the target SN, and it is used to cancel all prepared PSCells at the target SN and initiate the relase of related UE context at the target SN.

*----------Start of the Next Change--------------*

## 10.5 Secondary Node Change (MN/SN initiated)

### 10.5.1 EN-DC

The Secondary Node Change procedure is initiated either by MN or SN and used to transfer a UE context from a source SN to a target SN and to change the SCG configuration in UE from one SN to another. In inter-SN CPC, this procedure initiated either by MN or SN is also used to configure CPC configuration.

In SN initiated inter-SN CPC, the SN initiated SN Change procedure may also be initiated by the source SN, to modify the existing CPC configuration, or to trigger the release of the target SN by cancellation of all prepared PSCells at the target SN and releasing the CPC related UE context at the target SN..

NOTE 1: Inter-RAT SN change procedure with single RRC reconfiguration is not supported in this version of the protocol (i.e. no transition from EN-DC to DC).

The Secondary Node Change procedure always involves signalling over MCG SRB towards the UE.

**MN initiated SN Change**

*//skip the unchanged part*

4/5. *…*

In case of CPC, upon receiving the *RRCConnectionReconfigurationComplete* message from the UE, the MN triggers the Data Address Indication procedure to the source SN to inform that the CPC has been triggered, the source SN, if applicable, starts early data forwarding. The PDCP PDU and/or PDCP SDU forwarding may take place during early data forwarding.

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### 10.5.2 MR-DC with 5GC

**MN initiated SN Change**

The MN initiated SN change procedure is used to transfer a UE context from the source SN to a target SN and to change the SCG configuration in UE from one SN to another. This procedure can also be used to initiate inter-SN CPC.

In SN initiated inter-SN CPC, the SN initiated SN Change procedure may also be initiated by the source SN, to modify the existing CPC configuration, or to trigger the release of the target SN by cancellation of all prepared PSCells at the target SN and releasing the CPC related UE context at the target SN.

*----------End of the Changes--------------*