3GPP TSG-RAN WG3 Meeting #124 R3-24XXXX

**Fukuoka, Japan, 20-24 May, 2024**

Agenda Item: 12.3

Source: Huawei

Title: TP to TR38.799 for option B of Xn support

Document for: other

# 1 Introduction

This contribution is to provide TP for the Xn support of the architecture of the NR Femto node via the Xn GW according to the outcome of the offline discussion.

# Annex. TP for TR 38.799 V0.0.1

*Start of Change*

## 5.2 Architecture

Editor Note: Study the overall RAN architecture and required functional and procedural impacts for supporting 5G Femto deployments

>>>>>>>>>>>unchanged parts are skipped<<<<<<<<<<<<

5.2.2.x Option B for Xn support via Xn GW

As shown in Figure 5.2.2.x-1, the logical architecture for NR Femto node when Xn connectivity via the Xn GW is supported.

NR Femto

NR Femto

gNB

SeGW

Xn GW

5GC

NR Femto Mgmt System

Xn-C

NG

NG

Xn-C

Xn-C

Figure 5.2.2.x-1: NR Femto operating with Xn GW - Logical Architecture

Support for the Xn GW relies on following principles:

- A NR Femto node connects to a single Xn GW only. Each NR Femto node is preconfigured with information about which Xn GW it connects to, e.g. an IP address of the Xn GW.

- There is no limitation on the number of Xn GWs a gNB may connect to.

- Interface between two Xn GWs is not supported. The routing of XnAP messages via more than one Xn GW (i.e. more than two SCTP hops) is not allowed.

- XnAP contexts only exist in the two peer NR Femto nodes or in the NR Femto node and its peer gNB (same as without Xn GW). The peer XnAP contexts define an "XnAP association" between peer NR Femto nodes or between the NR Femto node and its peer gNB which spans over two SCTP associations (one per each hop).

- The Xn GW puts no constraints on the Xn user plane interface (Xn-U).

- For each NR Femto node or gNB connected to the Xn GW, the Xn GW maintains the association information, i.e. the mapping of the Global gNB ID to the TNL address(es).

*End of Change*