3GPP TSG-RAN WG3#126 R3-247788

Orlando, USA, 18-22 Nov 2024

Agenda Item: 11.4

Source: ZTE Corporation

Title: Discussion on AI/ML Mobility Optimization

Document for: Discussions & Approval

# Introduction

This contribution is to discuss following CB.

**CB: # AIRAN3\_NRDC**

**- Check the open issue above**

**- Provide TPs to capture agreements**

(moderator - ZTE)

Summary of offline disc [R3-247788](Inbox/R3-247788.zip)

# 2 For chairman’s notes

Summary for Chair Notes:

FFS on whether it is beneficial that MN can provide predicted SCG bearers, predicted PSCell ID to SN as a kind of assistance information.

Agree the TP R3-247827 (in revision of R3-247141) to reflect the agreements:

**Using the Data Collection Reporting Initiation procedure to configure the collection of UE performance at SN side.**

**Introduce the Data Collection ID IE into the SN Addition Request message to identify a Data Collection Reporting context.**

# 3 Discussion

**Introduce predicted PSCell ID in the DC procedure (e.g., SN Addition, MN-initiated SN change) as one of assistance information?**

**Other information, e.g., predicted SCG bearer?**

During online session today, it was discussed whether to introduce predicted PSCell ID in the DC procedure as one of assistance information. And one company also raised the other information e.g., predicted QoS flows the MN assumed to be served as SCGs.

In contribution R3-247140 [1], it was mentioned that in the current DC procedure (e.g., SN Addition procedure), there is no information related to the PSCell ID.

*In the legacy process, the MN does not explicitly instruct the SN on which cell to select as the PScell. However, MN could provide the assistance information to SN to choose and configure SCG cells. Now MN as NG-RAN node can predict UE trajectory, and then MN can use this information to select the appropriate target SN node. As a result, the MN could provide a predicted (suggested) PSCell ID to the SN for reference.*

In contribution R3-247535 [2], it is reasonable to think that the MN has inferred the action of SN Addition (or SN Change) assuming that adding (or changing) the SN would bring some benefits to the UE. We think that it is good if the MN informs the SN about some of the assumptions made, so that the SN can try to provide the best possible service to the UE.

*For example, when an MN infers the action to add or change SN, it can assume that a specific PSCell will be selected for the UE. This is obvious because the UE performance feedback received in the past for each UE is specific to a PSCell (described in Proposal 4). Hence, if UEs were served well by an SN, on one or more PSCells, the MN is more likely to predict that the SN and one or more specific PSCells, are the best options for a DC configuration at the UE.*

*Another example is that when the MN carries out an AI/ML generated SN Addition, it may request to the SN the establishment of SN-terminated bearers. However, the inferred decision can be based on the assumption that specific QoS flows will be served by the SN (as SCG). This is not in line with what could happen today, where an SN may decide that all the QoS flows for which the MN requests SN-terminated bearers, shall be served by MCGs. Therefore, when the MN derives an AI/ML based request to the SN for some resources for SN terminated bearers, it should tell the SN that this request was made assuming that SN could serve some or all of the QoS flows as SCGs. After receiving this notification, the SN is left free to decide whether to serve the QoS flows as MCG or SCG, but it can use the information and try to accommodate the MN assumptions, if possible.*

**Proposal 1: MN can provide predicted(assumed) PSCell ID to SN via SN Addition Request message as a kind of assistance information for DC configuration.**

**Proposal 2: MN can provide predicted(assumed) QoS Flow to SN via SN Addition Request message as a kind of assistance information for DC configuration.**

HW: If we introduced the predicted PSCell ID (predicted information), what’s feedback information.

E///: There is difference between assumption and prediction. It is always SN to decide the SCG configuration. Assumed information is one of assistance information

CATT, ZTE: Sending predicted PSCell ID is beneficial.

Nokia: It is impossible for MN to predict PSCell information.

SS: PSCell information is used for SN for reference. There is no difference between assumption and prediction.

QC: Predicted PScell information is useful.

~~WA: Predicted(assumed) PSCell ID is provided from MN to SN as a kind of assistance information.~~

FFS on whether it is beneficial that MN can provide predicted SCG bearers, predicted PSCell ID to SN as a kind of assistance information.