3GPP TSG-RAN WG3 Meeting #114-e R3-21xxxx

1-11 Nov 2021

**Agenda item: 13.2.2.**

**Source: Nokia, Nokia Shanghai Bell**

**Title: (TP for BL CR for TS 38.401) Discussion on Reduction of Service Interruption**

**Document for: Discussion and Decision**

# Introduction

This contribution proposes TP per CB: # 1303\_IAB\_Red\_Serv\_Inter.

**TP for BL Stage-2 CR (TS38.401)**

#### 8.2.3.1 Intra-CU topology adaptation procedure in SA

During the intra-CU topology adaptation in SA, both the source and the target parent node are served by the same IAB-donor-CU. The target parent node may use a different IAB-donor-DU than the source parent node. The source path may have common nodes with the target path. Figure 8.2.3.1-1 shows an example of the topology adaptation procedure, where the target parent node uses a different IAB-donor-DU than the one used by the source parent node.

\*\* Unchanged part is skipped \*\*

11. The IAB-donor-CU configures BH RLC channels and BAP-sublayer routing entries on the target path between the target parent IAB-node and target IAB-donor-DU as well as DL mappings on the target IAB-donor-DU for the migrating IAB-node’s target path. These configurations may be performed at an earlier stage, e.g. immediately after step 3, or before step 3. The IAB-donor-CU may establish additional BH RLC channels to the migrating IAB-MT via RRC message.

12. The F1-C connections are switched to use the migrating IAB-node’s new TNL address(es), IAB-donor-CU updates the UL BH information associated to each GTP-tunnel to migrating IAB-node. This step may also update UL FTEID and DL FTEID associated to each GTP-tunnel. All F1-U tunnels are switched to use the migrating IAB-node’s new TNL address(es). This step may use non-UE associated signaling in E1 and/or F1 interface to provide updated UP configuration for F1-U tunnels of multiple connected UEs or child IAB-MTs. The IAB-donor-CU may also update the UL BH information associated with non-UP traffic. Implementation must ensure the avoidance of potential race conditions, i.e. no conflicting configurations are concurrently performed using UE-associated and non-UE-associated procedures.

In case IPsec tunnel mode is used for TNL protection, the IAB-node may use MOBIKE to migrate the IPsec tunnel to the new outer IP addresses. After the completion of the MOBIKE procedure, the IAB-DU initiates a F1AP gNB-DU Configuration Update procedure from which the IAB-donor-CU can conclude whether the existing inner IP address(es) (e.g. for SCTP association) and the DL F-TEID can be reused.

13. The IAB-donor-CU sends a UE CONTEXT RELEASE COMMAND message to the source parent node IAB-DU.