3GPP TSG-RAN WG3 Meeting #128 draft-R3-253856

St Julian’s, Malta, 19th – 23rd May 2025

Agenda Item: 17.3

Source: Ericsson. Deutsche Telekom, China Unicom, Jio Platforms

Title: Xn impact of On-demand SIB1 for UEs in idle/inactive mode

Document for: Other

# Introduction

**Agreement 1: One “Provision Request message includes one “OD-SIB1 config R19” referring to the TS 38.331 definition, it is a RRC Container in octet string (presence M) + one NES Cell ID (presence M ) + one Cell-A ID (presence O )**

**Agreement 2: Cell A gNB-CU encoding the SIBxx.**

**Agreement 3: The NES gNB-CU sends the indication to NES gNB-DU. The NES gNB-DU MAY go to OD-SIB 1 operation up to gNB-DU decision.**

# Text Proposal for BL CR for TS 38.423

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of TP \*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

Editor’s Note: The procedure, message and the IE names are FFS

Editors Note: How to address the role of the NG-RAN node1 and NG-RAN node2 to be further discussed.

### 8.x.x UL WUS Configuration Provision (FFS)

#### 8.x.x.1 General

The purpose of the UL WUS Configuration Provision procedure is to enable an NG-RAN node1 to provide UL WUS configuration information to NG-RAN node2 “and request NG-RAN node2 to transmit UL WUS configuration information (FFS)”.

“The procedure is also used to enable an NG-RAN node1 to request NG-RAN node2 to stop transmission of UL WUS configuration. (FFS)”

The procedure uses non UE-associated signaling.

#### 8.x.x.2 Successful Operation



Figure 8.x.x.2-1: UL WUS Configuration Provision, successful operation

If the “start with UL WUS Configuration” (details on this codepoint/choice of “start with UL WUS Configuration” are FFS) is included in the UL WUS CONFIGURATION PROVISION REQUEST (Naming FFS) message, the NG-RAN node2shall, if supported, broadcast UL WUS Configuration (Naming FFS) in SIBx (SIB naming FFS) and reply with the UL WUS CONFIGURATION PROVISION RESPONSE (Naming FFS) message. The NG-RAN node2 stores the UL WUS configuration information (Naming FFS).

* If Cell-A ID (naming FFS) is included in the UL WUS CONFIGURATION PROVISION REQUEST (Naming FFS) message, the NG-RAN node2 shall, if supported, broadcast the UL WUS Configuration information (Naming FFS) in the cell indicated by Cell-A ID (naming FFS).

#### If the “stop” is included in the UL WUS CONFIGURATION PROVISION REQUEST (Naming FFS) message, the NG-RAN node2 shall, if supported, stop broadcasting UL WUS Configuration (Naming FFS) in SIBx (SIB naming FFS). NG-RAN node2 removes the received UL WUS Configuration.8.x.x.3 Unsuccessful Operation



Figure 8.x.x.3-1: UL WUS Configuration Provision, unsuccessful operation

If the NG-RAN node2 cannot broadcast UL WUS Configuration in SIBx (Naming FFS), or a failure occurs during UL WUS Configuration Provision (Naming FFS), the NG-RAN node2 shall send UL WUS CONFIGURATION PROVISION FAILURE (Naming FFS) message. The message shall contain the *Cause* IE with an appropriate value.

#### 8.x.x.4 Abnormal Conditions

Void.

### 8.x.y UL WUS Configuration Transmission Status Update (FFS)

#### 8.x.y.1 General

This procedure is initiated by an NG-RAN node2 to inform a neighbouring NG-RAN node1 about a previously admitted UL WUS configuration provision being stopped.The procedure uses non UE-associated signalling.

#### 8.x.y.2 Successful Operation



Figure 8.x.y.2-1: UL WUS Configuration Transmission Status Update, successful operation

The NG-RAN node2 shall indicate that a previously admitted UL WUS configuration provision in the UL WUS CONFIGURATION PROVISION STATUS message is being stopped.

#### 8.x.y.3 Unsuccessful Operation

Not applicable.

#### 8.x.y.4 Abnormal Conditions

Void.

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Next change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

### 9.x.x.x UL WUS CONFIGURATION PROVISION REQUEST

This message is sent by the NG-RAN node1 to the peer NG-RAN node2 to request or stop provisioning of an UL WUS configuration in one or more cells.

Direction: NG-RAN node1  NG-RAN node2.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.2.3.1 |  | YES | reject |
| CHOICE*Request Type* | M |  |  |  | YES | reject |
| >*Start* |  |  |  |  |  |  |
|  >> UL WUS Configuration | M |  | OCTET STRING | Includes the *xyz* message as defined in subclause a.b.c of TS 38.331 [10]. | – |  |
|  >> NES Cell ID | M |  | NR CGI9.2.2.7 | Indicate cell of the NG-RAN node1 for which the request applies. | – |  |
|  >> Cell-A ID | O |  | NR CGI9.2.2.7 | Indicate the Cell-A ID of the NG-RAN node2 requested to provide the UL WUS configuration. | – |  |
| >*Stop* |  |  |  |  |  |  |
|  >> NES Cell ID | M |  | NR CGI9.2.2.7 | Indicate cell of the NG-RAN node1 for which the request applies. | – |  |
| Interface Instance Indication | O |  | 9.2.2.39 |  | YES | reject |

9.1.3.y UL WUS CONFIGURATION PROVISION RESPONSE

This message is sent by an NG-RAN node2 to a peer NG-RAN node1 to indicate that the UL WUS configuration will be provided by the NG-RAN node2.

Direction: NG-RAN node2 ® NG-RAN node1.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.2.3.1 |  | YES | reject |
| NES Cell ID | M |  | NR CGI9.2.2.7 | Indicate cell of the NG-RAN node1 sent the request. | YES | reject |
| Interface Instance Indication | O |  | 9.2.2.39 |  | YES | reject |

9.1.3.z UL WUS CONFIGURATION PROVISION FAILURE

This message is sent by an NG-RAN node2 to a peer NG-RAN node1 to indicate that the UL WUS configuration cannot be provided in the requested cells of the NG-RAN node2.

Direction: NG-RAN node2 ® NG-RAN node1.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.2.3.1 |  | YES | reject |
| Cause | M |  | 9.2.3.2 |  | YES | ignore |
| NES Cell ID | M |  | NR CGI9.2.2.7 | Indicate cell of the NG-RAN node1 sent the request. | YES | ignore |
| Criticality Diagnostics | O |  | 9.2.3.3 |  | YES | ignore |
| Interface Instance Indication | O |  | 9.2.2.39 |  | YES | reject |

9.1.3.t UL WUS CONFIGURATION PROVISION STATUS

This message is sent by an NG-RAN node2 to a peer NG-RAN node1 to report that an admitted UL WUS configuration provision is being stopped.

Direction: NG-RAN node2 ® NG-RAN node1.

| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.2.3.1 |  | YES | ignore |
|  Cell-A ID | M |  | NR CGI9.2.2.7 | Indicate the Cell-A ID of the NG-RAN node2 performed the broadcasting for the UL WUS configuration. | YES | reject |
| Provision Status | M |  | ENUMERATED (stopped, …) | Indicates the provision of the UL WUS configuration in the assisting cells is stopped.  | YES | reject |
| Interface Instance Indication | O |  | 9.2.2.39 |  | YES | reject |

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of TP \*\*\*\*\*\*\*\*\*\*\*\*\*\*\***