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 the *Assisted Cell* (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 the assisted cell (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* |  |  |  |  |  |  |
| >>On-demand SIB1 Config | M |  | OCTET STRING | Includes the *od-SIB1-Config* contained in the SIBxx message as defined in of TS 38.331 [10]. | – |  |
| >>NR CGI | M |  | 9.2.2.7 | Indicates the cell of the NG-RAN node1 for which the request applies. | – |  |
| >>Assisted Cell | O |  | NR CGI  9.2.2.7 | Indicates the cell of the NG-RAN node2 requested to provide the UL WUS configuration. | – |  |
| >*Stop* |  |  |  |  |  |  |
| >>NR CGI | M |  | NR CGI  9.2.2.7 | Indicates 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 |
| NR CGI | M |  | 9.2.2.7 | Indicates the 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 |
| NR CGI | M |  | 9.2.2.7 | Indicates the 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 |
| NR CGI | M |  | 9.2.2.7 | Indicates the cell of the NG-RAN node1 sent the request. | 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 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\***