**3GPP TSG-SA5 Meeting #139-e *S5-215101***

**e-meeting, 11 - 20 October 2021**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **28.313** | **CR** | **0029** | **rev** | **1** | **Current version:** | **17.2.0** |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network |  |

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| ***Title:*** | Update procedures for plug and connect to management system | | | | | | | | | |
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| ***Source to WG:*** | S5 | | | | | | | | | |
| ***Source to TSG:*** | Huawei,Ericsson,China Telecom | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | PACMAN | | | | |  | ***Date:*** | | | 2021-04-23 |
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| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
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| ***Reason for change:*** | | TS 28.315 will capture the Plug and Connect; Procedure flows, procedures for NG-RAN NE plug and connect to management system should refers to that generic procedure. | | | | | | | | |
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| ***Summary of change:*** | | Update the procedures for RAN NE plug and connect to management system in 8.3.2.1 to refers to TS 28.315 Plug and Connect; Procedure flows. | | | | | | | | |
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| ***Consequences if not approved:*** | |  | | | | | | | | |
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| ***Clauses affected:*** | | 2, 4.2.3, 6.4.2.2.1,8.3.2.1,A.1.1 | | | | | | | | |
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|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
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| ***Other comments:*** | | This contribution depends on the approval of S5-215102 | | | | | | | | |
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| ***This CR's revision history:*** | | S5-215101 is the revision of S5-214216  S5-215XXX is the revision of S5-215101 and S5-215041 | | | | | | | | |

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| **1st Change** |

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 32.500: "Telecommunication Management; Self-Organizing Networks (SON); Concepts and requirements".

[3] 3GPP TS 28.532: "Management and orchestration; Generic management services"

[4] 3GPP TS 38.321 "NR; Medium Access Control (MAC) protocol specification".

[5] 3GPP TS 28.552 "Management and orchestration; 5G performance measurements".

[6] 3GPP TS 32.511 " Telecommunication management; Automatic Neighbour Relation (ANR) management; Concepts and requirements".

[7] 3GPP TS 38.300 "NR; Overall description; Stage-2".

[8] Void

[9] 3GPP TS 38.331: "NR; Radio Resource Control (RRC) protocol specification".

[10] Void

[11] 3GPP TS 28.531 "Management and orchestration; Provisioning".

[12] 3GPP TS 28.550: "Management and orchestration; Performance assurance".

[13] 3GPP TS 28.541: "Management and orchestration; 5G Network Resource Model (NRM); Stage 2 and stage 3".

[14] Void

[15] 3GPP TS 32.508: "Telecommunication management; Procedure flows for multi-vendor plug-and-play eNodeB connection to the network".

[16] 3GPP TS 38.133: "NR; Requirements for support of radio resource management".

[17] Void

[X] 3GPP TS 28.315: "Management and orchestration; Plug and Connect; Procedure flows".

[Y] 3GPP TS 28.314: " Management and orchestration; Plug and Connect; Concepts and requirements”.

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| **2nd Change** |

## 4.2 Self-establishment of new RAN NE in network

### 4.2.1 Introduction

Self-establishment of new RAN NE in network describes the procedure of a new NG-RAN NE can automatically establish when it is powered up and connect to the IP network in multi-vendor scenario, which includes:

- Network Configuration data handling

- Plug and connect to management system

- Self-Configuration

### 4.2.2 Network configuration data handling

Network configuration data handling makes the network configuration data available to the management system support self-configuration process, which may include network configuration data preparation, network configuration data transfer and network configuration data validation. This happens except all of the network configuration data for NE can be generated by the management system supporting self-configuration process.

**Network configuration data preparation:** This makes the network configuration data ready in operator's network management system who provides the network configuration data. How to prepare the network configuration data in operator's network management system is out of scope of the present document.

**Network configuration data transfer:** This transfers the Network configuration data from network configuration data Provider to the network configuration data Consumer.

**Network configuration data validation:** This validates the syntax and semantics of network configuration data. It takes place in the network configuration data Consumer.

### 4.2.3 Plug and connect to management system

Plug and connect to management system connects theNE to its management system providing support for self-configuration process as automatically as possible. The concepts and requirements of plug and connect are specified in TS 28.314 [Y].

### 4.2.4 Self-configuration

Self-configuration puts the NE into a state to be ready to carry traffic in an automated manner. Self-configuration includes following functionality: create self-configuration task, monitor self-configuration process, generate configuration data if needed, download and activate software, download and active configuration data, perform self-test and update network resource model, etc.

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| **3rd Change** |

### 6.1.2 Centralized SON

#### 6.1.2.1 PCI configuration

**REQ- CPCI-CONFIG-FUN-1** producer of provisioning MnS should have a capability allowing an authorized consumer to configure or re-configure the PCI value(s) for NR cell(s).

**REQ- CPCI-CONFIG-FUN-2** producer of provisioning MnS should have a capability to notify the authorized consumer with the PCI value(s) being assigned to NR cell(s).

**REQ-CPCI-CONFIG-FUN-3** producer of fault supervision MnS should have a capability to notify the authorized consumer about the detection or resolution of PCI collision or PCI confusion problems for NR cells.

#### 6.1.2.2 Requirements for RAN NE plug and connect to management system

The requirements for plug and connect an NE to management system are specified in TS 28.314 [Y].

#### 6.1.2.3 Requirements for self-configuration of a new RAN NE

**REQ-SCM-CON-1** The MnS for self-configuration management shall have the capability allowing MnS consumer request MnS producer to create, query and delete Self-configuration management profile.

**REQ-SCM-CON-2** The MnS for Self-configuration management shall have the capability allowing MnS consumer obtain the progress of self-configuration process form MnS producer.

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| **4th Change** |

##### 6.4.2.2.1 Use case for RAN NE plug and connect to management system

The NE described in this use case can be gNB in non-split scenario and gNB-DU in split scenario.

Note: The NE within virtualization is not addressed.

The details of this use case are covered in plug and connect use case in TS 28.314 [Y].

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| **5th Change** |

#### 8.3.2.1 Procedures for RAN NE plug and connect to management system

The NE described in this procedure can be gNB in non-split scenario and gNB-DU in split scenario.

Note 1: The NE within virtualization is not addressed.

The details of procedure flow and descriptions are covered in TS 28.315 [X].

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| **2nd Change** |

## A.1.1 Void

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| **End of Change** |