**3GPP TSG-CT WG4 Meeting #101eC4-205xxx**

**E-Meeting, 3rd – 13th November 2020 *Revision of C4-205319***

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **29.510** | **CR** | **0414** | **rev** | **1** | **Current version:** | **16.5.0** |  |
|  | | | | | | | | |
| *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 |  | Core Network | **X** |

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| ***Title:*** |  | | | | | | | | | |
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| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | CT4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5G\_eSBA | | | | |  | ***Date:*** | | | 2020-10-20 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | In clause 5.2.2.1, it states that the NFStatusSubscribe / NFstatusNotify / NFStatusUnsubscribe operations can be invoked by an NF Service Consumer or SCP requesting to be notified about events related to an NF instance located in the same PLMN, or in a different PLMN.  But only NF Service Consumer is metioned in subsequent definition of subscription related data structure, which shall be updated to avoid confusion. | | | | | | | | |
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| ***Summary of change:*** | | Parameters defined in SubscriptionData IE are also applicable to SCP. | | | | | | | | |
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| ***Consequences if not approved:*** | | NFStatusSubscribe service operation used by SCP is inconsistence within the specification. | | | | | | | | |
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| ***Clauses affected:*** | | 5.2.2.1 | | | | | | | | |
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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 ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This contribution does not change the OpenAPI. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

\* \* \* First Change \* \* \* \*

#### 5.2.2.1 Introduction

The services operations defined for the Nnrf\_NFManagement service are as follows:

- NFRegister: It allows an NF or SCP Instance to register its profile in the NRF; it includes the registration of the general parameters of the NF or SCP Instance, together with the list of potential services exposed by the NF Instance. This service operation is not allowed to be invoked from an NRF in a different PLMN.

- NFUpdate: It allows an NF or SCP Instance to replace, or update partially, the parameters of its profile (including the parameters of the associated services, if any) in the NRF; it also allows to add or delete individual services offered by the NF Instance. This service operation is not allowed to be invoked from an NRF in a different PLMN.

- NFDeregister: It allows an NF or SCP Instance to deregister its profile in the NRF, including the services offered by the NF Instance, if any. This service operation is not allowed to be invoked from an NRF in a different PLMN.

- NFStatusSubscribe: It allows an NF or SCP Instance to subscribe to changes on the status of NF Instances registered in NRF. It also allows an SCP Instance to subscribe to changes on the status of other SCP Instances registered in NRF. This service operation can be invoked by an NF Instance in a different PLMN (via the local NRF in that PLMN). It cannot be invoked by an SCP instance in a different PLMN.

- NFStatusNotify: It allows the NRF to notify subscribed NF or SCP Instances of changes on the status of NF Instances. It also allows the NRF to notify subscribed SCP Instances of changes on the status of SCP Instances. This service operation can be invoked directly between the NRF and an NF Instance in a different PLMN (without involvement of the local NRF in that PLMN). It cannot be invoked between the NRF and an SCP instance in a different PLMN.

- NFStatusUnsubscribe: It allows an NF or SCP Instance to unsubscribe to changes on the status of NF Instances registered in NRF. It also allows an SCP Instance to unsubscribe to changes on the status of other SCP Instances registered in NRF. This service operation can be invoked by an NF Instance in a different PLMN (via the local NRF in that PLMN). It cannot be invoked by an SCP instance in a different PLMN.

NOTE 1: The "change of status" of the NFStatus service operations can imply a request to be notified of newly registered NF or SCP Instances in NRF, or to be notified of profile changes of a specific NF or SCP Instance, or to be notified of the deregistration of an NF or SCP Instance.

NOTE 2: An NRF instance can also use the NFRegister, NFUpdate or NFDeregister service operations or OA&M system to register, update or deregister its profile in another NRF in the same PLMN.

- NFListRetrieval: It allows retrieving a list of NFs and SCPs currently registered in the NRF. This service operation is not allowed to be invoked from an NRF in a different PLMN.

- NFProfileRetrieval: It allows retrieving the profile of a given NF or SCP instance. This service operation is not allowed to be invoked from an NRF in a different PLMN.

The NFStatusSubscribe / NFstatusNotify / NFStatusUnsubscribe operations can be invoked by an NF Service Consumer (i.e., "source NF" or "SCP") requesting to be notified about events (registration, deregistration, profile change) related to an NF instance (i.e., "target NF") located in the same PLMN, or in a different PLMN. An SCP can also invoke these operations to be notified about events (registration, deregistration, profile change) related to an SCP instance located in the same PLMN.

In the description of these operations in clauses 5.2.2.5, 5.2.2.6 and 5.2.2.7, when the NF instances are located in the same PLMN, both source NF and target NF are said to be located in the "Serving PLMN" but, in the general case, the functionality is not restricted to the PLMN that is serving a given UE, and it shall be applicable as well to any scenario in which source NF and target NFs belong to the same PLMN.

When source NF and target NF are located in different PLMNs, the source NF is said to be in the "Serving PLMN", and the target NF (and the NRF where such NF is registered) is said to be in the "Home PLMN", similarly to the scenarios described in 3GPP TS 23.502 [3], but the functionality shall be equally applicable to any scenario between any pair of PLMNs (e.g. with the source NF in the Home PLMN and the target NF in the Serving PLMN).

The SCP is treated by the Nnrf\_NFManagement service in the same way as NFs. Specifically, the SCP is designated with a specific NF type and NF Instance ID. However, the SCP does not support services. Accordingly, references to "NF" or "NF Profile" in the description of the service operations in the following clauses also apply to an SCP.

\* \* \* End of Changes \* \* \* \*