**3GPP TSG-SA5 Meeting #154 *S5-242033***

Changsha, China, 15 - 19 April 2024

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **28.541** | **CR** |  | **rev** |  | **Current version:** | **17.14.0** |  |
|  |
| *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 | **X** | Core Network | **X** |

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|  |
| ***Title:***  |  |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** | TEI17 |  | ***Date:*** | 2024-04-16 |
|  |  |  |  |  |
| ***Category:*** | F |  | ***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 canbe 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)* |
|  |  |
| ***Reason for change:*** | YANG SS is not matching the approved stage 2. |
|  |  |
| ***Summary of change:*** | Update YANG code to match existing stage 2. |
|  |  |
| ***Consequences if not approved:*** | Stage 2 and Stage 3 mismatch; interoperability problems. |
|  |  |
| ***Clauses affected:*** | E.5.16, H.5.17 |
|  |  |
|  | **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:*** | YANG Forge link: Forge MR link: <https://forge.3gpp.org/rep/sa5/MnS/-/merge_requests/1105> at commit 021cf1a2b5054d9d9fc1915427c16cce1f0d5d1e |
|  |  |
| ***This CR's revision history:*** |  |

***First change***

E.5.16 module \_3gpp-nr-nrm-gnbcucpfunction.yang

<CODE BEGINS>

module \_3gpp-nr-nrm-gnbcucpfunction {

 yang-version 1.1;

 namespace "urn:3gpp:sa5:\_3gpp-nr-nrm-gnbcucpfunction";

 prefix "gnbcucp3gpp";

 import \_3gpp-common-yang-types { prefix types3gpp; }

 import \_3gpp-common-managed-function { prefix mf3gpp; }

 import \_3gpp-common-managed-element { prefix me3gpp; }

 import \_3gpp-common-top { prefix top3gpp; }

 import \_3gpp-common-yang-extensions { prefix yext3gpp; }

 organization "3GPP SA5";

 contact "https://www.3gpp.org/DynaReport/TSG-WG--S5--officials.htm?Itemid=464";

 description "Defines the YANG mapping of the GNBCUCPFunction Information

 Object Class (IOC) that is part of the NR Network Resource Model (NRM).

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 TTA, TTC). All rights reserved.";

 reference "3GPP TS 28.541 5G Network Resource Model (NRM)";

 revision 2024-02-23 { reference CR-1219; }

 revision 2023-09-17 { reference CR-1042 ; }

 revision 2022-07-27 { reference "CR-0769"; }

 revision 2021-11-06 { reference "CR-0611" ; }

 revision 2021-11-05 { reference "CR-0609"; }

 revision 2020-10-02 { reference CR-0384; }

 revision 2020-08-06 { reference "CR-0333"; }

 revision 2020-08-03 { reference "CR-0321"; }

 revision 2020-06-03 { reference "CR-0286"; }

 revision 2020-05-08 { reference S5-203316; }

 revision 2020-04-28 { reference "0260"; }

 revision 2020-02-14 { reference S5-20XXXX; }

 revision 2019-10-28 { reference S5-193518; }

 revision 2019-06-17 { reference "Initial revision"; }

 feature DESManagementFunction {

 description "Classs representing Distributed SON Energy Saving feature";

 }

 feature DANRManagementFunction {

 description "Classs representing D-SON function of ANR Management feature";

 }

 feature DMROFunction {

 description "Classs representing D-SON function of MRO feature";

 }

 grouping GNBCUCPFunctionGrp {

 description "Represents the GNBCUCPFunction IOC.";

 reference "3GPP TS 28.541";

 uses mf3gpp:ManagedFunctionGrp;

 leaf gNBId {

 description "Identifies a gNB within a PLMN. The gNB Identifier (gNB ID)

 is part of the NR Cell Identifier (NCI) of the gNB cells.";

 reference "gNB ID in 3GPP TS 38.300, Global gNB ID in 3GPP TS 38.413";

 mandatory true;

 type int64 { range "0..4294967295"; }

 }

 leaf gNBIdLength {

 description "Indicates the number of bits for encoding the gNB ID.";

 reference "gNB ID in 3GPP TS 38.300, Global gNB ID in 3GPP TS 38.413";

 mandatory true;

 type int32 { range "22..32"; }

 }

 leaf gNBCUName {

 description "Identifies the Central Unit of an gNB.";

 reference "3GPP TS 38.473";

 mandatory true;

 type string { length "1..150"; }

 }

 list pLMNId {

 description "The PLMN identifier to be used as part of the global RAN

 node identity.";

 key "mcc mnc";

 min-elements 1;

 max-elements 1;

 yext3gpp:inVariant;

 uses types3gpp:PLMNId;

 }

 leaf-list x2BlockList {

 type string;

 description "List of nodes to which X2 connections are prohibited.";

 }

 leaf-list x2AllowList {

 type string;

 description "List of nodes to which X2 connections are enforced.";

 }

 leaf-list xnBlockList {

 type string;

 description "List of nodes to which Xn connections are prohibited.";

 }

 leaf-list xnAllowList {

 type string;

 description "List of nodes to which X2 connections are enforced.";

 }

 leaf-list xnHOBlockList {

 type string;

 description "List of nodes to which handovers over Xn are prohibited.";

 }

 leaf configurable5QISetRef {

 type types3gpp:DistinguishedName;

 description "DN of the Configurable5QISet that the GNBCUCPFunction

 supports (is associated to).";

 }

 leaf-list x2HOBlockList {

 type string;

 description "List of nodes to which handovers over X2 are prohibited.";

 }

 leaf dynamic5QISetRef {

 type types3gpp:DistinguishedName;

 description "DN of the Dynamic5QISet that the GNBCUCPFunction supports

 (is associated to).";

 }

 leaf dCHOControl {

 type boolean;

 description "This attribute determines whether the CHO function is

 enabled or disabled.";

 }

 leaf dDAPSHOControl {

 type boolean;

 description "This attribute determines whether the DAPS handover function

 is enabled or disabled.";

 }

 }

 augment "/me3gpp:ManagedElement" {

 list GNBCUCPFunction {

 description "Represents the logical function CU-CP of gNB and en-gNB.";

 reference "3GPP TS 28.541";

 key id;

 uses top3gpp:Top\_Grp;

 container attributes {

 uses GNBCUCPFunctionGrp;

 }

 uses mf3gpp:ManagedFunctionContainedClasses;

 }

 }

}

<CODE ENDS>

***Next change***

## H.5.17 module \_3gpp-5gc-nrm-nwdaffunction.yang

<CODE BEGINS>

module \_3gpp-5gc-nrm-nwdaffunction {

 yang-version 1.1;

 namespace urn:3gpp:sa5:\_3gpp-5gc-nrm-nwdaffunction;

 prefix nwdaf3gpp;

 import \_3gpp-common-managed-function { prefix mf3gpp; }

 import \_3gpp-common-managed-element { prefix me3gpp; }

 import ietf-inet-types { prefix inet; }

 import \_3gpp-common-yang-types { prefix types3gpp; }

 import \_3gpp-common-yang-extensions { prefix yext3gpp; }

 import \_3gpp-5g-common-yang-types { prefix types5g3gpp; }

 import \_3gpp-common-top { prefix top3gpp; }

 organization "3gpp SA5";

 contact "https://www.3gpp.org/DynaReport/TSG-WG--S5--officials.htm?Itemid=464";

 description "This IOC represents the NWDAF function in 5GC. For more

 information about the NWDAF, see 3GPP TS 23.501.

 Copyright 2024, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI,

 TTA, TTC). All rights reserved.";

 reference "3GPP TS 28.541";

 revision 2024-02-23 { reference CR-1219 ; }

 revision 2023-09-17 { reference CR-1042 ; }

 revision 2020-11-07 { reference CR-0412 ; }

 revision 2019-10-25 { reference "S5-194457 S5-195427 S5-193518"; }

 revision 2019-05-15 {reference "initial revision"; }

 grouping NetworkSliceInfoGrp {

 description "Represents information of network slice when the NWDAF is

 authorized to collect the management data of the network slice. ";

 list sNSSAI {

 description "It represents the S-NSSAI the NetworkSlice managed object

 is supporting. The S-NSSAI is defined in TS 23.003 ";

 key idx;

 min-elements 1;

 max-elements 1;

 leaf idx {

 type string;

 }

 uses types5g3gpp:SNssai;

 }

 leaf-list cNSIId {

 type string;

 description "It represents NSI ID which is an identifier for identifying

 the Core Network part of a Network Slice instance when multiple

 Network Slice instances of the same Network Slice are deployed,

 and there is a need to differentiate between them in the 5GC.

 See NSI ID definition in clause 3.1 of TS 23.501 and

 subclause 6.1.6.2.7 of TS 29.531.";

 }

 leaf networkSliceRef {

 type types3gpp:DistinguishedName;

 mandatory true;

 description "This holds a DN of the NetworkSlice managed object relating

 to the NetworkSlice instance differentiated by sNSSAI and optional

 cNSIId.";

 }

 }

 grouping NWDAFFunctionGrp {

 description "Represents the NWDAFFunction IOC";

 uses mf3gpp:ManagedFunctionGrp;

 list pLMNIdList {

 description "List of at most six entries of PLMN Identifiers, but at

 least one (the primary PLMN Id).

 The PLMN Identifier is composed of a Mobile Country Code (MCC) and a

 Mobile Network Code (MNC).";

 min-elements 1;

 max-elements 6;

 key "mcc mnc";

 uses types3gpp:PLMNId;

 }

 leaf sBIFQDN {

 description "The FQDN of the registered NF instance in the service-based

 interface.";

 type inet:domain-name;

 }

 list sNSSAIList {

 description "List of S-NSSAIs the managed object is capable of supporting.

 (Single Network Slice Selection Assistance Information)

 An S-NSSAI has an SST (Slice/Service type) and an optional SD

 (Slice Differentiator) field.";

 //optional support

 reference "3GPP TS 23.003";

 key "sd sst";

 uses types5g3gpp:SNssai;

 }

 list managedNFProfile {

 key idx;

 min-elements 1;

 max-elements 1;

 uses types3gpp:ManagedNFProfile;

 }

 list commModelList {

 min-elements 1;

 key "groupId";

 description "Specifies a list of commModel. It can be used by NF and

 NF services to interact with each other in 5G Core network ";

 reference "3GPP TS 23.501";

 uses types5g3gpp:CommModel;

 }

 list networkSliceInfoList {

 key idx;

 min-elements 1;

 description "The attribute specifies a list of NetworkSliceInfo which

 is defined as a datatype (see clause 5.3.95). It can be used by the

 NWDAF to facilitate the data collection from OAM.";

 leaf idx {

 type string;

 }

 uses NetworkSliceInfoGrp;

 yext3gpp:inVariant;

 }

 }

 augment "/me3gpp:ManagedElement" {

 list NWDAFFunction {

 description "5G Core NWDAF Function";

 reference "3GPP TS 28.541 3GPP TS 23.501";

 key id;

 uses top3gpp:Top\_Grp;

 container attributes {

 uses NWDAFFunctionGrp;

 }

 uses mf3gpp:ManagedFunctionContainedClasses;

 }

 }

}

<CODE ENDS>

***End of changes***