**3GPP TSG-CT WG4 Meeting #102-eC4-211xyz**

**E-Meeting, 24th Feb – 5th Mar 2021 (was C4-211239)**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.510** | **CR** | **0444** | **rev** | **1** | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
| *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:*** | Enhancements to BSF Info | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson, AT&T | | | | | | | | | |
| ***Source to TSG:*** | CT4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | SBIProtoc17 | | | | |  | ***Date:*** | | | 2021-02-15 |
|  |  | | | |  | |  | | |  |
| ***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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Annex C of TS 23.503 describes the following scenario (also supported by TS 29.513):  *"Any AF using Rx, such as P-CSCF, the BSF determines the selected PCF address according to the information included in the incoming Rx requests and the information stored at the BSF. The BSF is able to proxy or redirect Rx requests targeting an IP address of a UE to the selected PCF."*  For that model, when there are more than one deployed BSF, the AF needs to find the BSF address (Rx Diameter Realm + Host) of the BSF handling that UE. It can also be another BSF (configured in the AF) that finds for the actual BSF that will handle that UE range.  To make it possible the BSF needs to register its Rx addresses in the NRF as part of the BsfInfo so that the AF or BSF can discover it and address that BSF. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add Diameter Host and Realm for Rx. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The scenario described in TS 23.503 is not supported. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.1.6.2.21, A.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 CR introduces backwards compatible new features, with impacts on the following APIs:  - TS29510\_Nnrf\_NFManagement.yaml  - TS29510\_Nnrf\_NFDiscovery.yaml | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

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

##### 6.1.6.2.21 Type: BsfInfo

Table 6.1.6.2.21-1: Definition of type BsfInfo

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| ipv4AddressRanges | array(Ipv4AddressRange) | O | 1..N | List of ranges of IPv4 addresses handled by BSF.  If not provided, the BSF can serve any IPv4 address. |
| dnnList | array(Dnn) | O | 1..N | List of DNNs handled by the BSF. The DNN shall contain the Network Identifier and it may additionally contain an Operator Identifier. If the Operator Identifier is not included, the DNN is supported for all the PLMNs in the plmnList of the NF Profile.  If not provided, the BSF can serve any DNN. |
| ipDomainList | array(string) | O | 1..N | List of IPv4 address domains, as described in clause 6.2 of 3GPP TS 29.513 [28], handled by the BSF.  If not provided, the BSF can serve any IP domain. |
| ipv6PrefixRanges | array(Ipv6PrefixRange) | O | 1..N | List of ranges of IPv6 prefixes handled by the BSF.  If not provided, the BSF can serve any IPv6 prefix. |
| rxDiamHost | DiameterIdentity | C | 0..1 | This IE shall be present if the BSF supports Rx interface.  When present, this IE shall indicate the Diameter host of the Rx interface for the BSF. |
| rxDiamRealm | DiameterIdentity | C | 0..1 | This IE shall be present if the BSF supports Rx interface.  When present, this IE shall indicate the Diameter realm of the Rx interface for the BSF. |

\* \* \* Next Change \* \* \* \*

## A.2 Nnrf\_NFManagement API

*(... text not shown for clarity ...)*

BsfInfo:

description: Information of a BSF NF Instance

type: object

properties:

dnnList:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Dnn'

minItems: 1

ipDomainList:

type: array

items:

type: string

minItems: 1

ipv4AddressRanges:

type: array

items:

$ref: '#/components/schemas/Ipv4AddressRange'

minItems: 1

ipv6PrefixRanges:

type: array

items:

$ref: '#/components/schemas/Ipv6PrefixRange'

minItems: 1

rxDiamHost:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DiameterIdentity'

rxDiamRealm:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/DiameterIdentity'

*(... text not shown for clarity ...)*

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