**3GPP TSG-CT WG4 Meeting #101eC4-205273**

**E-Meeting, 03rd – 13th November 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **29.500** | **CR** | **0189** | **rev** | **-** | **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:***  | Asserted PLMN-ID Header |
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| ***Source to WG:*** | Ericsson, Nokia, Nokia Shanghai Bell |
| ***Source to TSG:*** | CT4 |
|  |  |
| ***Work item code:*** | SBIProtoc17 |  | ***Date:*** | 2020-07-27 |
|  |  |  |  |  |
| ***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 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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
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| ***Reason for change:*** | In inter-PLMN signaling scenarios, when an incoming message is received by an NF Service Producer, it is useful to know the identify of the network (PLMN) where the NF Service Consumer originated the service request.This is useful, among other things, for network management; for example, compared with the EPC network architecture and protocols, the HSS always gets to know which is the network that originated a certain incoming request for an UE (since this is a built-in mechanism of the Diameter protocol). The HSS can then log such information, calculate KPIs, perform auditing of such information, etc… In 5G/SBI there is only 2 ways to achieve the same thing (say, for the same scenario in which the UDM may want to know the source network of an incoming request):- Either the parameter already exists in the API definition (e.g. in a query parameter or in a JSON attribute), or- Checking the corresponding claim in the Oauth2 access token, if Oauth2 is deployed and used In absence of the above, the receiving node cannot know from which network the request is originated. |
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| ***Summary of change:*** | Define an HTTP header containing the PLMN ID (as asserted by the p-SEPP) of the NF Service Consumer. |
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| ***Consequences if not approved:*** | NF Service Producers cannot know the identity of the network where the NF Service Producer is located. |
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| ***Clauses affected:*** | 5.2.3.2.1, 5.2.3.2.x (new) |
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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 CR's revision history:*** |  |

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

#### 5.2.3.2 Mandatory to support custom headers

##### 5.2.3.2.1 General

The 3GPP NF Services shall support the HTTP custom headers specified in Table 5.2.3.2.1-1 below. A description of each custom header and the normative requirements on when to include them are also provided in Table 5.2.3.2-1.

Table 5.2.3.2.1-1: Mandatory HTTP custom headers

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| Name | Reference | Description |
| 3gpp-Sbi-Message-Priority | Clause 5.2.3.2.2 | This header is used to specify the HTTP/2 message priority for 3GPP service based interfaces. This header shall be included in HTTP/2 messages when a priority for the message needs to be conveyed (e.g HTTP/2 messages related to Multimedia Priority Sessions). |
| 3gpp-Sbi-Callback | Clause 5.2.3.2.3 | This header is used to indicate if a HTTP/2 message is a callback (e.g notification).This header shall be included in HTTP POST messages for callbacks towards NF service consumer(s) in another PLMN via the SEPP (See 3GPP TS 29.573 [27]).This header shall also be included in HTTP POST messages for callbacks in indirect communication (See clause 6.10.7). |
| 3gpp-Sbi-Target-apiRoot | Clause 5.2.3.2.4 | This header is used by an HTTP client to indicate the apiRoot of the target URI when communicating indirectly with the HTTP server via an SCP.This header may also be used by an HTTP client to indicate the apiRoot of the target URI towards HTTP server in another PLMN via the SEPP, when TLS is used between the SEPPs. |
| 3gpp-Sbi-Routing-Binding | Clause 5.2.3.2.5 | This header is used in a service request to signal binding information to direct the service request to an HTTP server which has the targeted NF Service Resource context (see clause 6.12). |
| 3gpp-Sbi-Binding | Clause 5.2.3.2.6 | This header is used to signal binding information related to an NF Service Resource to a future consumer (HTTP client) of that resource (see clause 6.12). |
| 3gpp-Sbi-Discovery-\* | Clause 5.2.3.2.7 | Headers beginning with the prefix 3gpp-Sbi-Discovery- are used in indirect communication mode for discovery and selection of a suitable producer by the SCP. Such headers may be included in any SBI message and include information allowing an SCP to find a suitable producer as per the consumer's included delegated discovery parameters. |
| 3gpp-Sbi-Producer-Id | Clause 5.2.3.2.8 | This header is used in a service response from the SCP to the NF Service Consumer, when using indirect communication with delegated discovery and the NF Service Producer does not return a binding indication in a service response creating a resource. See clause 6.10.3.4.  |
| 3gpp-Sbi-Oci | Clause 5.2.3.2.9 | This header may be used by an overloaded NF Service Producer in a service response, or in a notification request to signal Overload Control Information (OCI) to the NF Service Consumer.This header may also be used by an overloaded NF Service Consumer in a notification response or in a service request to signal Overload Control Information (OCI) to the NF Service Producer. |
| 3gpp-Sbi-Lci | Clause 5.2.3.2.10 | This header may be used by a NF Service Producer to send Load Control Information (LCI) to the NF Service Consumer. |
| 3gpp-Sbi-Client-Credentials | Clause 5.2.3.2.11 | This header may be used by an NF Service Consumer to send Client Credentials Assertion to the NRF or to the NF Service Producer. See clause 6.7.5. |
| 3gpp-Sbi-Asserted-Plmn-Id | Clause 5.2.3.2.x | This header may be inserted by the p-SEPP, i.e. the SEPP on the PLMN of the NF Service Producer (see 3GPP TS 29.573 [27]), in the incoming SBI HTTP messages, and it indicates the PLMN-ID, as verified by the p-SEPP, of the source PLMN of the HTTP messages (i.e. the PLMN of the NF Service Consumer). |

Editor's Note: For the 3gpp-Sbi-Asserted-Plmn-Id header, it's FFS to address the scenario in which the remote SEPP (c-SEPP) may convey signaling from multiple PLMN-IDs (either due to a PLMN having multiple PLMN-IDs, or due to the c-SEPP acting as a hub conveying traffic from different PLMNs.

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

##### 5.2.3.2.x 3gpp-Sbi-Asserted-Plmn-Id

The header contains the PLMN Identity (MCC-MNC), as asserted by the SEPP (which plays the role of the p-SEPP as described in 3GPP TS 29.573 [27]), of the source PLMN of the received HTTP messages.

The encoding of the header follows the ABNF as defined in IETF RFC 7230 [12].

3gpp-Sbi-Asserted-Plmn-Id = "3gpp-Sbi-Asserted-Plmn-Id" ":" RWS 3\*3DIGIT "-" 2\*3DIGIT

EXAMPLE: 3gpp-Sbi-Asserted-Plmn-Id: 123-45

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