**3GPP TSG- WG3 Meeting #**

**Xiamen, China, 9 - 13 October, 2023 (Revision of C3-233138)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** | **0300** | **rev** | **3** | **Current version:** |  |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | |
| ***Title:*** | Supporting query parameters extensionsibility for the CAPIF\_Discover\_Service\_API | | | | | | | | |
|  |  | | | | | | | | |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell, Huawei, Intel, AT&T, Interdigital, China Mobile, China Telecom, Samsung, China Unicom, SIA, Verizon, ZTE, Ericsson | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | |
|  |  | | | | | | | | |
| ***Work item code:*** | NBI18 | | | | |  | ***Date:*** | | 2023-09-29 |
|  |  | | | |  | |  | |  |
| ***Category:*** | **B** | |  | | | | ***Release:*** | |  |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | |
| ***Reason for change:*** | | As per the request from ETSI ISG MEC (cf. LSs in C3-231446 and C3-232026) to support the above for the discovery operation of the CAPIF\_Discover\_Service\_API, the definition of this operation in this specification needs hence to be updated accordingly. | | | | | | | |
|  | |  | | | | | | | |
| ***Summary of change:*** | | This CR proposes to:   * Use the vendor-specific query parameters mechanism defined in clause 5.2.13.2 of TS 29.122. | | | | | | | |
|  | |  | | | | | | | |
| ***Consequences if not approved:*** | | * Vendor-specific query parameters cannot be supported for the discovery operation of the CAPIF\_Discover\_Service\_API. * ETSI ISG MEC requirements cannot be fulfilled.. | | | | | | | |
|  | | |  | | | | | | |
| ***Clauses affected:*** | | | 7.11,8.1.2.2.3.1, 8.1.6 | | | | | | |
|  | | |  | | | | | | |
|  | | | **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 does not impact the OpenAPI descriptions defined in this specification. | | | | | | |
|  | | |  | | | | | | |
| ***This CR's revision history:*** | | |  | | | | | | |

\* \* \* \* Start of changes \* \* \* \*

## 7.11 CAPIF vendor-specifc extensions

Information elements exchanged on the CAPIF APIs shall be extensible with vendor-specific data as specified in clause 5.2.13.2 of 3GPP TS 29.122 [14].

\* \* \* \* Next change \* \* \* \*

###### 8.1.2.2.3.1 GET

This operation enables to retrieve a list of APIs currently registered in the CAPIF core function, satisfying a number of filter criteria.

Table 8.1.2.2.3.1-1: URI query parameters supported by the GET method on this resource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description | Applicability |
| api-invoker-id | string | M | 1 | It represents the identifier (assigned by the CCF) ofthe API invoker that is sending the request. It may also represent the identifier of the CCF that is sending the request if the request is sent over the CAPIF-6/6e reference point. (NOTE 1) |  |
| api-name | string | O | 0..1 | Contains the API name as {apiName} part of the URI structure as defined in clause 5.2.4 of 3GPP TS 29.122 [14]. |  |
| api-version | string | O | 0..1 | Contains the API major version conveyed in the URI (e.g. v1). |  |
| comm-type | CommunicationType | O | 0..1 | Communication type used by the API (e.g. REQUEST\_RESPONSE). |  |
| protocol | Protocol | O | 0..1 | Protocol used by the API. |  |
| aef-id | string | O | 0..1 | AEF identifier. |  |
| data-format | DataFormat | O | 0..1 | Data format used by the API (e.g. serialization protocol JSON). |  |
| api-cat | string | O | 0..1 | The service API category to which the service API belongs. |  |
| preferred-aef-loc | AefLocation | O | 0..1 | The preferred AEF location. If this parameter is present, the CCF shall try to discover a matched AEF location the service API supports. This parameter is ignored by the CCF if there is no matching record found. |  |
| supported-features | SupportedFeatures | O | 0..1 | To filter irrelevant responses related to unsupported features. |  |
| api-supported-features | SupportedFeatures | C | 0..1 | Features supported by the discovered service API indicated by api-name parameter. This may only be present if the api-name query parameter is present. | ApiSupportedFeatureQuery |
| NOTE 1: This parameter is not part of API filter criteria so that it is not used in matching APIs published in the CCF.  NOTE 2: In addition to the standardized query parameters defined in table 8.1.2.2.3.1-1 above, the service consumer may also provide vendor-specific query parameters as specified in clause 5.2.13.3 of 3GPP TS 29.122 [14]. The CCF shall use any received vendor-specific query parameters in the filtering process of the results to be returned in the response in a similar way and in addition to the standardized query parameters defined in this table. This capability may be signalled by the feature VendSpecQueryParams. | | | | | |

This method shall support the request data structures specified in table 8.1.2.2.3.1-2 and the response data structures and response codes specified in table 8.1.2.2.3.1-3.

Table 8.1.2.2.3.1-2: Data structures supported by the GET Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 8.1.2.2.3.1-3: Data structures supported by the GET Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| DiscoveredAPIs | M | 1 | 200 OK | The response body contains the result of the search over the list of registered APIs. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [14]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource retrieval. The response shall include a Location header field containing an alternative URI of the resource located in an alternative CAPIF core function.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [14]. |
| ProblemDetails | O | 0..1 | 414 URI Too Long | Indicates that the server refuses to process the request because the request-target is too long. |
| NOTE: The mandatory HTTP error status codes for the GET method listed in table 5.2.6-1 of 3GPP TS 29.122 [14] also apply. | | | | |

Table 8.1.2.2.3.1-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

Table 8.1.2.2.3.1-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative CAPIF core function. |

\* \* \* \* Next change \* \* \* \*

### 8.1.6 Feature negotiation

General feature negotiation procedures are defined in clause 7.8.

Table 8.1.6-1: Supported Features

|  |  |  |
| --- | --- | --- |
| **Feature number** | **Feature Name** | **Description** |
| 1 | ApiSupportedFeatureQuery | Indicates the support of the query filter indicating the supported feature(s) of a service API. |
| 2 | VendSpecQueryParams | Indicates the support of vendor specific API discovery query filter parameters with JSON object contains a JSON pointer with value for filtering the resource. |

\* \* \* \* End of changes \* \* \* \*