**3GPP TSG-SA4 Meeting # *S4-240374***

**Sophia-Antipolis, FR, 29 Jan - 02 Feb 2024 revision of S4-240131**

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| *CR-Form-v12.2* | | | | | | | | |
| **PSEUDO CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **26.510** | **CR** | pseudo | **rev** |  | **Current version:** | 1.0.2 |  |
|  | | | | | | | | |
| *For* [***HELP***](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 | **X** | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | Removing the 3gpp namespace restriction in signalling delivery protocols | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Tencent Cloud | | | | | | | | | |
| ***Source to TSG:*** | S4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GMS\_Pro\_Ph2 | | | | |  | ***Date:*** | | | 2024-01-20 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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:*** | | To be able to use other URIs for signaling protocols | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | * + 8.8.3.1 and 8.9.3.1, protocol property | | | | | | | | |
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| ***Consequences if not approved:*** | | For each external protocol, 3gpp has to define a URI in its spec which is cumbersome and not aligned with the rest of industry | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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's revision history:*** | |  | | | | | | | | |

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| **1st Change** |

#### 8.8.3.1 ContentHostingConfiguration resource

Table 8.8.3.1-1: Definition of ContentHostingConfiguration resource

| Property name | | | | Data Type | Cardinality | Description |
| --- | --- | --- | --- | --- | --- | --- |
| name | | | | string | 1..1 | A name for this Content Hosting Configuration. |
| ingestConfiguration | | | | object | 1..1 | Parameters for ingesting media content into the Media AS at reference point M2. |
|  | mode | | | Content‌Transfer‌Mode | 1..1 | Indicates whether media content is pulled by the Media AS from the Media Application Provider's origin server or pushed into the Media AS by the Media Application Provider (see clause 7.3.4.5). |
|  | protocol | | | Uri | 1..1 | A fully-qualified term identifier URI that identifies the content ingest protocol.  The controlled vocabulary of content ingest protocols in not specified in the present document. |
|  | baseURL | | | AbsoluteUrl | 0..1 | A base URL (i.e., one that includes a scheme, authority and, optionally, path segments) from which content is ingested at reference point M2 for this ingest configuration.  In the case of Pull-based content ingest (method is set to PULL), the base URL shall be provided to the Media AF to indicate the location from which content is to be pulled. A request received at reference point M4 is mapped by the Media AS to a URL at reference point M2 whose base is the value of this property.  In the case of Push-based content ingest (method is set to PUSH), this property shall be populated by the Media AF and returned to the Media Application Provider to indicate the base URL to which content for this Content Hosting Configuration is to be published. |
| distributionConfigurations | | | | array(Object) | 1..1 | Specifies the distribution method and configuration for the ingested content.  More than one distribution may be configured for the ingested content, e.g. to offer different distribution configurations such as DASH and HLS. |
|  | supplementary‌Distribution‌Networks | | | array(<Distribution‌NetworkType, DistributionMode> | 0..1 | Indicates that the content for this distribution configuration is to be distributed via one of more supplementary networks. Each member of the array is a duple mapping a type of distribution network to a mode of distribution.  The same DistributionNetworkType value shall appear at most once in this array. |
|  | edgeResources‌ConfigurationId | | | ResourceId | 0..1 | A reference to an Edge Resources Configuration resource (see clause 8.6.2).  When present, indicates that the Media AS supporting this content distribution shall be realised as a set of one or more EAS instances. |
|  | content‌Preparation‌TemplateId | | | ResourceId | 0..1 | A reference to a Content Preparation Template resource (see clause 8.5.2).  Indicates that content preparation prior to distribution is required. |
|  | certificateId | | | ResourceId | 0..1 | A reference to a Server Certificate resource (see clause 8.4.3.2).  When content is distributed using TLS [TLS13], the referenced X.509 [X509] certificate for the origin domain is presented by the Media AS in the TLS handshake at reference point M4. This attribute indicates the identifier of the certificate to use. |
|  | canonical‌Domain‌Name | | | string | 1..1 | All resources exposed at reference point M4 shall be accessible through this default Fully Qualified Domain Name assigned by the Media AF. |
|  | domainNameAlias | | | string | 0..1 | The Media Application Provider may assign another Fully-Qualified Domain Name (FQDN) through which media resources within the scope of this distribution configuration are additionally accessible from the Media AS at reference point M4.  This domain name is used by the Media AS to set appropriate CORS HTTP response headers at reference point M4.  If this property is present, the Media Application Provider is responsible for providing in the DNS a CNAME record that resolves domainNameAlias to canonical‌Domain‌Name.  If the certificateId property is also present in this distribution configuration, the provided domain name alias shall match one of the subjectAltName extension fields in the referenced Server Certificate resource, allowing for wildcard matching. |
|  | baseURL | | | AbsoluteUrl | 1..1 | A base URL (i.e., one that includes a scheme, authority and, optionally, path segments) from which content is made available to Media Clients at reference point M4 for this distribution configuration.  The value is chosen by the Media AF when the Content Hosting Configuration is provisioned. It is an error for the Media Application Provider to set this. |
|  | entryPoint | | | M1‌Media‌Entry‌Point | 0..1 | The Media Entry Point nominated by the Media Application Provider for this distribution configuration when it is used to describe a single content item.  Omitted when this distribution configuration describes multiple content items. |
|  |  | relativePath | | RelativeUrl | 1..1 | A relative path (i.e., without a scheme or any leading forward slash characters) to the resource for the Media Entry Point. The semantics are dependent on the value of ingestConfiguration.protocol.  The path shall be valid at reference point M2 when appended to the ingest base URL and at reference point M4 when appended to the distribution base URL. |
|  |  | contentType | | string | 1..1 | The MIME content type of the Media Entry Point.  Used by the Media Client to select a Media Entry Point. |
|  |  | profiles | | array(Uri) | 0..1 | An optional list of conformance profile identifiers associated with the Media Entry Point, each one expressed as a URI. A profile URI may indicate an interoperability point, for example.  Used by the 5GMS Client to select a Media Entry Point.  If present, the array shall contain at least one item. |
|  | pathRewriteRules | | | array(object) | 0..1 | An ordered list of rules for rewriting the request URL paths of media resource requests handled by the Media AS at reference point M4 and translating them to URL paths at reference point M2.  If multiple rules match a particular resource’s path, only the first matching rule, in order of appearance in this array, shall be applied. |
|  |  | requestPathPattern | | string | 1..1 | A regular expression [ECMA262] against which the path part of each Media AS request URL, including the leading “/”, and up to and including the final “/”, shall be compared. (Any leaf path element following the final “/” shall be excluded from this comparison.)  In the case of Pull-based content ingest, the M4 download request path is used in the comparison.  In the case of Push-based content ingest, the M2 upload request path is used in the comparison.  In either case, if the request path matches this pattern, the path mapping specified in the corresponding mappedPath shall be applied. |
|  |  | mappedPath | | string | 1..1 | A replacement for the portion of the Media AS request path that matches requestPathPattern.  In the case of Pull-based content ingest, ingestConfiguration.entryPoint is concatenated with the mapped path and any leaf path element from the original M4 download request to form the M2 origin request URL.  In the case of Push-based content ingest, canonical‌Domain‌Name (and, optionally, domain‌Name‌Alias) are concatenated with the mapped path and any leaf path element from the original M2 upload request to form the distribution URL(s) exposed over reference point M4. |
|  | cachingConfigurations | | | array(object) | 0..1 | Defines a configuration of the Media AS content cache for a matching subset of media resources ingested in relation to this Content Hosting Configuration. |
|  |  | urlPatternFilter | | string | 1..1 | A pattern used to match media resource URLs at reference point M2 to determine whether a given media resource ingested by the Media AS is eligible to be cached by it. The format of the pattern shall be a regular expression as specified in [ECMA262]. |
|  |  | cachingDirectives | | object | 1..1 | If a urlPatternFilter applies to a resource, then the provided cachingDirectives shall be applied by the Media AS at reference point M4, potentially overwriting any origin caching directives provided by the Media Application Provider when that resource is ingested at reference point M2. |
|  |  |  | statusCodeFilters | array(integer) | 0..1 | The set of HTTP origin response status codes at reference point M2 to which these cachingDirectives apply..  If the property is present, the set shall contain at least one item.  If absent, the enclosing cachingDirectives shall apply to all HTTP origin response status codes. |
|  |  |  | noCache | boolean | 1..1 | If set to True, indicates that the media resources matching the filters shall not be cached by the Media AS and shall be marked as not to be cached when served by the Media AS at reference point M4. |
|  |  |  | maxAge | Uint32 | 0..1 | The caching time-to-live period that shall be set on ingested media resources matching the filters. This determines the minimum period for which the Media AS shall cache matching media resources as well as the time-to-live period signalled by the Media AS at reference point M4 when it serves such media resources.  The time-to-live for a given media resource shall be calculated relative to the time it was ingested. |
|  | geoFencing | | | object | 0..1 | Directives limiting access to the content to the indicated geographic areas (see NOTE 1). |
|  |  | locatorType | | Uri | 1..1 | The type of the members of the locators array shall be indicated using a fully-qualified term identifier URI from the controlled vocabulary specified in clause B.1, or else from a vendor-specific vocabulary. |
|  |  | locators | | array(string) | 1..1 | Array of locators from which access to the resources is to be allowed. The format of the locator strings shall be determined by the semantics of the term identifier indicated in locatorType. |
|  | urlSignature | | | object | 0..1 | Defines the URL signing scheme to be enforced by the Media AS at reference point M4 (see NOTE 2). When present, only correctly signed and valid URLs are permitted to access the content resources within the scope of the enclosing distribution configuration. |
|  |  | urlPattern | | string | 1..1 | A pattern that shall be used by the Media AS to match M4 media resource request URLs. The Media AS shall not serve a matching media resource at reference point M4 unless it includes a valid authentication token calculated over the portion of the M4 request URL that matches this pattern. The format of the pattern shall be a regular expression as specified in [ECMA262]. |
|  |  | tokenName | | string | 1..1 | The name of the query parameter that the Media Access Function shall use to present the authentication token in the M4 request URL when required to do so. |
|  |  | passphraseName | | string | 1..1 | The name of the token parameter to be used to refer to the passphrase when constructing the M4 authentication token. |
|  |  | passphrase | | string | 1..1 | A string of between 6 and 50 characters to be used as the shared secret between the Media Application Provider and the Media AS for this distributionConfiguration.  (This secret is used in the computation and verification of the M4 authentication token but is never sent in the cleartext part of the M4 request URL.) |
|  |  | tokenExpiryName | | string | 1..1 | The name of the token parameter to be used to refer to the token expiry time point when constructing the M4 authentication token.  The name of the query parameter that the Media Access Function shall use to present the token expiry time point in the cleartext part of the M4 request URL. |
|  |  | useIPAddress | | boolean | 1..1 | If set to True, the IP address of the Media Access Function is included in the computation of the authentication token for resources that match urlPattern and access to matching media resources shall be allowed by the Media AF only when the M4 request is made from this IP address. |
|  |  | ipAddressName | | string | 0..1 | The name of the token parameter that is encoded as part of the M4 authentication token if the useIPAddress flag is set to True.  (The IP address is not passed in the cleartext part of the M4 request URL.) |
| NOTE 1: The geofencing feature used to restrict content requests to the Media AS at reference point M4 is specified in clause 7.6.4.6 of TS 26.512 [26512].  NOTE 2: The format of the authentication token used to sign content requests to the Media AS at reference point M4 is specified in clause 7.6.4.5 of TS 26.512 [26512]. | | | | | | |