**3GPP TSG-SA4 Meeting #112-e *S4-210292***

**, 1st – 10th Februay 2021** *revision of S4-20174*

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
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|  |  | **CR** | **0007** | **rev** | **1** | **Current version:** | 16.1.0 |  |
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| *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 | **X** | Radio Access Network |  | Core Network | **X** |

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| ***Title:***  | CR on OpenAPI Implementation of m1 interface |
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| ***Source to WG:*** | Qualcomm Inc. |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** |  |  | ***Date:*** | 27th January 2020 |
|  |  |  |  |  |
| ***Category:*** | F |  | ***Release:*** | 16 |
|  | *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)* |
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| ***Reason for change:*** | This CR is with the accordance with the new 3GPP procedures for documenting OpenAPI interfaces on 3GPP Forge. It contains the implementation of the m1 interface in the branch m1-dev |
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| ***Summary of change:*** | The CR documents the implementation of the m1 interface by providing the corresponding YAML files. |
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| ***Consequences if not approved:*** | The implementation will be incomplete. |
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| ***Clauses affected:*** | C.1, C.2, C.3, C.4 |
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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:*** |  |

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| **First Change** |

# C.1 General

This annex is based on the OpenAPI 3.0.0 specification [23] and provides corresponding representations of all APIs defined in the present specification.

NOTE 1: An OpenAPIs representation embeds JSON Schema representations of HTTP message bodies.

This annex shall take precedence when being discrepant to other parts of the specification with respect to the encoding of information elements and methods within the API(s).

NOTE 2: The semantics and procedures, as well as conditions, e.g. for the applicability and allowed combinations of attributes or values, not expressed in the OpenAPI definitions but defined in other parts of the specification also apply.

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| **Second Change** |

# C.2 Data Types applicable to several APIs

For the purpose of referencing entities in the Open API file defined in this annex, it shall be assumed that this Open API file is contained in a physical file named "TS26512\_CommonTypes.yaml".

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| openapi: 3.0.0servers:  - url: '{apiRoot}/'    variables:      apiRoot:        default: https://example.com        description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501info:  description: Documentation of the 3GPP 5GMS Common Data Types.  version: 1.0.0  title: 3GPP 5GMS Common Typestags:  - name: 3GPP TS 26.512    description: 5G Media Streaming Common Types    externalDocs:      description: Find out more      url: 'http://www.3gpp.org'externalDocs:  description: TS 26.512  url: 'http://www.3gpp.org/DynaReport/26512.htm'paths:  /:    description: 'This only defines a set of common reusable components'components:  schemas:    PathRewriteRule:      type: object      properties:        originPathPattern:          type: string        distributionPath:          type: string    GeofencingLocators:      type: object      properties:        locatorType:          type: string          enum:            - cell            - city        locators:          type: array          items:            type: string    Pattern:       type: object      properties:        pattern:          type: string    QoSSpecification:      type: object      properties:        marBwUl:          $ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'        marBwDl:          $ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'        maxPacketLossRateDl:          $ref: 'TS29571\_CommonData.yaml#/components/schemas/PacketLossRateRm'        maxPacketLossRateUl:          $ref: 'TS29571\_CommonData.yaml#/components/schemas/PacketLossRateRm'        maxSuppBwDl:          $ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'        maxSuppBwUl:          $ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'        minDesBwDl:          $ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'        minDesBwUl:          $ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'        mirBwUl:          $ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'        mirBwDl:          $ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'    ApplicationSessionContext:      type: object      properties:        afAppId:          $ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/AfAppId'        sliceInfo:          $ref: 'TS29571\_CommonData.yaml#/components/schemas/Snssai'        dnn:          $ref: 'TS29571\_CommonData.yaml#/components/schemas/Dnn'        aspId:          $ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/AspId'    ChargingSpecification:      type: object      properties:        sponId:          type: string        sponStatus:          $ref: 'TS29514\_Npcf\_PolicyAuthorization.yaml#/components/schemas/SponsoringStatus'        gpsi:          type: array          items:            $ref: 'TS29571\_CommonData.yaml#/components/schemas/Gpsi'    Percentage:      type: number    DurationSec:      type: integer    DateTime:      type: string    IpPacketFilterSet:      type: object      required:        - direction      properties:        srcIp:          type: string        dstIp:          type: string        protocol:          type: integer        srcPort:          type: integer        dstPort:          type: integer        toSTc:          type: string        flowLabel:          type: integer        spi:          type: integer        direction:          type: string    ServiceDataFlowDescription:      type: object      properties:        flowDescription:          $ref: '#/components/schemas/IpPacketFilterSet'        domainName:          type: string    M5QoSSpecification:      type: object      required:        - marBwDlBitRate        - marBwUlBitRate        - mirBwDlBitRate        - mirBwUlBitRate      properties:        marBwDlBitRate:            $ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'        marBwUlBitRate:            $ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'        minDesBwDlBitRate:            $ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'        minDesBwUlBitRate:            $ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'        mirBwDlBitRate:            $ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'        mirBwUlBitRate:            $ref: 'TS29571\_CommonData.yaml#/components/schemas/BitRate'        desLatency:          type: integer        desLoss:          type: integer    TypedLocation:      type: object      required:        - locationIdentifierType        - location      properties:        locationIdentifierType:          $ref: '#/components/schemas/CellIdentifierType'        location:          type: string    OperationSuccessResponse:      type: object      required:      - success      properties:        success:          type: boolean        reason:          type: string    CellIdentifierType:      type: string      enum: [ CGI, ECGI, NCGI ]    SdfMethod:      type: string      enum: [5Tuple, 2Tuple, typeOfServiceMarking, flowLabel, domainName]    ProvisioningSessionType:      type: string      enum: [downlink, uplink] 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| **Third Change** |

# C.3 OpenAPI representation of the M1 APIs

## C.3.1 ProvisioningSessions API

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| openapi: 3.0.0servers:  - url: '{apiRoot}/3gpp-m1/v1'    variables:      apiRoot:        default: https://example.com        description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501info:  description: Documentation of the 3GPP M1 Provisioning interface.  version: 1.0.0  title: 3GPP M1 interface Provisioning Sessions APItags:  - name: 3GPP TS 26.512    description: 5G Media Provisioning Interface M1 Provisioning Sessions    externalDocs:      description: Find out more      url: 'http://www.3gpp.org'paths:  /provisioning-sessions:    get:      summary: 'List of all Provisioning Sessions'      description: ''      parameters:        - name: provisioningSessionId          in: query          required: false          schema:            type: string          description: A unique identifier of the Provisioning Session      operationId: 'listProvisionings'      responses:        '200':          description: List of Provisioning Sessions          content:            application/json:              schema:                $ref: '#/components/schemas/ProvisioningSession'    post:      summary: 'Create a new Provisioning Session'      description: ''      requestBody:         description: initial configuration of new Provisioning Session        required: true        content:          application/json:            schema:              $ref: '#/components/schemas/ProvisioningSession'      parameters: []      operationId: 'Create a new Provisioning Session'      responses:        '201':          description: Created    /provisioning-sessions/{provisioningSessionId}:    parameters:        - name: provisioningSessionId          in: path          required: true          schema:            type: string          description: A unique identifier of the Provisioning Session    get:      summary: 'Get Provisioning Session'      description: ''      parameters: []      operationId: 'getProvisioningById'      responses:        '200':          description: list of Provisioning sessions          content:            application/json:              schema:                $ref: '#/components/schemas/ProvisioningSession'    put:      summary: 'Update a Provisioning Session'      description: ''      parameters: []      operationId: ''      responses:        default:          description: Default response    delete:      summary: ''      description: ''      parameters: []      operationId: ''      responses:        default:          description: Default response          externalDocs:  description: TS 26.512  url: 'http://www.3gpp.org/DynaReport/26346.htm'components:  schemas:    ProvisioningSession:      type: object      required:        - id      properties:        id:          type: integer          format: int64  securitySchemes:    m1d\_auth:      type: oauth2      flows:        authorizationCode:          authorizationUrl: https://www.3gpp.org/3gpp-m1d/v1/authorize          tokenUrl: https://www.3gpp.org/3gpp-m1d/v1/token          scopes:            read: Grants read access            write: Grants write access            admin: Grants access to admin operations  links: {}  callbacks: {}security: - m1d\_auth: [] |

## C.3.2 ServerCertificatesProvisioning API

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| openapi: 3.0.0servers:  - url: '{apiRoot}/3gpp-m1/v1'    variables:      apiRoot:        default: https://example.com        description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501info:  description: Documentation of the 3GPP M1 Provisioning interface Certificate  version: 1.0.0  title: 3GPP M1 interfacetags:  - name: 3GPP TS 26.512    description: 5G Media Provisioning Interface M1 Server Certificate    externalDocs:      description: Find out more      url: 'http://www.3gpp.org'paths:  /provisioning-sessions/{provisioningSessionId}/certificates:    parameters:      - name: provisioningSessionId        in: path        required: true        schema:          type: string        description: 'A unique identifier of the the Provisioning'    post:      summary: 'Create a new security certificate'      description: ''      responses:        '200':          description: 'The generated certificate'          headers:            Location:               description: 'Location of the newly created server certificate'              schema:                type: string          content:            'application/x-pem-file':              schema:                type: string    get:      summary: 'retrieve previously uploaded server certificate'      parameters:         - name: certificateId          in: path          required: true          schema:            type: string          description: 'A unisque identifier of the server certificate'      responses:        '200':          description: 'the server certificate'          content:            'application/x-pem-file':              schema:                type: stringexternalDocs:  description: TS 26.512  url: 'http://www.3gpp.org/DynaReport/26346.htm'components:  schemas:    Certificate:      type: object      required:        - "id"      properties:        id:          type: string          securitySchemes:    m1d\_auth:      type: oauth2      flows:        authorizationCode:          authorizationUrl: https://www.3gpp.org/3gpp-m1d/v1/authorize          tokenUrl: https://www.3gpp.org/3gpp-m1d/v1/token          scopes:            read: Grants read access            write: Grants write access            admin: Grants access to admin operations  links: {}  callbacks: {}security: - m1d\_auth: [] |

## C.3.3 ContentPreparationTemplatesProvisioning API

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## C.3.4 ContentProtocolsDiscovery API

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## C.3.5 ContentHostingProvisioning API

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openapi: 3.0.0servers:  - url: '{apiRoot}/3gpp-m1/v1'    variables:      apiRoot:        default: https://example.com        description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501info:  description: Documentation of the 3GPP M1d Provisioning interface.  version: 1.0.0  title: 3GPP M1d interfacetags:  - name: 3GPP TS 26.512    description: 5G Media Provisioning Interface M1d Content Hosting Configuration    externalDocs:      description: Find out more      url: 'http://www.3gpp.org'paths:  /provisioning-sessions/{provisioningSessionId}/content-hosting-configurations:    parameters:        - name: provisioningSessionId          in: path          required: true          schema:            type: string          description: 'A unique identifier of the Provisioning'    get:      summary: 'retrieve an existing Content Hosting Configuration'      description: 'retrieve an existing Content Hosting Configuration'      parameters:         - name: contentHostingConfigurationId          in: query          required: false          schema:            type: string          description: A unique identifier of the Content Hosting Configuration      responses:        '200':          description: The Content Hosting Configuration          content:            application/json:              schema:                $ref: '#/components/schemas/ContentHostingConfiguration'    post:      summary: 'create a Content Hosting Configuration'      description: 'Used to retrieve an existing Content Hosting Configuration'      responses:        '201':          description: Created          headers:            Location:              description: 'Location of the newly created Content Hosting Configuration'              schema:                type: string                  content:            application/json:              schema:                $ref: '#/components/schemas/ContentHostingConfiguration'    /provisioning-sessions/{provisioningSessionId}/content-hosting-configuration/{contentHostingConfigurationId}:    parameters:        - name: provisioningSessionId          in: path          required: true          schema:            type: string          description: A unique identifier of the Provisioning Session        - name: contentHostingConfigurationId          in: path          required: true          schema:            type: string          description: A unique identifier of the Content Hosting Configuration    get:      summary: 'retrieve an existing Content Hosting Configuration'      description: 'retrieve an existing Content Hosting Configuration'      responses:        '200':          description: The identified Provisioning          content:            application/json:              schema:                $ref: '#/components/schemas/ContentHostingConfiguration'    put:      summary: ''      description: ''      responses:        default:          description: ''    delete:      summary: ''      description: ''      responses:        default:          description: Default response                      /provisioning-sessions/{provisioningSessionId}/content-hosting-configuration/{contentHostingConfigurationId}/purge:    parameters:        - name: provisioningSessionId          in: path          required: true          schema:            type: string          description: A unique identifier of the Provisioning        - name: contentHostingConfigurationId          in: path          required: true          schema:            type: string          description: A unique identifier of the Content Hosting Configuration    post:      summary: 'Purge the content of the cache'      description: ''      requestBody:        description: 'The RegEx pattern for resources to purge from the cache'        required: true        content:          application/json:            schema:              $ref: '#/components/schemas/Pattern'                  responses:        '200':          description: 'Content was purged successfully'externalDocs:  description: TS 26.512  url: 'http://www.3gpp.org/DynaReport/26346.htm'components:  schemas:    ContentHostingConfiguration:      type: object      required:        - id        - origin      properties:        id:          type: integer          format: int64        ingestConfiguration:          $ref: '#/components/schemas/IngestConfiguration'        distributionConfiguration:          type: array          items:            $ref: '#/components/schemas/DistributionConfiguration'    IngestConfiguration:      type: object      properties:        name:          type: string        path:          type: string        pull:          type: boolean        protocol:          type: string          enum:            - dashifpush        entryPoint:          type: string      xml:        name: IngestConfiguration    DistributionConfiguration:      type: object      properties:        contentPreparationTemplateId:          type: string        targetDomain:          type: string        originDomain:          type: string        pathRewriteRules:          type: array          items:            $ref: '#/components/schemas/PathRewriteRule'        cacheConfiguration:          type: array          items:            $ref: '#/components/schemas/CachingConfiguration'        geoFencing:          type: array          items:            $ref: '#/components/schemas/Geo'        urlSignature:          type: object          properties:            urlPattern:              type: string            tokenName:              type: string            passphraseName:              type: string            passphrase:              type: string            tokenExpiryName:              type: string            useIPAddress:              type: boolean            ipAddressName:              type: string        certificateId:          type: integer      xml:        name: DistributionConfiguration    PathRewriteRule:      type: object      properties:        originPathPattern:          type: string        distributionPath:          type: string    CachingConfiguration:      type: object      properties:        urlPatternFilter:          type: string        cachingDirectives:          type: object          properties:            statusCodeFilters:              type: array              items:                type: integer            noCache:              type: boolean            maxAge:              type: integer              format: int32  securitySchemes:    m1d\_auth:      type: oauth2      flows:        authorizationCode:          authorizationUrl: https://www.3gpp.org/3gpp-m1d/v1/authorize          tokenUrl: https://www.3gpp.org/3gpp-m1d/v1/token          scopes:            read: Grants read access            write: Grants write access            admin: Grants access to admin operations  links: {}  callbacks: {}security: - m1d\_auth: [] 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## C.3.6 ConsumptionReportingProvisioning API

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| openapi: 3.0.0servers:  - url: '{apiRoot}/3gpp-m1/v1'    variables:      apiRoot:        default: https://example.com        description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501info:  description: Documentation of the 3GPP M1d Provisioning interface Consumption Reporting.  version: 1.0.0  title: 3GPP M1d interfacetags:  - name: 3GPP TS 26.512    description: 5G Media Provisioning Interface M1d Consumption Reporting    externalDocs:      description: Find out more      url: 'http://www.3gpp.org'paths:  /provisioning-sessions/{provisioningSessionId}/consumption-reporting-configuration:    parameters:      - name: provisioningSessionId        in: path        required: true        schema:           type: string        description: 'A unique identifier of the Provisioning'    post:      summary: 'Activate the consumption reporting procedure'      description: 'Activate the consumption reporting procedure'      responses:        '200':          description: 'the consumption reporting is successfully activate'    get:      summary: 'Retrieve the consumption reporting configuration'      description: 'retrieve the consumption reporting configuration'      responses:        '200':          description: 'a description of the consumption reporting configuration'          content:            application/json:              schema:                $ref: '#/components/schemas/ConsumptionReportingConfiguration'externalDocs:  description: TS 26.512  url: 'http://www.3gpp.org/DynaReport/26346.htm'components:  schemas:    ConsumptionReportingConfiguration:      type: object      properties:        reportingInterval:          $ref: 'https://forge.etsi.org/rep/3GPP/5G\_APIs/blob/master/TS29122\_CommonData.yaml#/components/schemas/DurationSec'        samplePercentage:          type: number          format: float          minimum: 0.0          maximum: 100.0        locationType:          $ref: '#/components/schemas/Geo'  securitySchemes:    m1d\_auth:      type: oauth2      flows:        authorizationCode:          authorizationUrl: https://www.3gpp.org/3gpp-m1d/v1/authorize          tokenUrl: https://www.3gpp.org/3gpp-m1d/v1/token          scopes:            read: Grants read access            write: Grants write access            admin: Grants access to admin operations  links: {}  callbacks: {}security: - m1d\_auth: [] |

## C.3.7 MetricsReportingProvisioning API

|  |
| --- |
|  |

## C.3.8 PolicyTemplatesProvisioning API

|  |
| --- |
| openapi: 3.0.0servers:  - url: '{apiRoot}/3gpp-m1/v1'    variables:      apiRoot:        default: https://example.com        description: apiRoot as defined in clause 4.4 of 3GPP TS 29.501info:  description: Documentation of the 3GPP M1 Policy Template   version: 1.0.0  title: 3GPP M1 Policy Template interfacetags:  - name: 3GPP TS 26.512    description: 5G Media Provisioning Interface M1 Provisioning Interface    externalDocs:      description: Find out more      url: 'http://www.3gpp.org'paths:  /provisioning-sessions/{provisioningSessionId}/policy-templates:    parameters:      - name: provisioningSessionId        in: path        required: true        schema:          type: string        description: 'A unique identifier of the Provisioning Session'    post:      summary: 'Create a new Policy Template'      description: 'create a new Policy Template'      responses:        '201':          description: 'the newly created Policy Template'          content:            application/json:              schema:                $ref: '#/components/schemas/PolicyTemplate'  /provisioning-sessions/{provisioningSessionId}/policy-templates/{policyTemplateId}:    parameters:      - name: provisioningSessionId        in: path        required: true        schema:          type: string        description: 'A unique identifier of the Provisioning Session'      - name: policyTemplateId        in: path        required: true        schema:          type: string        description: 'A unique identifier of the Policy Template'    get:      summary: 'retrieve a description of the Policy Template'      description: 'retrieve a description of the Policy Template'      responses:        '200':          description: 'a description of the Policy Template'          content:            application/json:              schema:                $ref: '#/components/schemas/PolicyTemplate'    put:      summary: 'modify the configuration of a Policy Template'      description: ''      requestBody:        content:          application/json:            schema:              $ref: '#/components/schemas/PolicyTemplate'      responses:        '200':          description: 'update a policy template'          content:            application/json:              schema:                $ref: '#/components/schemas/PolicyTemplate'    delete:       summary: 'delete a Policy Template'      description: 'delete a Policy Template'      responses:        '200':          description: 'a Policy Template is deleted'externalDocs:  description: TS 26.512  url: 'http://www.3gpp.org/DynaReport/26512.htm'components:  securitySchemes:    m1d\_auth:      type: oauth2      flows:        authorizationCode:          authorizationUrl: https://www.3gpp.org/3gpp-m1d/v1/authorize          tokenUrl: https://www.3gpp.org/3gpp-m1d/v1/token          scopes:            read: Grants read access            write: Grants write access            admin: Grants access to admin operations  links: {}  callbacks: {}security: - m1d\_auth: [] |

|  |
| --- |
| **Fourth Change** |

# C.4 OpenAPI representation of the M5 APIs

## C.4.1 ServiceAccessInformation API

|  |
| --- |
| openapi: 3.0.0info:  description: Documentation of the 3GPP M5 Media Session Handling API to aquire Service Access Information  version: "1.0.0"  title: M5 Media Session Handling to aquire Service Access Information.  contact:    email: Thorsten.Lohmar@ericsson.com  license:    name: Apache 2.0    url: 'http://www.apache.org/licenses/LICENSE-2.0.html'servers:  - url: '{apiRoot}/3gpp-m5d/v1/service-access-information'    variables:      apiRoot:        default: https://example.com        description: apiRoot as defined in subclause 4.4.1 of 3GPP TS 29.501.paths:  /{provisioningSessionId}/:    get:      operationId: 'ServiceAccessInformation\_Get'      tags:         - ServiceAccessInformation       parameters:        - name: provisioningSessionId          description: string identifying the service access information resource          in: path          required: true          schema:            type: string      responses:        '201':          description: 'NA Session resource is created'          headers:            Location:              description: 'Contains the URI of the newly created NA Sessionresource'              required: true              schema:                type: string          content:            application/json:              schema:                  $ref: '#/components/schemas/ServiceAccessInformationResource'        '400':          description: 'invalid input, object invalid'    components:  schemas:    ServiceAccessInformationResource:      type: object      required:      - provisioningSessionId      - provisioningSessionType      properties:        provisioningSessionId:          type: string        provisioningSessionType:                $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/ProvisioningSessionType'        StreamingAccess:          type: object          properties:            mediaPlayerEntry:              type: string              format: uri        ClientConsumptionReportingConfiguration:          type: object          required:            - serverAddresses            - locationReporting            - samplePercentage          properties:            reportingInterval:                $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/DurationSec'            serverAddresses:                $ref: '#/components/schemas/ServerAddresses'            locationReporting:              type: boolean            samplePercentage:                $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/Percentage'        DynamicPolicyInvocationConfiguration:          type: object          required:            - serverAddresses            - validPolicyTemplateIds            - sdfMethods          properties:             serverAddresses:                $ref: '#/components/schemas/ServerAddresses'            validPolicyTemplateIds:              type: array              items:                 type: string            sdfMethods:              type: array              items:                $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/SdfMethods'            externalReferences:              type: array              items:                type: string        ClientMetricsReportingConfiguration:          type: array          items:            type: object            required:            - serverAddresses            - samplePercentage            - urlFilters            - metrics            properties:              serverAddresses:                  $ref: '#/components/schemas/ServerAddresses'              dataNetworkName:                type: string              reportingInterval:                  $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/DurationSec'              samplePercentage:                                $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/Percentage'              urlFilters:                type: array                items:                  type: string              metrics:                type: array                items:                  type: string        NetworkAssistanceConfiguration:          type: object          required:             - serverAddress          properties:            serverAddresses:                $ref: '#/components/schemas/ServerAddresses'# Common Data Type (26.512)    ServerAddresses:      type: array      items:        type: string        format: uri |

## C.4.2 ConsumptionReporting API

|  |
| --- |
| openapi: 3.0.0info:  description: Documentation of the 3GPP M5 Media Session Handling API  version: "1.0.0"  title: M5 Media Session Handling  contact:    email: Thorsten.Lohmar@ericsson.com  license:    name: Apache 2.0    url: 'http://www.apache.org/licenses/LICENSE-2.0.html'servers:  - url: '{apiRoot}/3gpp-m5d/v1/consumption-reporting/{aspId}'    variables:      apiRoot:        default: https://example.com        description: apiRoot as defined in subclause 4.4.1 of 3GPP TS 29.501.      aspId:        default: MyAsp        description:  as defined 3GPP TS 26.512.tags:  - name: 3GPP TS 26.512    description: 5G Media Session Handling APIpaths:  /:    post:      summary: Upload a consumption report      requestBody:        description: Upload a consumption report.        required: true        content:          application/json:            schema:              $ref: '#/components/schemas/ConsumptionReport'      responses:        '201':          description: 'A Consumption report is uploaded'components:  schemas:    ConsumptionReport :      type: object      required:        - mediaPlayerEntry        - reportingClientId        - consumptionReportingUnits      properties:        mediaPlayerEntry:          type: string        reportingClientId:          type: string        consumptionReportingUnits:          type: array          items:             $ref: '#/components/schemas/ConsumptionReportingUnit'    ConsumptionReportingUnit:      type: object      properties:        mediaConsumed:          type: string        startTime:            $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/DateTime'        duration:            $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/DurationSec'        Locations:            $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/TypedLocation' |

## C.4.3 MetricReporting API

|  |
| --- |
| openapi: 3.0.0info:  description: Documentation of the 3GPP M5 Media Session Handling API  version: "1.0.0"  title: M5 Media Session Handling  contact:    email: Thorsten.Lohmar@ericsson.com  license:    name: Apache 2.0    url: 'http://www.apache.org/licenses/LICENSE-2.0.html'servers:  - url: '{apiRoot}/3gpp-m5d/v1/metrics-reporting/{provisioningSessionId}/{metricsReportingConfigurationId}'    variables:      apiRoot:        default: https://example.com        description: apiRoot as defined in subclause 4.4.1 of 3GPP TS 29.501.      provisioningSessionId:        default: MyProvSess        description:  as defined 3GPP TS 26.512.      metricsReportingConfigurationId:        default: MyQoEConf        description:  as defined 3GPP TS 26.512.tags:  - name: 3GPP TS 26.512    description: 5G Media Session Handling APIpaths:  /:    post:      summary: Upload a metrics report      requestBody:        description: Upload a metrics report.        required: true        content:          application/xml:            schema:              type: string      responses:        '201':          description: 'A metric report is uploaded' |

## C.4.4 DynamicPolicies API

|  |
| --- |
| openapi: 3.0.0info:  description: Documentation of the 3GPP M5 Media Session Handling API  version: "1.0.0"  title: M5 Media Session Handling  contact:    email: Thorsten.Lohmar@ericsson.com  license:    name: Apache 2.0    url: 'http://www.apache.org/licenses/LICENSE-2.0.html'servers:  - url: '3gpp-m5/v1/dynamicpolicies/'    variables:      apiRoot:        default: https://example.com        description: apiRoot as defined in subclause 4.4.1 of 3GPP TS 29.501.tags:  - name: 3GPP TS 26.512    description: 5G Media Session Handling APIpaths:  /policies/:    get:      tags:        - DynamicPolicy      summary: Forbidden due to privacy      responses:        '400':          description: bad input parameter    post:      tags:        - DynamicPolicy      summary: Create a new Dynamic Policy resource      responses:        '201':          description: 'dynamic policy resource is created'          content:            application/json:              schema:                $ref: '#/components/schemas/DynamicPolicy'          headers:            Location:              description: 'Contains the URI of the created Dynamic Policy resource, according to the structure: {apiRoot}/policies/{dynamicPolicyId}'              required: true              schema:                type: string        '401':          description: Unauthorized  /policies/{dynamicPolicyId}:    get:      tags:        - DynamicPolicy      summary: 'Provides all properties of a dynamic policy resources'      parameters:        - name: dynamicPolicyId          description: 'string identifying the dynamic policy resource'          in: path          required: true          schema:            type: string      responses:        '200':          description: 'Properties of dynamic policy resource'          content:            application/json:              schema:                  $ref: '#/components/schemas/DynamicPolicy'        '400':          description: bad input parameter        '401':          description: Unauthorized    put:      tags:        - DynamicPolicy      summary: Adds / overwrites a dynamic policy resource      description: Adds / overwrites a dynamic policy resource      parameters:        - name: dynamicPolicyId          description: string identifying the dynamic policy resource          in: path          required: true          schema:            type: string      requestBody:        description: Setting policy parameters.        required: true        content:          application/json:            schema:              $ref: '#/components/schemas/DynamicPolicy'      responses:        '201':          description: item created        '400':          description: 'invalid input, object invalid'        '401':          description: Unauthorized        '409':          description: an existing item already exists    patch:      tags:        - DynamicPolicy      summary: modifies a dynamic policy      description: Modifies a dynamic policy resource      parameters:        - name: dynamicPolicyId          description: string identifying the dynamic policy resource          in: path          required: true          schema:            type: string      requestBody:        description: Setting policy parameters.        required: true        content:          application/merge-patch+json:            schema:              $ref: '#/components/schemas/DynamicPolicy'      responses:        '201':          description: item created        '400':          description: 'invalid input, object invalid'        '401':          description: Unauthorized        '409':          description: an existing item already exists    delete:      tags:        - DynamicPolicy      summary: modifies a dynamic policy      description: Deletes a dynamic policy resource      parameters:        - name: dynamicPolicyId          description: string identifying the dynamic policy resource          in: path          required: true          schema:            type: string      responses:        '204':          description: No Content (Successful deletion of the existing subscription)        '400':          description: 'invalid input, object invalid'        '401':          description: Unauthorized        '409':          description: an existing item already existscomponents:  schemas:    DynamicPolicy:      type: object      required:        - dynamicPolicyId        - policyTemplateId        - serviceDataFlowDescription        - provisioningSessionId      properties:        dynamicPolicyId:          type: string        policyTemplateId:          type: string        serviceDataFlowDescriptions:          type: array          items:             $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/ServiceDataFlowDescription'        provisioningSessionId:          type: string        qosSpecification:            $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/M5QoSSpecification'        enforcementMethod:          type: string        enforcementBitRate:          type: integer |

## C.4.5 NetworkAssistance API

|  |
| --- |
| openapi: 3.0.0info:  description: Documentation of the 3GPP M5 Media Session Handling API  version: "1.0.0"  title: M5 Media Session Handling  contact:    email: Thorsten.Lohmar@ericsson.com  license:    name: Apache 2.0    url: 'http://www.apache.org/licenses/LICENSE-2.0.html'servers:  - url: '{apiRoot}/3gpp-m5d/v1/network-assistance/'    variables:      apiRoot:        default: https://example.com        description: apiRoot as defined in subclause 4.4.1 of 3GPP TS 29.501.tags:  - name: 3GPP TS 26.512    description: 5G Media Session Handling APIpaths:  /:    post:      tags:        - NetworkAssistance      summary: Create a new Network Assistance Session resource      responses:        '201':          description: 'network assistance session resource is created'          content:            application/json:              schema:                $ref: '#/components/schemas/NetworkAssistanceSession'          headers:            Location:              description: 'Contains the URI of the created Network Assistance Session resource'              required: true              schema:                type: string        '401':          description: Unauthorized  /{naSessionId}:    get:      tags:        - NetworkAssistance      summary: 'Provides all properties of a Network Assistance Session resources'      parameters:        - name: naSessionId          description: 'string identifying the Network Assistance Session resource'          in: path          required: true          schema:            type: string      responses:        '200':          description: 'Properties of network assistance session resource'          content:            application/json:              schema:                  $ref: '#/components/schemas/NetworkAssistanceSession'        '400':          description: bad input parameter        '401':          description: Unauthorized    put:      tags:        - NetworkAssistance      summary: Adds / overwrites a network assistance session resource      description: Adds / overwrites a network assistance session resource      parameters:        - name: naSessionId          description: string identifying the network assistance session resource          in: path          required: true          schema:            type: string      requestBody:        description: Setting policy parameters.        required: true        content:          application/json:            schema:              $ref: '#/components/schemas/NetworkAssistanceSession'      responses:        '201':          description: item created        '400':          description: 'invalid input, object invalid'        '401':          description: Unauthorized        '409':          description: an existing item already exists    patch:      tags:        - NetworkAssistance      summary: modifies a network assistance session resource      description: Modifies a network assistance session resource      parameters:        - name: naSessionId          description: string identifying the network assistance session resource          in: path          required: true          schema:            type: string      requestBody:        description: Setting policy parameters.        required: true        content:          application/merge-patch+json:            schema:              $ref: '#/components/schemas/NetworkAssistanceSession'      responses:        '201':          description: item created        '400':          description: 'invalid input, object invalid'        '401':          description: Unauthorized        '409':          description: an existing item already exists    delete:      tags:        - NetworkAssistance      summary: deletes a network assistance session resource      description: Deletes a network assistance session resource      parameters:        - name: naSessionId          description: string identifying the network assistance session resource          in: path          required: true          schema:            type: string      responses:        '204':          description: No Content (Successful deletion of the existing resource)        '400':          description: 'invalid input, object invalid'        '401':          description: Unauthorized        '409':          description: an existing item already exists  /{naSessionId}/recommendation:    get:      tags:        - NetworkAssistance      summary: 'Provides all properties of a Network Assistance Session resources'      parameters:        - name: naSessionId          description: 'string identifying the Network Assistance Session resource'          in: path          required: true          schema:            type: string      responses:        '200':          description: 'Properties of network assistance session resource'          content:            application/json:              schema:                  $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/M5QoSSpecification'        '400':          description: bad input parameter        '401':          description: Unauthorized  /{naSessionId}/boostRequest:    post:      tags:        - NetworkAssistance      summary: 'Provides all properties of a Network Assistance Session resources'      parameters:        - name: naSessionId          description: 'string identifying the Network Assistance Session resource'          in: path          required: true          schema:            type: string      responses:        '200':          description: 'Properties of network assistance session resource'          content:            application/json:              schema:                  $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/OperationSuccessResponse'        '400':          description: bad input parameter        '401':          description: Unauthorizedcomponents:  schemas:    NetworkAssistanceSession:      type: object      required:         - naSessionId      properties:        naSessionId:          type: string        serviceDataFlowDescription:          type: array          items:             $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/ServiceDataFlowDescription'        policyTemplateId:          type: string        requestedQoS:            $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/M5QoSSpecification'        recommendedQoS:            $ref: 'TS26512\_CommonTypes.yaml#/components/schemas/M5QoSSpecification'                notficationURL:          type: string 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