**3GPP TSG-CT WG3 Meeting #135 *C3-24XXXX***

 **Hyderabad, India, 27 - 31 May 2024**

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| --- |
| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **29.435** | **CR** | **0003** | **rev** | **3** | **Current version:** | **18.0.0** |  |
|  |
| *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** |

|  |
| --- |
|  |
| ***Title:***  | Slice API management API (YAML) |
|  |  |
| ***Source to WG:*** | Lenovo |
| ***Source to TSG:*** | C3 |
|  |  |
| ***Work item code:*** | NSCALE |  | ***Date:*** | 2024-04-01 |
|  |  |  |  |  |
| ***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 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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | Clause 9.3 of TS 23.435 has specified a feature for slice API configuration and translation. |
|  |  |
| ***Summary of change:*** | Proposed NSCE\_SliceApiManagement API format definition implements YAML for slice API configuration and translation as defined in clause 9.3 of TS 23.435. |
|  |  |
| ***Consequences if not approved:*** | Stage 3 is not in accordance with stage 2. |
|  |  |
| ***Clauses affected:*** | A.1 |
|  |  |
|  | **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:*** |  |

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

# A.2 NSCE\_SliceApiManagement API

openapi: 3.0.0

info:

 title: NSCE\_Server\_Slice API Management

 version: 1.0.0-alpha.1

 description: |

 NSCE Server Slice API Management Service.

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externalDocs:

 description: >

 3GPP TS 29.435 V18.1.0; Service Enabler Architecture Layer for Verticals (SEAL);

 Network Slice Capability Exposure (NSCE) Server Services; Stage 3.

 url: http://www.3gpp.org/ftp/Specs/archive/29\_series/29.435/

servers:

 - url: '{apiRoot}/nsce-sam/v1'

 variables:

 apiRoot:

 default: https://example.com

 description: apiRoot as defined in clause 6.5 of 3GPP TS 29.549

security:

 - {}

 - oAuth2ClientCredentials: []

paths:

 /configuration:

 post:

 summary: Create a slice API management configuration.

 operationId: SliceAPIMamgtConfiguration

 tags:

 - Slice API management Configuration (Collection)

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '201':

 description: >

 Created. The slice API management configuration request was successfully created

 and representation of the created Individual Slice API Management Configuration is

 returned in the response body.

 content:

 application/json:

 schema:

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

 headers:

 Location:

 description: >

 Contains the URI of the created Individual Network Slice Configuration resource.

 required: true

 schema:

 type: string

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

 callbacks:

 SlApiCnf:

 '{$request.body#/notifUri}':

 post:

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: >

 No Content. Notification for the slice API information was successfully

 received and processed.

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

 /configuration/{configurationId}:

 parameters:

 - name: configurationId

 in: path

 description: >

 Represents the identifier of the Individual Slice API Management Configuration.

 required: true

 schema:

 type: string

 get:

 description: >

 Request to retrieve an existing Individual Slice API Management Configuration

 resource.

 operationId: GetIndivSliceSub

 tags:

 - Individual Slice API Management Configuration (Document)

 responses:

 '200':

 description: >

 OK. The requested Individual slice API management configuration resource shall be

 returned in the response body.

 content:

 application/json:

 schema:

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

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '406':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/406'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

 delete:

 description: Deletes an existing Individual Slice API Management Configuration.

 operationId: DeleteIndSliceMgmtSub

 tags:

 - Individual Slice API Management Configuration (Document)

 responses:

 '204':

 description: >

 No Content. The Individual Slice API Management Configuration resource was

 successfully deleted.

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

 /configuration/{configurationId}/update:

 post:

 summary: Request to update an existing individual slice API configuration.

 operationId: UpdSliceApiConfig

 tags:

 - Update slice API configuration

 parameters:

 - name: configurationId

 in: path

 description: >

 Represents the identifier of the Individual Slice API Management Configuration.

 required: true

 schema:

 type: string

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '200':

 description: >

 OK. The slice API configuration update request was successfully received and

 processed, and slice API configuration update related information shall be returned

 in the response body.

 content:

 application/json:

 schema:

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

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

 /invoke:

 post:

 summary: Enables a service consumer to request for slice API invocation.

 operationId: Invoke

 tags:

 - Invoke

 requestBody:

 required: true

 content:

 application/json:

 schema:

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

 responses:

 '204':

 description: >

 No Content. The slice API invocation request is successfully received and processed.

 '307':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/307'

 '308':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/308'

 '400':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/400'

 '401':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/401'

 '403':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/403'

 '404':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/404'

 '411':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/411'

 '413':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/413'

 '415':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/415'

 '429':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/429'

 '500':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/500'

 '503':

 $ref: 'TS29122\_CommonData.yaml#/components/responses/503'

 default:

 $ref: 'TS29122\_CommonData.yaml#/components/responses/default'

components:

 securitySchemes:

 oAuth2ClientCredentials:

 type: oauth2

 flows:

 clientCredentials:

 tokenUrl: '{tokenUrl}'

 scopes: {}

 schemas:

#

# STRUCTURED DATA TYPES

#

 SlApiMgmtCnf:

 description: >

 Represents the slice API management configuration request.

 type: object

 properties:

 notifUri:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/Uri'

 servReqs:

 type: array

 items:

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

 minItems: 1

 timeValidity:

 $ref: 'TS29122\_CommonData.yaml#/components/schemas/TimeWindow'

 suppFeat:

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

 required:

 - notifUri

 - servReqs

 UpdSlApiReq:

 description: >

 Represents the slice API configuration update request.

 type: object

 properties:

 trigEvnt:

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

 netSliceId:

 $ref: 'TS29435\_NSCE\_PolicyManagement.yaml#/components/schemas/NetSliceId'

 suppFeat:

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

 required:

 - trigEvnt

 UpdSlApiResp:

 description: >

 Represents the response to the slice API configuration update resquest.

 type: object

 properties:

 slApiInfo:

 type: string

 suppFeat:

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

 required:

 - slApiInfo

 InvokeReq:

 description: >

 Represents the slice for which, the API invocation is requested.

 type: object

 properties:

 slApiId:

 type: string

 required:

 - slApiId

 SlApiCnf:

 description: >

 Represents the slice API configuration information.

 type: object

 properties:

 slApiCnf:

 type: string

 required:

 - slApiCnf

 ServiceReq:

 description: >

 Represents the application service requirements related to a network slice.

 type: object

 properties:

 valServId:

 type: string

 netSliceId:

 $ref: 'TS29435\_NSCE\_PolicyManagement.yaml#/components/schemas/NetSliceId'

 appQoSReqs:

 $ref: 'TS29435\_NSCE\_InterPLMNContinuity.yaml#/components/schemas/AppReqs'

 servProfile:

 type: array

 items:

 $ref: 'TS29435\_NSCE\_SliceCommServic.yaml#/components/schemas/ServReq'

 minItems: 1

 areaOfInterest:

 $ref: 'TS29435\_NSCE\_NSInfoDelivery.yaml#/components/schemas/ServArea'

 required:

 - valServId

 - netSliceId

# SIMPLE DATA TYPES

#

#

# ENUMERATIONS

#

 TriggerEvent:

 anyOf:

 - type: string

 enum:

 - UE\_MOBILITY

 - MIGRATION

 - SERV\_API\_UNAVAILABILITY

 - APP\_QOS\_REQ\_CHANGE

 - type: string

 description: >

 This string provides the triggering event for slice API configuration update.

 description: |

 Represents a trigger event.

 Possible values are:

 - UE\_MOBILITY: Indicates triggering event for slice API configuration update is

 UE mobility to a different service area.

 - MIGRATION: Indicates triggering event for slice API configuration update is

 application server migration to a different edge/cloud platform.

 - SERV\_API\_UNAVAILABILITY: Indicateds triggering event for slice API configuration

 update is service API unavailability.

 - APP\_QOS\_REQ\_CHANGE: Indicateds triggering event for slice API configuration update

 is VAL application QoS requirements change.

\* \* \* End of Change \* \* \* \*