**3GPP TSG-SA5 Meeting #129 *S5-201390***

**Hyderabad, India, 24 – 28 February 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** |  | **rev** |  | **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)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network | **X** |

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| ***Title:***  |  |
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| ***Source to WG:*** |  |
| ***Source to TSG:*** | S5 |
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| ***Work item code:*** |  |  | ***Date:*** |  |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-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-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:*** | Configurable subscriptions to notifications have been added to 3GPP TS 28.622 and 3GPP TS 28.623. For this reason dedicated subscribe and unsubscribe operations are not needed any more in the Provisioning MnS. |
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| ***Summary of change:*** | The dedicated subscribe and unsubscribe operations are removed. |
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| ***Consequences if not approved:*** | Multiple possibilities for subscribing and unsubscribing to receive notifications exist leading to problems when conflicting client requests are received. |
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| ***Clauses affected:*** | 11.1.1.5 (void), 11.1.1.6 (void), 12.1.1.1.1, 12.1.1.1.6 (void), 12.1.1.1.7 (void), 12.1.1.3.1, 12.1.1.3.2.2 (void), 12.1.1.4.1, 12.1.1.4.2.12 (void), 12.1.1.4.2.13 (void), 12.1.1.4.2.14 (void), 12.1.1.4.4.2 |
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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 modification** |

#### 11.1.1.5 Void

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#### 11.1.1.6 Void

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| **Next modification** |

## 12.1 Generic provisioning management service

### 12.1.1 RESTful HTTP-based solution set

#### 12.1.1.1 Mapping of operations

##### 12.1.1.1.1 Introduction

The IS operations are mapped to SS equivalents according to table 12.1.1.1.1-1.

Table 12.1.1.1.1-1: Mapping of IS operations to SS equivalents

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| **IS operation** | **HTTP Method** | **Resource URI** | **SQ** |
| createMOI | PUT | http://{URI-DN-prefix}/{root}/{ProvMnS}/{MnSVersion}/{URI-LDN}/{LDN-first-part}/{className}={id}  | M |
| getMOIAttributes | GET | http://{URI-DN-PREFIX}/{root}/{ProvMnS}/{MnSVersion}/{URI-LDN}/{LDN-FIRST-PAT}/{className}={id}  | M |
| modifyMOIAttributes | PUTPATCH | http://{URI-DN-prefix}/{root}/{ProvMnS}/{MnSVersion}/{URI-LDN}/{LDN-first-part}/{className}={id}  | M |
| deleteMOI | DELETE | http://{URI-DN-prefix}/{root}/{ProvMnS}/{MnSVersion}/{URI-LDN}/{LDN-first-part}/{className}={id}  | M |
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| **Next modification** |

##### 12.1.1.1.6 Void

##### 12.1.1.1.7 Void

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| **Next modification** |

#### 12.1.1.3 Resources

##### 12.1.1.3.1 Resource structure

Figure 12.1.1.3.1-1 shows the resource structure of the Provisioning MnS.



Figure 12.1.1.3.1-1: Resource URI structure of the Provisioning MnS

Table 12.1.1.3.1-1 provides an overview of the resources and applicable HTTP methods.

Table 12.1.1.3.1-1: Resources and methods overview

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| --- | --- | --- | --- |
| Resource name | Resource URI | HTTP method | Description |
| MOI | /{className}={id} | PUT | Creates a resource representing a managed object instance |
| MOI | /{className}={id} | GET | Retrieves one or multiple resources representing managed object instances |
| MOI | /{className}={id} | PATCH | Modifies one or multiple resources representing managed object instances |
| MOI | /{className}={id} | DELETE | Deletes one or multiple resources representing managed object instances |
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| notificationSink | /notificationSink | POST | Sends notifications |

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| **Next modification** |

###### 12.1.1.3.2.2 Void

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#### 12.1.1.4 Data type definitions

##### 12.1.1.4.1 General

Table 12.1.1.4.1-1: Data types defined in this specification

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| Data type | Reference | Description |
| **General types** |
| dateTime-Type | 12.1.1.4.4.2 | Date and time |
| long-Type | 12.1.1.4.4.2 | Long type |
| uri-Type | 12.1.1.4.4.2 | Type of an URI |
| **Types used in paths** |
| className-PathType | 12.1.1.4.4.2 | Used in the path to identify a resource object |
| id-PathType | 12.1.1.4.4.2 | Used in the path to identify a resource object |
| **Types in query parts** |
| attributes-QueryType | 12.1.1.4.2.18 | Used in the query part of HTTP GET to select the attributes of the scoped resource objects to be returned. |
| fields-QueryType | 12.1.1.4.2.1 | Used in the query part of HTTP GET to select the resource object properties (attributes) to be returned |
| filter-QueryType | 12.1.1.4.2.2 | Used in the query part of HTTP GET, HTTP PATCH and HTTP DELETE to filter scoped resource objects |
| scope-QueryType | 12.1.1.4.2.3 | Used in the query part of HTTP GET, HTTP PATCH and HTTP DELETE to extend the set of targeted resources beyond the base resource identified with the path component of the URI |
| **Types used in request bodies** |
| resourcePut-RequestType | 12.1.1.4.3.4 | Used in the request body of HTTP PUT describing the resource to be created or updated |
| jsonMergePatch-RequestType | 12.1.1.4.2.y | Used in the request body of HTTP PATCH describing the set of modifications to be applied to the targeted resources for the media type "application/merge-patch+json" (RFC 7396 [12]) |
| jsonEnhancedMergePatch-RequestType | 12.1.1.4.2.z | Used in the request body of HTTP PATCH describing the set of modifications to be applied to the targeted resources for the media type "application/enhanced-merge-patch+json" (TS 32.158 [15]) |
| jsonPatch-RequestType | 12.1.1.4.2.5 | Used in the request body of HTTP PATCH describing the set of modifications to be applied to the targeted resources |
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| **Types used in response bodies** |
| error-ResponseType | 12.1.1.4.2.6 |  |
| resourcePut-ResponseType | 12.1.1.4.2.7 | Used in the response body of HTTP PUT describing the resource created |
| resourceDeletion-ResponseType | 12.1.1.4.2.8 | Used in the response body of HTTP DELETE identifying the URIs of the deleted resources |
| resourceModification-ResponseType | 12.1.1.4.2.9 | Used in the response body of HTTP PATCH describing the set of modified resources  |
| resourceRetrieval-ResponseType | 12.1.1.4.2.10 | Used in the response body of HTTP GET to return the resources identified in the request for retrieval, or the selected attributes in case the fields query parameter is used  |
|  |  |  |
| **Types used for resources** |
| resourceRepresentationType | 12.1.1.4.2.11 | Used for resource representations |
|  |  |  |
| **Types used in notifications** |
| notifyMOICreation-NotifType | 12.1.1.4.2.15 | Used in the request body of HTTP POST for the notification type notifyMOICreation |
| notifyMOIDeletion-NotifType | 12.1.1.4.2.16 | Used in the request body of HTTP POST for the notification type notifyMOIDeletion |
| notifyMOIAttributeValueChange-NotifType | 12.1.1.4.2.17 | Used in the request body of HTTP POST for the notification type notifyMOIAttributeValueChange |
| **Types referenced by the definitions above** |
| additionalText-Type | 12.1.1.4.4.2 | Allows a free form text description to be reported as defined in ITU-T Rec. X. 733 [4] |
| attributeNameValuePair-Type | 12.1.1.4.3.1 | Attribute name and attribute value pair |
| correlatedNotification-Type | 12.1.1.4.3.2 | Describes the correlated notifications of a single source |
| notificationId-Type | 12.1.1.4.4.2 | Notification identifier as defined in ITU-T Rec. X. 733 [4] |
| notificationType-Type | 12.1.1.4.4.3 | Notification type (notifyMOICreation, etc.) |
| sourceIndicator-Type | 12.1.1.4.4.4 | Indicates the source of the operation that led to the generation of the notification. |

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| **Next modification** |

###### 12.1.1.4.2.12Void

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###### 12.1.1.4.2.13 Void

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###### 12.1.1.4.2.14 Void

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| **Next modification** |

##### 12.1.1.4.4 Simple data types and enumerations

12.1.1.4.4.1 General

This clause defines simple data types and enumerations that are used by the data structures defined in the previous clauses.

12.1.1.4.4.2 Simple data types

Table 12.1.1.4.3.2-1: Simple data types

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| Type name | Type definition | Description |
| dateTime-Type | string | Date and time with type: string and format:date-time [x] |
| long-Type | integer | Signed 64 bits with type: integer and format: int64 [x] |
| uri-Type | string | Type of a URI |
| className-PathType | string | Type used in the path component for the class name |
|  |  |  |
| id-PathType | string | Type used in the path component for the id. |
|  |  |  |
| additionalText-Type | string | Allows a free form text description to be reported as defined in ITU-T Rec. X. 733 [4] |
|  |  |  |
| notificationId-Type | long-Type | Notification identifier as defined in ITU-T Rec. X. 733 [4] |
| scopeLevel-Type | integer | Scope level of a scope |
| systemDN-Type | string | Type of the System DN |

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| **End of modifications** |