**TM Forum Specification**

TMF720 Digital Identity API REST Conformance Profile

TMF720B

Release 21.5.0

November 2021

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# INTRODUCTION - API DESCRIPTION

The Digital Identity API can be used to create and query digital identity(ies). Complete description of this API is available in the TMF720 user guide.

# RESOURCE MODEL CONFORMANCE

## API MANDATORY RESOURCES

The following table indicates the mandatory resources for this API.

| Resource Name | | | | | | | | | | | | | | | | | | | | | Comment |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| DigitalIdentity | | | | | | | | | | | | | | | | | | | | | Only GET & POST operations are mandatory. |

## General Notes on Resource Attribute Conformance

There are three situations that could occur for an attribute:

* Mandatory attribute,
* Mandatory attribute if the optional parent attribute is present,
* Non-mandatory/Optional attribute. Those are all the other attributes not mentioned in the following subsections. Please refer to the corresponding API REST Specification for more details.
* The tables in the subsections below indicate which attributes are mandatory including mandatory when an optional parent is present.
* Where a resource is an input into an API (e.g. POST, PATCH), Mandatory means that the attribute value must be supplied by the API consumer in the input (and must not be blank or null).
* Where a resource is an output from an API (e.g. GET, POST), Mandatory means that the attribute value must be supplied by the API provider in the output (and must not be blank or null).
* For a sub-resource that is not an array, Mandatory (cardinality 1..1) means that the sub-resource must be present, while Optional (cardinality 0..1) means that the sub-resource may be absent. Mandatory and Optional on the sub-resource attributes apply to the sub-resource if present.
* For a sub-resource that is an array, Mandatory (cardinality 1..\*) means that at least one sub-resource must be present in the array, while Optional (cardinality 0..\*) means that the array may be absent. Mandatory and Optional on the sub-resource attributes apply to each of the sub-resources if present.

In this table are listed all mandatory attributes. A mandatory attribute MUST be retrieved in resource representation when no attribute selection is used (e.g. GET /../{id}) without any attribute selection

When an attribute is listed with an indentation (in second column) it means this attribute is mandatory if root (parent) attribute is present.

## DigitalIdentity Resource Mandatory Attributes

| Mandatory attribute when parent is present | | | | | | | | | | | | | | | | | | | | | Rule |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| creationDate | | | | | | | | | | | | | | | | | | | | | M (in response messages) |
| href | | | | | | | | | | | | | | | | | | | | | M (in response messages) |
| id | | | | | | | | | | | | | | | | | | | | | M (in response messages) |
| status | | | | | | | | | | | | | | | | | | | | | M (in response messages) |
| credential | | | | | | | | | | | | | | | | | | | | | M  Array of Credential |
|  | @type | | | | | | | | | | | | | | | | | | | | M |
|  | id | | | | | | | | | | | | | | | | | | | | M |
|  | state | | | | | | | | | | | | | | | | | | | | M (in response message) |
| credential.validFor (if present) | | | | | | | | | | | | | | | | | | | | |  |
|  | startDateTime | | | | | | | | | | | | | | | | | | | | M |
| credential.contactMedium (if present) | | | | | | | | | | | | | | | | | | | | | Array of DigitalIdentityContactMedium |
|  | @type | | | | | | | | | | | | | | | | | | | | M |
|  | id | | | | | | | | | | | | | | | | | | | | M |
| credential.contactMedium.validFor (if present) | | | | | | | | | | | | | | | | | | | | | See conditions for TimePeriod at credential.validFor |
| resourceIdentified (if present) | | | | | | | | | | | | | | | | | | | | |  |
|  | id | | | | | | | | | | | | | | | | | | | | M |
| contactMedium (if present) | | | | | | | | | | | | | | | | | | | | | Array of DigitalIdentityContactMedium |
|  | @type | | | | | | | | | | | | | | | | | | | | M |
|  | id | | | | | | | | | | | | | | | | | | | | M |
| individualIdentified (if present) | | | | | | | | | | | | | | | | | | | | |  |
|  | @referredType | | | | | | | | | | | | | | | | | | | | M |
|  | @type | | | | | | | | | | | | | | | | | | | | M |
|  | id | | | | | | | | | | | | | | | | | | | | M |
| partyRoleIdentified (if present) | | | | | | | | | | | | | | | | | | | | | Array of RelatedParty |
|  | @referredType | | | | | | | | | | | | | | | | | | | | M |
|  | id | | | | | | | | | | | | | | | | | | | | M |
|  | role | | | | | | | | | | | | | | | | | | | | M if referredType is Party (not required if referredType is PartyRole) |
| relatedParty (if present) | | | | | | | | | | | | | | | | | | | | | Array of RelatedParty  See conditions for RelatedParty at partyRoleIdentified |
| attachment (if present) | | | | | | | | | | | | | | | | | | | | | Array of AttachmentRefOrValue |
|  | @type | | | | | | | | | | | | | | | | | | | | M |
|  | attachmentType | | | | | | | | | | | | | | | | | | | | O/M Must be provided for an attachment provided by value |
|  | id | | | | | | | | | | | | | | | | | | | | O/M Must be provided for an attachment ref |
|  | mimeType | | | | | | | | | | | | | | | | | | | | O/M Must be provided for an attachment provided by value |
|  | name | | | | | | | | | | | | | | | | | | | | O/M Must be provided for an attachment provided by value |
|  | url | | | | | | | | | | | | | | | | | | | | M |
|  | validFor | | | | | | | | | | | | | | | | | | | | M  See conditions for TimePeriod at credential.validFor |
| attachment.size (if present) | | | | | | | | | | | | | | | | | | | | |  |
|  | amount | | | | | | | | | | | | | | | | | | | | M |
|  | units | | | | | | | | | | | | | | | | | | | | M |

# API OPERATIONS CONFORMANCE

For every single resource the following tables includes mandatory operations.

## DigitalIdentity Mandatory Operations

The following table indicates which ones are mandatory for the DigitalIdentity resource:

| Uniform API Operation | | | | | | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| GET | | | | | | | | | | | | | | | | | | | | |
| POST | | | | | | | | | | | | | | | | | | | | |

# API GET OPERATION CONFORMANCE

All the GET operations in this API share the same status code pattern.

|  |  |
| --- | --- |
| GET | Mandatory/Optional |
| Response Status Code 200 if successful | M |
| Response Status Code 404 if not found | M |

## Definitions for Filter

The following definitions apply to all the GET operations:

* Filtered Search: A filtered search can be applied using query parameters to obtain only the resources that meet the criteria defined by the filtering parameters included in the query request. Several elements can be applied to the filtered search. In that case logic, a logical AND is applied to combine the criteria (e.g.:?severity=<value>&status=<value>).
* Attribute selection (Limiting Response Data): In order to limit which attributes are included in the response, the GET request can include the ?fields= query parameter. Only those attributes whose names are supplied in this parameter will be returned. Attribute selection capabilities are the same for collections retrieval and individual resource queries.
* Level: The filtering and attribute selection can apply to the top level properties (attributes) and subproperties. The tables below show which attributes need to be supported in top-level or contained resources.

## GET /digitalIdentity?fields=...&{filtering}

This operation list or find DigitalIdentity entities

Attribute selection is mandatory for all first level attributes except for the href attribute.

Filtering on sub-resources is optional for all compliance levels

## GET /digitalIdentity/{id}?fields=...&{filtering}

This operation retrieves a DigitalIdentity entity. Attribute selection is enabled for all first level attributes.

Attribute selection is mandatory for all first level attributes except for the href attribute.

Filtering on sub-resources is optional for all compliance levels

# API POST OPERATION CONFORMANCE

All the POST operations in this API share the same status code pattern.

|  |  |
| --- | --- |
| POST | Mandatory/Optional |
| Status Code 201 if resource created | M |

## POST /digitalIdentity

This operation creates a DigitalIdentity entity.

The following table provides the list of mandatory attributes when creating an instance of the DigitalIdentity resource, including any possible rule, conditions and applicable default values.

| Mandatory Attributes | | | | | | | | | | | | | | | | | | | | | Rule |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| credential | | | | | | | | | | | | | | | | | | | | | at least one credential must be provided for a Digital Identity creation |
| credential.@type | | | | | | | | | | | | | | | | | | | | | as credential is by definition polymorphic, @type must be provided |
| credential.id | | | | | | | | | | | | | | | | | | | | | identifier of a credential used as an index to identify it if several are provided |
| individualIdentified | | | | | | | | | | | | | | | | | | | | | partyRoleIdentified or individualIdentified or resourceIdentified must be provided. |
| partyRoleIdentified | | | | | | | | | | | | | | | | | | | | | partyRoleIdentified or individualIdentified or resourceIdentified must be provided. |
| resourceIdentified | | | | | | | | | | | | | | | | | | | | | partyRoleIdentified or individualIdentified or resourceIdentified must be provided. |

# ACKNOWLEDGEMENTS

## Release History

|  |  |  |  |
| --- | --- | --- | --- |
| **Release Number** | **Date** | **Release led by:** | **Description** |
| Release 4.0.0  (first release of this API) |  | Pierre Gauthier TM Forum [pgauthier@tmforum.org](mailto:pgauthier@tmforum.org)  Ludovic Robert  Orange  Ludovic.robert@orange.com | First Release of the Document. |
|  |  |  |  |

## Version History

|  |  |  |  |
| --- | --- | --- | --- |
| **Version Number** | **Date** | **Modified by** | **Description** |
| Release 21.5 |  | P. Gauthier / L.Robert | Version 4.0 of the API REST  *Nota: the version 4.0 is assigned to all the APIs delivered from the release 19.0* |
|  |  |  |  |