

# TM Forum Specification

## Test Data API Conformance Profile

**TMF706B**

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Direct inquiries to the TM Forum office:

181 New Road, Suite 304  
Parsippany, NJ 07054, USA  
Tel No. +1 973 944 5100  
Fax No. +1 973 944 5110  
TM Forum Web Page: [www.tmforum.org](http://www.tmforum.org)

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## **INTRODUCTION - API DESCRIPTION**

This API provides a standardized mechanism for the management of test data artifacts used for test case parameterization. These include Test Data Schemas and Test Data Instances.

## RESOURCE MODEL CONFORMANCE

### API MANDATORY RESOURCES

The following table indicates the mandatory resources for this API.

| Resource Name    | Comment   |
|------------------|---|
| TestDataSchema   | Mandatory unless the TestDataInstance resource is present |
| TestDataInstance | Mandatory unless the TestDataSchema resource is present   |

### 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.

## TestDataSchema Resource Mandatory Attributes

| Mandatory attribute when parent is present | Rule                                 |
|--|--------------------------------------|
| description                                | M                                    |
| href                                       | M (in response messages)             |
| id   | M (in response messages)             |
| testDataSchemaDefinition                   | M                                    |
| version                                    | M                                    |
| relatedParty (if present)                  | Array of RelatedPartyWithContactInfo |
| @referredType                              | M                                    |
| attribute.characteristic (if present)      |                                      |
| name                                       | M                                    |
| value                                      | M                                    |

## TestDataInstance Resource Mandatory Attributes

| Mandatory attribute when parent is present | Rule                                 |
|--|--------------------------------------|
| description                                | M                                    |
| href                                       | M (in response messages)             |
| id   | M (in response messages)             |
| testDataInstanceDefinition                 | M                                    |
| version                                    | M                                    |
| relatedParty (if present)                  | Array of RelatedPartyWithContactInfo |
| @referredType                              | M                                    |
| attribute.characteristic (if present)      |                                      |
| name                                       | M                                    |
| value                                      | M                                    |

## API OPERATIONS CONFORMANCE

For every single resource the following tables includes mandatory operations.

### TestDataSchema Mandatory Operations

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

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

### TestDataInstance Mandatory Operations

The following table indicates which ones are mandatory for the TestDataInstance 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 sub properties. The tables below show which attributes need to be supported in top-level or contained resources.

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

This operation list or find TestDataSchema 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 /testDataSchema/{id}?fields=...&{filtering}

This operation retrieves a TestDataSchema 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



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

This operation list or find TestDataInstance 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 /testDataInstance/{id}?fields=...&{filtering}

This operation retrieves a TestDataInstance 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 /testDataSchema

This operation creates a TestDataSchema entity.

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

| Mandatory Attributes     | Rule |
|--------------------------|------|
| description              |      |
| testDataSchemaDefinition |      |
| version                  |      |

### POST /testDataInstance

This operation creates a TestDataInstance entity.

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

| Mandatory Attributes       | Rule |
|----------------------------|------|
| description                |      |
| testDataInstanceDefinition |      |
| version                    |      |

## ACKNOWLEDGEMENTS

### Release History

| Release Status | Date        | Release led by:  | Description                    |
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| Pre-production | 29-Jan-2021 | Pierre Gauthier, TM Forum<br><a href="mailto:pgauthier@tmforum.org">pgauthier@tmforum.org</a><br><br>Edward Pershwitz, ITEA Technologies<br><a href="mailto:edward.pershwitz@iteatechnologies.com">edward.pershwitz@iteatechnologies.com</a> | First Release of the Document. |
|                |             |  |                                |

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