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Customer Management API Conformance Profile

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TABLE OF CONTENTS

- NOTICE.....2
- TABLE OF CONTENTS3
- INTRODUCTION - API DESCRIPTION4
- RESOURCE MODEL CONFORMANCE5
 - API MANDATORY AND OPTIONAL RESOURCES 5
 - CUSTOMER MANDATORY AND OPTIONAL ATTRIBUTES 5
- NOTIFICATION MODEL CONFORMANCE7
 - API MANDATORY AND OPTIONAL NOTIFICATIONS..... 7
- API OPERATIONS CONFORMANCE8
 - API MANDATORY AND OPTIONAL OPERATIONS 8
- API GET OPERATION CONFORMANCE.....9
 - /customer?fields=...&{filtering}..... 9
 - /customer/{id}?fields=...&{filtering}..... 9
- API POST OPERATION CONFORMANCE.....10
 - /customer 10
- API PUT OPERATION CONFORMANCE.....12
- API PATCH OPERATION CONFORMANCE13
 - /customer/{id} 13
- API DELETE OPERATION CONFORMANCE15
 - /customer/{id} 15
- API CONFORMANCE TEST SCENARIOS16
 - Customer resource TEST CASES..... 16
- ACKNOWLEDGEMENTS22
 - Version History 22
 - Release History 22

INTRODUCTION - API DESCRIPTION

See the introduction of the related specification document.

RESOURCE MODEL CONFORMANCE

API MANDATORY AND OPTIONAL RESOURCES

For the resources defined by the API fill the following table and indicate which ones are mandatory and which ones are optional.

Resource Name	Mandatory or Optional	Comments
Customer	M	

CUSTOMER MANDATORY AND OPTIONAL ATTRIBUTES

The table below summarizes mandatory and optional attributes for resource "Customer"

Attribute Name	Mandatory or Optional	Comments
@baseType	O	
@schemaLocation	O	
@type	O	
href	M (in response messages) O (otherwise)	Url for the created resource
id	M (in response messages) O (otherwise)	Generated by the server
name	M (for resource creation) O (otherwise)	
status	O	
statusReason	O	

Attribute Name	Mandatory or Optional	Comments
validFor	O	
engagedParty	O	
type	O	
account	O	
paymentMethod	O	
contactMedium	O	
characteristic	O	
creditProfile	O	
agreement	O	
relatedParty	O	

NOTIFICATION MODEL CONFORMANCE

The Pub/Sub models are common and described in the TMF REST Design Guidelines.

API MANDATORY AND OPTIONAL NOTIFICATIONS

For the Notifications defined by the API the following table indicates which ones are mandatory and which ones are optional.

Notification Name	Mandatory or Optional	Comments
CustomerCreationNotification	M	
CustomerAttributeValueChangeNotification	M	
CustomerStateChangeNotification	M	
CustomerRemoveNotification	M	

All attributes of the resource associated with the notification are mandatory

API OPERATIONS CONFORMANCE

API MANDATORY AND OPTIONAL OPERATIONS

The following table indicates which ones are mandatory and which ones are optional for each one of the resources in the API (default is for all resources).

Uniform API Operation	Mandatory/Optional	Comments
GET	M for all resources	GET must be used to retrieve a representation of a resource
POST	M for resources: Customer	POST must be used to create a new resource
PUT	O for resources: Customer	PUT must be used to completely update a resource identified by its resource URI
PATCH	M for resources: Customer	PATCH must be used to partially update a resource
DELETE	M for resources: Customer	DELETE must be used to remove a resource

API GET OPERATION CONFORMANCE

Definitions

Filtered Search: A filtered search can be applied using query parameters in order to obtain only the resource entities 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.:?status=<value> &statusReason=<value>)

Attribute selection (Filtered Response Data): In order to apply a filter and limit the number of attributes included in the response, the GET request can include the “?fields=” query parameter. Several elements can be applied to the filter. In that case, a logical AND is applied to combine the values (e.g.:?fields=status,statusReason) will provide in the response only the values assigned to attributes status and statusReason. Attribute selection capabilities are the same for collections retrieval and individual resource queries

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

GET	M	
Response Status Code 200	M	
Other Status Codes	NA	

/CUSTOMER?FIELDS=...&{FILTERING}

This operation list customer entities.
Attribute selection is mandatory for all first level attributes.
Filtering is mandatory for first compliance level (L1) and optional otherwise.

/CUSTOMER/{ID}?FIELDS=...&{FILTERING}

This operation retrieves a customer entity.
Attribute selection is mandatory for all first level attributes.
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	M	
Status Code 201	M	
Other Status Codes	NA	

/CUSTOMER

This operation creates a customer entity.

Mandatory and Non Mandatory Attributes

The following tables provides the list of mandatory and non mandatory attributes when creating a Customer, including any possible rule conditions and applicable default values. Notice that it is up to an implementer to add additional mandatory attributes.

Mandatory Attributes	Rule
----------------------	------

name

Non Mandatory Attributes	Default Value	Rule
--------------------------	---------------	------

@baseType

@schemaLocation

@type

status

statusReason

validFor

engagedParty

type

account

paymentMethod

contactMedium

characteristic

creditProfile

agreement

relatedParty

Additional Rules

The following table provides additional rules indicating mandatory fields in sub-resources or relationships when creating a Customer resource.

Context	Mandatory Sub-Attributes
engagedParty	id, href
characteristic	name, value
contactMedium	type, characteristic
account	id, href, name
creditProfile	creditProfileDate, validFor
paymentMethod	id, href

Default Values Summary

When creating the resource, the following table summarizes the default values applicable to optional attributes of the resource (or sub-resources).

Attributes	Default Value
id	Automatically generated

API PUT OPERATION CONFORMANCE

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

PUT	O	
Status Code 201	M	
Other Status Codes	NA	

API PATCH OPERATION CONFORMANCE

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

PATCH	O	
Status Code 201	M	
Other Status Codes	NA	

/CUSTOMER/{ID}

This operation allows partial updates of a customer entity. Support of json/merge (<https://tools.ietf.org/html/rfc7386>) is mandatory, support of json/patch (<http://tools.ietf.org/html/rfc5789>) is optional.

Note: If the update operation yields to the creation of sub-resources or relationships, the same rules concerning mandatory sub-resource attributes and default value settings in the POST operation applies to the PATCH operation. Hence these tables are not repeated here.

Patchable and Non Patchable Attributes

The tables below provide the list of patchable and non patchable attributes, including constraint rules on their usage.

Patchable Attributes	Rule
----------------------	------

@baseType

@schemaLocation

@type

name

status

statusReason

validFor

engagedParty

type

account

paymentMethod

contactMedium

characteristic

creditProfile

agreement

relatedParty

Non Patchable Attributes	Rule
--------------------------	------

id

href

@baseType

@schemaLocation

@type

name

status

statusReason

validFor

engagedParty

type

account

paymentMethod

contactMedium

characteristic

creditProfile

agreement

relatedParty

API DELETE OPERATION CONFORMANCE

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

DELETE	O	
Status Code 200	M	
Other Status Codes	NA	

/CUSTOMER/{ID}

This operation deletes a customer entity.

API CONFORMANCE TEST SCENARIOS

This section describes the test scenarios required for the basic CONNECT certification of the API.

Test Cases must be executed in the order defined for each resource because the result from one of the scenarios will be input for the next one.

Requests must be addressed to the endpoint provided for certification, specifically they must be addressed to the URI defined by the concatenation of the {apiRoot} and the specific resource, where the {apiRoot} is defined as {serverRoot}/customerManagement/v3, where {serverRoot} defines the certification endpoint

CUSTOMER RESOURCE TEST CASES

Nominal Scenarios

TC_Cust_N1 – Create new Customer with minimum required information

- Send a POST message to {apiRoot}/customer/ with the following contents in the BODY

```
{
  "name": "<anytext>",
}
```

- Wait for a response from the server with the following characteristics
 - Response Code 201-Created
 - Include a location header in the body set to /{apiRoot}/customer/{IDCust1} where {IDCust1} indicates the identifier assigned by the server to the new customer resource
 - The response message includes all mandatory parameters, including the engagedParty field which is automatically generated.
 - The body of the response matches the values set in the original request
- Send a GET message to /{apiRoot}/customer/
- Wait for a response from the server with the following characteristics
 - Response Code 200-OK

- The body of the response includes one Customer resource with ID set to {IDCust1}, the same identifier as assigned by the server to the new resource created
 - The response message includes all mandatory parameters
 - The body of the response for the resource with identifier {IDCust1} matches the values set in the original request
- Send a GET message to `/{apiRoot}/customer/{IDCust1}`
 - Wait for a response from the server with the following characteristics
 - Response Code 200-OK
 - The response message includes all mandatory parameters
 - The body of the response includes a Customer resource structure that matches the values in the original request

TC_Cust_N2 – Create new Customer with minimum set of parameters supported by server

- Send a POST message to `{apiRoot}/customer/` with the following contents in the BODY

```
{
  "name": "nanana",
  "account":
    {
      "description": "This account ...",
      "href": "https://host:port/tmf-
apis/accountManagement/v2/account/6081",
      "id": "6081",
      "name": "Travel Account"
    }
}
```

- Wait for a response from the server with the following characteristics

- Response Code 201-Created
 - Include a location header in the body set to `/{apiRoot}/account/{IDCust2}` where `{IDCust2}` indicates the identifier assigned by the server to the new Customer resource
 - The response message includes all mandatory parameters that were not sent in the original request)
 - The body of the response matches the values set in the original request
- Send a GET message to `/{apiRoot}/customer/`
 - Wait for a response from the server with the following characteristics
 - Response Code 200-OK
 - The body of the response includes one Customer resource with ID set to `{IDCust2}`, the same identifier as assigned by the server to the new resource created
 - The response message includes all mandatory parameters
 - The body of the response for the resource with identifier `{IDCust2}` matches the values set in the original request
 - Send a GET message to `/{apiRoot}/customer/{IDCust2}`
 - Wait for a response from the server with the following characteristics
 - Response Code 200-OK
 - The response message includes all mandatory parameters
 - The body of the response includes a Customer resource structure that matches the values in the original request

TC_Cust_N3 – Search for Customers with specific characteristics

- Send a GET message to `/{apiRoot}/customer`
- Wait for a response from the server with the following characteristics
 - Response Code 200-OK
 - The body of the response includes at least two customer resources referring to `{IDCust1}` and `{IDCust2}`
 - The body of the response for the resource with each identifier matches the values in the corresponding original request
- Send a GET message to `/{apiRoot}/customer?status=Active`
- Wait for a response from the server with the following characteristics
 - Response Code 200-OK
 - The body of the response includes one Customer resource referring to `{IDCust1}` and there is no reference to Customer resource `{IDCust2}`
 - The response message includes all mandatory parameters
 - The body of the response for the resource with identifier `{IDCust1}` matches the values in the original request

TC_Cust_N4 – Filtered retrieval of Customers

- Send a GET message to `/{apiRoot}/customer/{IDCust1}?fields=name,status`
- Wait for a response from the server with the following characteristics
 - Response Code 200-OK
 - The body of the response includes one Customer resource referring to `{IDCust1}` and including only attributes name and status, matching the values in the original request

Error Scenarios

TC_Cust_E1 – Unknown Customer identifier

- Send a GET message to `{apiRoot}/customer/{IDtt3}`, where `{IDtt3}` does not match any of the identifiers previously created in the server
- Wait for a response from the server with the following characteristics
 - Response Code 404-Not Found

TC_Cust_E2 – Invalid Request – Missing mandatory parameter

- Send a POST message to `{apiRoot}/customer/` with the following contents in the BODY.

```
{  
  "status": true,  
}
```

Notice that this request is missing mandatory parameter "name" but any other mandatory parameter could be used

- Wait for an error response from the server indicating the mandatory parameter is missing in the request

TC_Cust_E3 – Invalid Request – Missing parameter mandatory in context

- Send a POST message to `{apiRoot}/customer/` with the following contents in the BODY.

```
{  
  "name": "some name",  
  "account":  
    {  
      "description": "blabla ..."  
    }  
}
```

Notice that this request is missing mandatory parameters "id" and "href" in the included account reference.

- Wait for an error response from the server indicating the mandatory parameter is missing in the request

ACKNOWLEDGEMENTS**VERSION HISTORY**

Version Number	Date	Release led by:	Description
1.0	15-Jul-2015	Pierre Gauthier TM Forum pgauthier@tmforum.org	First Release of Draft Version of the Document.
2.0	16-Jun-2018	Mariano Belaunde	Updated version
2.0.1	27-Jun-2018	Adrienne Walcott	Formatting/style edits prior to publishing

RELEASE HISTORY

Version Number	Date	Release led by:	Description
Release 18.0.0	25-Jun-2018	Pierre Gauthier	Initial Release