*Frameworx Specification*

# Customer Management API Conformance Profile

**TMF659**
**Release 16.5.0**
**December 2016**

| Latest Update: Frameworx Release 16.5 | Member Evaluation |
|---|---|
| Version 1.0.0 | IPR Mode: RAND |

## NOTICE

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# INTRODUCTION

The following document is the REST API Conformance for the Customer Management API.

## API DESCRIPTION

The Customer Management API provides the standardized mechanisms for customer and customer account management such as creation, update, retrieval and deletion of these entities.

Customer can be a person, an organization or another service provider who buys products from an enterprise or receives offers.

Customer account represents a financial entity. It records all customer accounting events (payment and invoice amounts).

The operations that can be exercised over a customer or a customerAccount resource using the API and covered in this document are those identified as mandatory to be supported such as

- Create new customer entity (POST)
- Retrieve the list of customer entities stored in server (GET to collection of customers)
- Retrieve details of one specific customer entity stored in server (GET to individual customer)

- Create new customerAccount entity (POST)
- Retrieve the list of customerAccount entities stored in server (GET to collection of customers)
- Retrieve details of one specific customerAaccount entity stored in server (GET to individual customer)

Operations such as modification or deletion of a customer or customerAccount entity are considered optional, hence not covered in this Conformance Profile document.

This document identifies the parameters that must be included in a request to create a new customer or customerAccount entity as well as the parameters expected in the response. Additionally this document identifies the attributes that, even though are optional to be included in a request, must be supported by the server when included in the request to create a new resource. Other optional attributes not supported by the server may end up in an error response from the server rejecting the request.

The test scenarios in this document are intended to create a set of resources (customer or customerAccount) and then retrieve the information stored in the server so as to confirm the resources created are stored with the values originally set. Additionally, some test scenarios are included to verify that the server replies with the corresponding error response in situations where a mandatory attribute is not included in the request or the request is to provide information about a resource not previously created and stored in the server.

## RESOURCE MODEL CONFORMANCE

### Customer Management API MANDATORY AND OPTIONAL RESOURCES

| Resource Name | Mandatory or Optional | Comments |
|---|---|---|
| Customer | M | |
| CustomerAccount | M | |
| PaymentMean | O | The description of payment means can be directly provided as part of the Customer and CustomerAccount structures |

### Customer resource MANDATORY AND OPTIONAL ATTRIBUTES

| Attribute Name | Mandatory or Optional | Comments |
|---|---|---|
| id | M (in response messages)<br><br>O (otherwise) | Generated by the server and provided in the response upon resource creation.<br><br>Accepted in entity-creation requests if the server supports the incoming identifier as the reference to create new resources |
| href | M (in response messages)<br><br>O (otherwise) | Value in response must be the same as the one set in Location header provided upon entity creation |
| status | M/O | Only required in response messages from the server |

| | | when providing the Customer entity contents (responses to create-POST and read-GET the entity) |
|---|---|---|
| name | M | |
| description | O | |
| customerRank | O | |
| validFor | O | |
|     startDateTime | O | |
|     endDateTime | O | |
| relatedParty | O | |
|     id | M (if relatedParty included) O (otherwise) | |
|     href | M (in response messages and if relatedParty included) O (otherwise) | Only required in response messages from the server |
|     role | O | |
|     name | O | |
|     validFor | O | |
|         startDateTime | O | |
|         endDateTime | O | |
| contactMedium | O | Array of structures |
|     preferred | M (in response messages and if contactMedium | Only required in response messages from the server when providing the |

| | | | |
|---|---|---|---|
| | | included) | contactMedium structure contents |
| | | O (otherwise) | |
| | type | M (if contactMedium included) | |
| | | O (otherwise) | |
| | medium | M (if contactMedium included) | |
| | | O (otherwise) | |
| | | List of specific medium components depending on the type (emailAddress, tel number, …) | M (if contactMedium included) | At least one entity in the list must be included |
| | | | O (otherwise) | |
| | validFor | O | |
| | | startDateTime | O | |
| | | endDateTime | O | |
| customerAccount | | O | Array of structures |
| | id | M (if customerAccount included) | |
| | | O (otherwise) | |
| | href | M (in response messages and if customerAccount included) | Only required in response messages from the server |
| | | O (otherwise) | |
| | name | O | |
| | description | O | |
| | status | O | |

| customerCreditProfile | O | Array of structures |
|---|---|---|
|     creditProfileDate | M (if customerCreditProfile included)<br><br>O (otherwise) | |
|     creditRiskRating | O | |
|     creditScore | O | |
|     validFor | M (if customerCreditProfile included)<br><br>O (otherwise) | |
|         startDateTime | O | |
|         endDateTime | O | |
| paymentMean | | Array of structures |
|     id | M (if paymentMean included)<br><br>O (otherwise) | |
|     href | M (in response messages and if paymentMean included)<br><br>O (otherwise) | Only required in response messages from the server |
|     name | O | |
| characteristic | O | Array of structures |
|     name | M (if characteristic included)<br><br>O (otherwise) | |
|     value | M (if characteristic included)<br><br>O (otherwise) | |

## CustomerAccount resource MANDATORY AND OPTIONAL ATTRIBUTES

| Attribute Name | Mandatory or Optional | Comments |
|---|---|---|
| id | M (in response messages)<br><br>O (otherwise) | Generated by the server and provided in the response upon resource creation.<br><br>Accepted in entity-creation requests if the server supports the incoming identifier as the reference to create new resources |
| href | M (in response messages)<br><br>O (otherwise) | Value in response must be the same as the one set in Location header provided upon entity creation |
| lastModified | O | |
| name | M | |
| accountType | M | |
| status | M/O | Only required in response messages from the server when providing the CustomerAccount entity contents (responses to create-POST and read-GET the entity) |
| description | O | |
| creditLimit | O | |
| pin | O | |
| receivableBalance | O | |

| customerAccountTaxExemption | O | Array of structures |
|---|---|---|
| issuingJurisdiction | M (if customerAccountTaxExemption included) O (otherwise) | |
| certificateNumber | O | |
| reason | O | |
| validFor | O | |
| startDateTime | O | |
| endDateTime | O | |
| customerAccountRelationship | O | |
| relationshipType | M (if customerAccountRelationship included) O (otherwise) | |
| validFor | O | |
| startDateTime | O | |
| endDateTime | O | |
| customerAccount | M (if customerAccountRelationship included) O (otherwise) | Array of structures |
| id | M (if customerAccount included) O (otherwise) | |

| | | | | |
|---|---|---|---|---|
| | | href | M (in response messages and if customerAccount included) O (otherwise) | Only required in response messages from the server |
| | | name | O | |
| | | description | O | |
| contact | | | O | Array of structures |
| | contactType | | M (if contact included) O (otherwise) | |
| | contactName | | M (if contact included) O (otherwise) | |
| | partyRoleType | | O | |
| | validFor | | O | |
| | | startDateTime | O | |
| | | endDateTime | O | |
| | contactMedium | | O | Array of structures |
| | | preferred | M (in response messages and if contactMedium included) O (otherwise) | Only required in response messages from the server when providing the contactMedium structure contents |
| | | type | M (if contactMedium included) O (otherwise) | |
| | | medium | M (if contactMedium included) O (otherwise) | |

| | | | | |
|---|---|---|---|---|
| | | List of specific medium components depending on the type (emailAddress, tel number, …) | M (if contactMedium included)<br><br>O (otherwise) | At least one entity in the list must be included |
| | relatedParty | | O | |
| | | id | M (if relatedParty included)<br><br>O (otherwise) | |
| | | href | M (in response messages and if relatedParty included)<br><br>O (otherwise) | Only required in response messages from the server |
| | | role | O | |
| customer | | | O | Array of structures |
| | id | | M (if customer included)<br><br>O (otherwise) | |
| | href | | M (in response messages and if customer included)<br><br>O (otherwise) | Only required in response messages from the server |
| | name | | O | |
| | description | | O | |
| customerAccountBalance | | | O | Array of structures |
| | type | | M (if customerAccountBalance included)<br><br>O (otherwise) | |
| | amount | | M (if customerAccountBalance included) | |

| | | | O (otherwise) | |
|---|---|---|---|---|
| | status | | O | |
| | validFor | | O | |
| | | startDateTime | O | |
| | | endDateTime | O | |
| paymentPlan | | | O | |
| | status | | M (if paymentPlan included) O (otherwise) | |
| | type | | M (if paymentPlan included) O (otherwise) | |
| | priority | | M (if paymentPlan included) O (otherwise) | |
| | amount | | O | |
| | paymentFrequency | | O | |
| | numberOfPayments | | O | |
| | validFor | | O | |
| | | startDateTime | O | |
| | | endDateTime | O | |
| | paymentMean | | O | |
| | | id | M (if paymentMean included) O (otherwise) | |

| | | href | M (in response messages and if paymentMean included)<br><br>O (otherwise) | Only required in response messages from the server |
| --- | --- | --- | --- | --- |

## PaymentMean resource MANDATORY AND OPTIONAL ATTRIBUTES

This resource is optional and not included in the basic CONNECT certification. The description of payment means can be directly provided as part of the Customer and CustomerAccount structures.

## API OPERATIONS CONFORMANCE

For every single resource use the following templates and define what operations are optional and what operations are mandatory.

### Customer MANDATORY AND OPTIONAL OPERATIONS

| Uniform API Operation | Mandatory/Optional | Comments |
|---|---|---|
| GET | M | GET must be used to retrieve a representation of a resource |
| POST | M | POST must be used to create a new resource |
| PUT | O | PUT must be used to completely update a resource identified by its resource URI |
| PATCH (JSON-MERGE) | O | PATCH must be used to partially update a resource |
| DELETE | O | DELETE must be used to remove a resource |

## API GET FILTERING 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.:?customerRank=<value> &status=<value>)

**Filtered Data (Attribute selection):** 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=customerRank,status) will provide in the response only the values assigned to attributes category and channel. Attribute selection capabilities are the same for collections retrieval and individual resource queries

### Filtering in Customer resource

| Attribute name | Filtered search First Level | Filtered search N Level | Attribute Selection First Level | Attribute Selection N Level |
|---|---|---|---|---|
| Id | NA | NA | M | NA |
| href | NA | NA | M | NA |
| status | M | NA | M | NA |
| name | M | NA | M | NA |
| description | O | NA | M | NA |
| customerRank | O | NA | M | NA |
| validFor | NA | O | M | O |
| relatedParty | NA | O | M | O |
| contactMedium | NA | O | M | O |
| customerAccount | NA | O | M | O |

| customerCreditProfile | NA | O | M | O |
|---|---|---|---|---|
| paymentMean | NA | O | M | O |
| characteristic | NA | O | M | O |

## GET /customerManagement/customer/

**Filtered Search:** A filtered search can be applied using the following filtering criteria

- status: To obtain the list of customers that are in a given status

- name: To obtain the details of the customer with a given name

- other optional attributes as defined in the table above

**Filtered Data:** A filtered response can be requested for the following attributes using the "?fields=" query parameter

- Any of the attributes in the first level of Customer resource definition

## GET /customerManagement/customer/{ID}

**Filtered Search:** A filtered response can be requested for the following attributes using the "?fields=" query parameter

- Any of the attributes in thefirst level of Cutsomer resource definition

## Filtering in CustomerAccount resource

| Attribute name | Filtered search First Level | Filtered search N Level | Attribute Selection First Level | Attribute Selection N Level |
|---|---|---|---|---|
| id | NA | NA | M | NA |
| href | NA | NA | M | NA |

| lastModified | O | NA | M | NA |
|---|---|---|---|---|
| name | M | NA | M | NA |
| accountType | M | NA | M | NA |
| status | M | NA | M | NA |
| description | O | NA | M | NA |
| creditLimit | O | NA | M | NA |
| pin | O | NA | M | NA |
| receivableBalance | O | NA | M | NA |
| customerAccountTaxExemption | NA | O | M | O |
| customerAccountRelationship | NA | O | M | O |
| contact | NA | O | M | O |
| customer | NA | O | M | O |
| customerAccountBalance | NA | O | M | O |
| paymentPlan | NA | O | M | O |

## GET /customerManagement/customerAccount/

**Filtered Search:** A filtered search can be applied using the following filtering criteria

- status: To obtain the list of customer accounts that are in a given status

- name: To obtain the details of the customer account with a given name

- accountType: To obtain the details of the customer accounts of a given type

- other optional attributes as defined in the table above

**Filtered Data:** A filtered response can be requested for the following attributes using the "?fields=" query parameter

Any of the attributes in the first level of Customer resource definition

GET /customerManagement/customerAccount /{ID}

**Filtered Search:** A filtered response can be requested for the following attributes using the "?fields=" query parameter

- Any of the attributes in thefirst level of Cutsomer resource definition

## API POST OPERATION CONFORMANCE

### POST to /customerManagement/customer

This Uniform Contract operation is used to create a Customer resource in the server.

The response to this operation must include a Location header set to /customerManagement/customer/{ID} where {ID} indicates the identifier assigned by the server to the new Product Offering resource created

| POST | M | |
|---|---|---|
| Response Status Code 201 | M | |
| Other Status Codes | NA | |

The following table indicates attributes that are required to be sent when creating a new Customer resource as well as attributes with special considerations. All other attributes defining the resource are not required to be sent as aprt of the BODY of the POST request message:

| Attribute name | Mandatory | Default | Rule |
|---|---|---|---|
| id | N | | Accepted in entity-creation requests if the server supports the incoming identifier as the reference to create new resources |
| name | Y | | |
| relatedParty.id | N | | Mandatory if relatedParty included<br><br>The consumer must indicate the identifier for every relatedParty assigned to the Customer |
| contactMedium.type | N | | Mandatory for each contactMedium structure included |
| contactMedium.medium | N | | Mandatory for each contactMedium structure |

| | | | |
|---|---|---|---|
| | | | included |
| customerAccount.id | N | | Mandatory for each customerAccount structure included<br><br>The consumer must indicate the identifier for every customerAccount assigned to the Customer |
| customerCreditProfile. creditProfileDate | N | | Mandatory for each customerCreditProfile structure included |
| customerCreditProfile. validFor | N | | Mandatory for each customerCreditProfile structure included |
| paymentMean.id | N | | Mandatory for each paymentMean structure included<br><br>The consumer must indicate the identifier for every paymentMean assigned to the Customer |
| characteristic.name | N | | Mandatory for each characteristic structure included |
| characteristic.value | N | | Mandatory for each characteristic structure included |

The response from the server must include a BODY with the contents of the new resource created.

If the POST request includes optional parameters (as per the model resource definition) that are not supported by the server, then the server must reject the request (replying with a 4xx error response) indicating the parameter not supported.

The following parameters must be supported by the server when included in the request to create a new resource

- name
- status

- description
- contactMedium
- contactMedium.type
- contactMedium.medium
- contactMedium.preferred

The BODY of the response from the server must include attribute "href" set to the same value as the one in the Location header.

The server must support in the request, and include in the BODY of the response even if they are not included in the request, the following attributes that are mandatory in the definition of a Customer as per the resource model defined

- id
- status

The BODY of the response from the server must include attribute "href" under each one of the entities within the Customer model that can be addressed individually and were included in the request. This applies to any of the following entities

- relatedParty
- customerAccount
- paymentMean

## POST to /customerManagement/customerAccount

This Uniform Contract operation is used to create a CustomerAccount resource in the server.

The response to this operation must include a Location header set to /customerManagement/customerAccount/{ID} where {ID} indicates the identifier assigned by the server to the new Product Offering resource created

| POST | M | |
|------|---|---|
| Response Status Code 201 | M | |
| Other Status Codes | NA | |

The following table indicates attributes that are required to be sent when creating a new Customer resource as well as attributes with special considerations. All other attributes defining the resource are not required to be sent as aprt of the BODY of the POST request message:

| Attribute name | Mandatory | Default | Rule |
|---|---|---|---|
| id | N | | Accepted in entity-creation requests if the server supports the incoming identifier as the reference to create new resources |
| name | Y | | |
| accountType | Y | | |
| customerAccountTaxExemption.issuingJurisdiction | N | | Mandatory if customerAccountTaxExemption included |
| customerAccountRelationship.relationshipType | N | | Mandatory for each customerAccountRelationship structure included |
| customerAccountRelationship. customerAccount | N | | Mandatory for each customerAccountRelationship structure included |
| customerAccount.id | N | | Mandatory for each customerAccount structure included<br><br>The consumer must indicate the identifier for every customerAccount assigned to the Customer |
| contact.contactType | N | | Mandatory for each contact structure included |
| contact.contactName | N | | Mandatory for each contact structure included |
| contact.contactMedium.preferred | N | | Mandatory for each contactMedium structure included |
| contact.contactMedium.type | N | | Mandatory for each contactMedium structure |

| | | | included |
|---|---|---|---|
| contact.contactMedium.medium | N | | Mandatory for each contactMedium structure included |
| contact.relatedParty.id | N | | Mandatory if relatedParty included<br><br>The consumer must indicate the identifier for every relatedParty assigned to the Customer |
| customer.id | N | | Mandatory if relatedParty included<br><br>The consumer must indicate the identifier for every relatedParty assigned to the Customer |
| customerAccountBalance.type | N | | Mandatory for each customerAccountBalance structure included |
| customerAccountBalance.amount | N | | Mandatory for each customerAccountBalance structure included |
| paymentPlan.priority | N | | Mandatory if paymentPlan included |
| paymentPlan.status | N | | Mandatory if paymentPlan included |
| paymentPlan.type | N | | Mandatory if paymentPlan included |
| paymentPlan.paymentMean.id | N | | Mandatory if paymentMean included<br><br>The consumer must indicate the identifier for every paymentMean assigned to the paymentPlan |

The response from the server must include a BODY with the contents of the new resource created.

If the POST request includes optional parameters (as per the model resource definition) that are not supported by the server, then the server must reject the request (replying with a 4xx error response) indicating the parameter not supported.

The following parameters must be supported by the server when included in the request to create a new resource

- accountType
- name
- status
- description
- contact
- contact.type
- contact.contactName
- contact.partyRoleType
- contact.contactMedium
- contact.contactMedium.type
- contactMedium.medium
- contactMedium.medium.preferred
- customer
- customer.id
- paymentPlan
- paymentPlan.type
- paymentPlan.priority
- paymentPlan.status
- paymentPlan.amount
- paymentPlan.paymentMean
- paymentPlan.paymentMean.id

The BODY of the response from the server must include attribute "href" set to the same value as the one in the Location header.

The server must support in the request, and include in the BODY of the response even if they are not included in the request, the following attributes that are mandatory in the definition of a Customer as per the resource model defined

- id
- status

The BODY of the response from the server must include attribute "href" under each one of the entities within the Customer model that can be addressed individually and were included in the request. This applies to any of the following entities

- relatedParty
- customer
- paymentPlan.paymentMean

## API PATCH OPERATION CONFORMANCE

This section defines which attributes are patchable.

Since PATCH operation is optional and not included in the basic CONNECT certification this is not applicable in this conformance document.

## API DELETE OPERATION CONFORMANCE

This section defines what operations can be used to delete a Customer or CustomerAccount resource.

Since DELETE operation is optional and not included in the basic CONNECT certification this is not applicable in this conformance document.

## API CONFORMANCE TEST SCENARIOS

This section describes the test scenarios required for the basic CONNECT certification of Customer Management 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/v1**, being {serverRoot} defines the certification endpoint

### Customer resource TEST CASES

**Nominal Scenarios**

### TC_Cust_N1 – Create new Customer with minimum mandatory information

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

    ```
    {
        "name": "cst1",
    }
    ```

- 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/{IDcst1} where {IDcst1} indicates the identifier assigned by the server to the new Customer resource

    - The response message includes all mandatory parameters (including id, href and status 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 {IDcst1}, 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 {IDcst1} matches the values set in the original request

- Send a GET message to /{apiRoot}/ customer /{IDcst1}

- 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": "cst2",
    "description": "<anytext>",
    "status": "Active",
    "contactMedium":
    [
        {
            "type": "Email",
            "medium":
            {
                "emailAddress": "ejemplocustomer2@test.com"
            }
        },
        {
            "preferred": true,
            "type": "TelephoneNumber",
            "medium":
            {
                "type": "home",
                "number": "+10001234567"
            }
        }
    ]
}
```

- 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/{IDcst2} where {IDcst2} indicates the identifier assigned by the server to the new Customer resource

- The response message includes all mandatory parameters (including id and href 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 {IDcst2}, 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 {IDcst2} matches the values set in the original request

- Send a GET message to /{apiRoot}/ customer /{IDcst2}

- 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 {IDcst1} and {IDcst2}

- 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/?name=cst1

- 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 {IDcst1} and there is no reference to Customer resource {IDcst2}

  - The response message includes all mandatory parameters

  - The body of the response for the resource with identifier {IDcst1} matches the values in the 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 {IDcst2} and there is no reference to Customer resource {IDcst1}

  - The response message includes all mandatory parameters

  - The body of the response for the resource with identifier {IDcst2} matches the values in the original request


### TC_Cust_N4 – Filtered retrieval of Customer data

- Send a GET message to /{apiRoot}/customer/{IDcst1}?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 {IDcst1} and including only attributes name and status, matching the values in the original request

- Send a GET message to /{apiRoot}/customer/{IDcst2}?fields=name, contactMedium

- 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 {IDcst2} and including only attributes name and contactMedium, matching the values in the original request

Notice that this test case is using parameters "name", "status" and "contactMedium" to filter the data included in the response but any other parameter could be used

### TC_Cust_N5 – Filtered Search and Filtered data response

- Send a GET message to /{apiRoot}/customer/?status=Active&fields=name,contactMedium

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

    - Response Code 200-OK

    - The body of the response includes one Customerresource referring to {IDcst2} and there is no reference to Customer resource {IDcst1}

    - The body of the response for the resource with each identifier includes only attributes name and contactMedium, matching the values in the corresponding original request

Notice that this test case is using parameters "name" and "contactMedium" to filter the data included in the response but any other parameter could be used

## Error Scenarios

### TC_Cust_E1 – Unknown Customer identifier

- Send a GET message to /{apiRoot}/customer/{IDcst4}, where {IDcst4} does not match any of the identifiers previously creted in the server

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

    o 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.

    {

```
        "description": "<anytext>",
        "status": "Active"
    }
```

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": "<anytext>",
    "description": "<anytext>",
    "status": "New",
    "contactMedium":
    [
        {
            "medium":
            {
                "emailAddress": "ejemplocustomer2@test.com"
            }
        }
    ]
}
```

Notice that this request is missing mandatory parameter "type" when parameter "contactMedium" is included in the request, but any other parameter that becomes mandatory based on the context could be used

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

## CustomerAccount resource TEST CASES

### Nominal Scenarios

#### TC_Acct_N1 – Create new Customer Account with minimum mandatory information

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

```
{
    "name": "acc1",
```

```
        "accountType": "Residential"
    }
```

- 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}/ customerAccount /{IDacc1} where {IDacc1} indicates the identifier assigned by the server to the new Customer Account resource

    - The response message includes all mandatory parameters (including id, href and status 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}/customerAccount/

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

    - Response Code 200-OK

    - The body of the response includes one CustomerAccount resource with ID set to {IDacc1}, 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 {IDacc1} matches the values set in the original request

- Send a GET message to /{apiRoot}/ customerAccount /{IDacc1}

- 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 CustomerAccount resource structure that matches the values in the original request

**TC_Acct_N2 – Create new Customer Account with minimum set of parameters supported by server**

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

```json
{
    "name": "acc2",
    "description": "<anytext>",
    "status": "New",
    "contact":
    [
      {
        "contactType": "primary",
        "contactName": "contact2_1",
        "partyRoleType": "salesman",
        "contactMedium":
          [
              {
                  "type": "Email",
                  "medium":
                  {
                    "emailAddress": "ejemploaccount2@test.com"
                  }
              },
              {
                  "preferred": true,
                  "type": "TelephoneNumber",
                  "medium":
                  {
                    "type": "home",
                    "number": "+10001234567"
                  }
              }
          ]
      }
    ]
    "customer":
    {
        "id": "cst2"
    }
    "paymentPlan":
    [
        {
            "type": "Type2",
            "priority": 1,
            "status": "Effective",
            "amount": 5,
            "paymentMean":
            {
                "id": "PM_1"
            }
        }
    ]
}
```

- 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}/ customerAccount /{IDacc2} where {IDacc2} indicates the identifier assigned by the server to the new Customer Account resource

- The response message includes all mandatory parameters (including id and href 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}/ customerAccount /

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

    - Response Code 200-OK

    - The body of the response includes one Customer Account resource with ID set to {IDacc2}, 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 {IDacc2} matches the values set in the original request

- Send a GET message to /{apiRoot}/ customerAccount /{IDacc2}

- 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 Account resource structure that matches the values in the original request

**TC_Cust_N3 – Search for customer accounts with specific characteristics**

- Send a GET message to /{apiRoot}/customerAccount

- 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 account resources referring to {IDacc1} and {IDacc2}

- 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}/customerAccount/?name=acc1

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

  - Response Code 200-OK

  - The body of the response includes one Customer Account resource referring to {IDacc1} and there is no reference to Customer resource {IDacc2}

  - The response message includes all mandatory parameters

  - The body of the response for the resource with identifier {IDacc2} matches the values in the original request

- Send a GET message to /{apiRoot}/ customerAccount /?status=New

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

  - Response Code 200-OK

  - The body of the response includes one Customer Account resource referring to {IDacc2} and there is no reference to Customer resource {IDacc1}

  - The response message includes all mandatory parameters

  - The body of the response for the resource with identifier {IDacc2} matches the values in the original request

### TC_Cust_N4 – Filtered retrieval of Customer Account data

- Send a GET message to /{apiRoot}/customerAccount/{IDacc1}?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 Account resource referring to {IDacc1} and including only attributes name and status, matching the values in the original request

- Send a GET message to /{apiRoot}/customerAccount/{IDacc2}?fields=name, contact

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

    - Response Code 200-OK

    - The body of the response includes one Customer Account resource referring to {IDacc2} and including only attributes name and contact, matching the values in the original request

Notice that this test case is using parameters "name", "status" and "contact" to filter the data included in the response  but any other parameter could be used

### TC_Cust_N5 – Filtered Search and Filtered data response

- Send a GET message to /{apiRoot}/customerAccount/?status=New&fields=name,customer

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

    - Response Code 200-OK

    - The body of the response includes one Customerresource referring to {IDacc2} and there is no reference to Customer resource {IDacc1}

    - The body of the response for the resource with each identifier includes only attributes name and customer, matching the values in the corresponding original request

Notice that this test case is using parameters "name"  and "customer" to filter the data included in the response  but any other parameter could be used

## Error Scenarios

### TC_Cust_E1 – Unknown Customer Account identifier

- Send a GET message to /{apiRoot}/customerAccount/{IDacc4}, where {IDacc4} does not match any of the identifiers previously creted in the server

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

    o Response Code 404-Not Found

### TC_Cust_E2 – Invalid Request – Missing mandatory parameter

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

```
{
    "description": "<anytext>",
    "status": "Active"
}
```

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}/customerAccount/ with the following contents in the BODY.

```
{
    "name": "<anytext>",
    "description": "<anytext>",
    "status": "New",
    "paymentPlan":
     [
        {
            "priority": 1,
            "status": "Effective",
            "amount": 5,
            "paymentMean":
            {
                "id": "PM_1"
            }
        }
     ]
}
```

Notice that this request is missing mandatory parameter "type" when parameter "paymentPlan" is included in the request, but any other parameter that becomes mandatory based on the context could be used

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

## ACKNOWLEDGEMENTS

## RELEASE HISTORY

| Release Number | Date | Release led by: | Description |
|---|---|---|---|
| Release 1.0.0 | 12/01/2016 | Pierre Gauthier<br>TM Forum<br>pgauthier@tmforum.org | Version issued for Fx16.5 |