API ACCOUNT MANAGEMENT  
CONFORMANCE

Document Number: TMF666C

Document Version: : 1.1

Date: June, 2017

Document Status: Draft (1.1)

# NOTICE

Copyright © TeleManagement Forum 2013. All Rights Reserved.

This document and translations of it may be copied and furnished to others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published, and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this section are included on all such copies and derivative works. However, this document itself may not be modified in any way, including by removing the copyright notice or references to TM FORUM, except as needed for the purpose of developing any document or deliverable produced by a TM FORUM Collaboration Project Team (in which case the rules applicable to copyrights, as set forth in the [TM FORUM IPR Policy](http://www.tmforum.org/IPRPolicy/11525/home.html), must be followed) or as required to translate it into languages other than English.

The limited permissions granted above are perpetual and will not be revoked by TM FORUM or its successors or assigns.

This document and the information contained herein is provided on an "AS IS" basis and TM FORUM DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY OWNERSHIP RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

Direct inquiries to the TM Forum office:

4 Century Drive  
Suite 100  
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/)

TM Forum Web Page: [www.tmforum.org](http://www.tmforum.org/)

# Table of Contents

[NOTICE 2](#_Toc484165627)

[Table of Contents 3](#_Toc484165628)

[Introduction - API DESCRIPTION 6](#_Toc484165629)

[RESOURCE MODEL CONFORMANCE 7](#_Toc484165630)

[API MANDATORY AND OPTIONAL RESOURCES 7](#_Toc484165631)

[Party Account MANDATORY AND OPTIONAL ATTRIBUTES 7](#_Toc484165632)

[Billing Account MANDATORY AND OPTIONAL ATTRIBUTES 8](#_Toc484165633)

[Settlement Account MANDATORY AND OPTIONAL ATTRIBUTES 9](#_Toc484165634)

[Financial Account MANDATORY AND OPTIONAL ATTRIBUTES 10](#_Toc484165635)

[Billing Cycle Specification MANDATORY AND OPTIONAL ATTRIBUTES 11](#_Toc484165636)

[Bill Format MANDATORY AND OPTIONAL ATTRIBUTES 12](#_Toc484165637)

[Bill Presentation Media MANDATORY AND OPTIONAL ATTRIBUTES 12](#_Toc484165638)

[NOTIFICATION MODEL CONFORMANCE 14](#_Toc484165639)

[API MANDATORY AND OPTIONAL NOTIFICATIONS 14](#_Toc484165640)

[API OPERATIONS CONFORMANCE 15](#_Toc484165641)

[API MANDATORY AND OPTIONAL OPERATIONS 15](#_Toc484165642)

[API GET OPERATION CONFORMANCE 17](#_Toc484165643)

[/partyAccount?fields=...&{filtering} 17](#_Toc484165644)

[/partyAccount/{id}?fields=...&{filtering} 17](#_Toc484165645)

[/billingAccount?fields=...&{filtering} 17](#_Toc484165646)

[/billingAccount/{id}?fields=...&{filtering} 18](#_Toc484165647)

[/settlementAccount?fields=...&{filtering} 18](#_Toc484165648)

[/settlementAccount/{id}?fields=...&{filtering} 18](#_Toc484165649)

[/financialAccount?fields=...&{filtering} 18](#_Toc484165650)

[/financialAccount/{id}?fields=...&{filtering} 18](#_Toc484165651)

[/billingCycleSpecification?fields=...&{filtering} 18](#_Toc484165652)

[/billingCycleSpecification/{id}?fields=...&{filtering} 18](#_Toc484165653)

[/billFormat?fields=...&{filtering} 18](#_Toc484165654)

[/billFormat/{id}?fields=...&{filtering} 18](#_Toc484165655)

[/billPresentationMedia?fields=...&{filtering} 19](#_Toc484165656)

[/billPresentationMedia/{id}?fields=...&{filtering} 19](#_Toc484165657)

[API POST OPERATION CONFORMANCE 20](#_Toc484165658)

[/partyAccount 20](#_Toc484165659)

[/billingAccount 21](#_Toc484165660)

[/settlementAccount 22](#_Toc484165661)

[/financialAccount 23](#_Toc484165662)

[/billingCycleSpecification 25](#_Toc484165663)

[/billFormat 25](#_Toc484165664)

[/billPresentationMedia 26](#_Toc484165665)

[API PATCH OPERATION CONFORMANCE 27](#_Toc484165666)

[/partyAccount/{id} 27](#_Toc484165667)

[/billingAccount/{id} 28](#_Toc484165668)

[/settlementAccount/{id} 30](#_Toc484165669)

[/financialAccount/{id} 32](#_Toc484165670)

[/billingCycleSpecification/{id} 33](#_Toc484165671)

[/billFormat/{id} 34](#_Toc484165672)

[/billPresentationMedia/{id} 34](#_Toc484165673)

[API DELETE OPERATION CONFORMANCE 36](#_Toc484165674)

[/partyAccount/{id} 36](#_Toc484165675)

[/billingAccount/{id} 36](#_Toc484165676)

[/settlementAccount/{id} 36](#_Toc484165677)

[/financialAccount/{id} 36](#_Toc484165678)

[/billingCycleSpecification/{id} 36](#_Toc484165679)

[/billFormat/{id} 36](#_Toc484165680)

[/billPresentationMedia/{id} 36](#_Toc484165681)

[API CONFORMANCE TEST SCENARIOS 37](#_Toc484165682)

[PartyAccount resource TEST CASES 37](#_Toc484165683)

[Release History 44](#_Toc484165684)

# Introduction - API DESCRIPTION

The Account API provides standardized mechanism for the management of billing and settlement accounts, as well as for financial accounting (account receivable) either in B2B or B2B2C contexts.

It allows creation, update and retrieval of account information either in a B2B2C relationship context (creation of mass market customer billing account within a “Billing on Behalf of” process for example) or in a B2B context (creation of a billing/settlement account for a partner or B2B customer).

It also allows creation and query of bill items allowing partners or B2B customer to check their invoice.

Accounts typically refer to parties and party roles. However the management of party and party roles is out of the scope of this API. The TMF APIs Party Management, Customer Management and Party Role Management can be used for this purpose.

# 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 |
| PartyAccount | M |  |
| BillingAccount | M |  |
| SettlementAccount | M |  |
| FinancialAccount | M |  |
| BillingCycleSpecification | M |  |
| BillFormat | M |  |
| BillPresentationMedia | M |  |

## Party Account MANDATORY AND OPTIONAL ATTRIBUTES

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

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Mandatory or Optional** | **Comments** |
| creditLimit | O |  |
| description | O |  |
| href | M (in response messages) O (otherwise) | Url for the created resource |
| id | M (in response messages) O (otherwise) | Generated by the server |
| lastModified | O |  |
| name | M (for resource creation) O (otherwise) |  |
| state | O |  |
| type | O |  |
| paymentStatus | O |  |
| billStructure | O |  |
| paymentPlan | O |  |
| financialAccount | O |  |
| defaultPaymentMethod | O |  |
| relatedParty | O |  |
| taxExemption | O |  |
| contact | O |  |
| accountBalance | O | Attribute non patchable |
| accountRelationship | O |  |

## Billing Account MANDATORY AND OPTIONAL ATTRIBUTES

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

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Mandatory or Optional** | **Comments** |
| paymentStatus | O |  |
| creditLimit | O |  |
| description | O |  |
| href | M (in response messages) O (otherwise) | Url for the created resource |
| id | M (in response messages) O (otherwise) | Generated by the server |
| lastModified | O |  |
| name | M (for resource creation) O (otherwise) |  |
| state | O |  |
| type | O |  |
| billStructure | O |  |
| paymentPlan | O |  |
| financialAccount | O |  |
| defaultPaymentMethod | O |  |
| relatedParty | O |  |
| taxExemption | O |  |
| contact | O |  |
| accountBalance | O | Attribute non patchable |
| accountRelationship | O |  |

## Settlement Account MANDATORY AND OPTIONAL ATTRIBUTES

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

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Mandatory or Optional** | **Comments** |
| paymentStatus | O |  |
| creditLimit | O |  |
| description | O |  |
| href | M (in response messages) O (otherwise) | Url for the created resource |
| id | M (in response messages) O (otherwise) | Generated by the server |
| lastModified | O |  |
| name | M (for resource creation) O (otherwise) |  |
| state | O |  |
| type | O |  |
| billStructure | O |  |
| paymentPlan | O |  |
| financialAccount | O |  |
| defaultPaymentMethod | O |  |
| relatedParty | O |  |
| taxExemption | O |  |
| contact | O |  |
| accountBalance | O | Attribute non patchable |
| accountRelationship | O |  |

## Financial Account MANDATORY AND OPTIONAL ATTRIBUTES

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

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Mandatory or Optional** | **Comments** |
| creditLimit | O |  |
| description | O |  |
| href | M (in response messages) O (otherwise) | Url for the created resource |
| id | M (in response messages) O (otherwise) | Generated by the server |
| lastModified | O | Attribute non patchable |
| name | M (for resource creation) O (otherwise) |  |
| state | O |  |
| type | O |  |
| relatedParty | O |  |
| taxExemption | O |  |
| contact | O |  |
| accountBalance | O |  |
| accountRelationship | O |  |

## Billing Cycle Specification MANDATORY AND OPTIONAL ATTRIBUTES

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

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Mandatory or Optional** | **Comments** |
| billingDateShift | O |  |
| billingPeriod | O |  |
| chargeDateOffset | O |  |
| creditDateOffset | O |  |
| description | O |  |
| frequency | O |  |
| href | M (in response messages) O (otherwise) | Url for the created resource |
| id | M (in response messages) O (otherwise) | Generated by the server |
| mailingDateOffset | O |  |
| name | M (for resource creation) O (otherwise) |  |
| paymentDueDateOffset | O |  |
| validFor | O |  |

## Bill Format MANDATORY AND OPTIONAL ATTRIBUTES

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

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Mandatory or Optional** | **Comments** |
| description | 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) |  |

## Bill Presentation Media MANDATORY AND OPTIONAL ATTRIBUTES

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

|  |  |  |
| --- | --- | --- |
| **Attribute Name** | **Mandatory or Optional** | **Comments** |
| description | 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) |  |

# 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 indicate which ones are mandatory and which ones are optional.

|  |  |  |
| --- | --- | --- |
| Notification Name | Mandatory or Optional | Comments |
| PartyAccountAttributeValueChangeNotification | M |  |
| PartyAccountStateChangeNotification | M |  |
| BillingAccountAttributeValueChangeNotification | M |  |
| BillingAccountStateChangeNotification | M |  |
| SettlementAccountAttributeValueChangeNotification | M |  |
| SettlementAccountStateChangeNotification | M |  |
| FinancialAccountCreationNotification | M |  |
| FinancialAccountAttributeValueChangeNotification | M |  |
| FinancialAccountStateChangeNotification | M |  |
| FinancialAccountRemoveNotification | M |  |

All attributes of the resource associated with the notification are mandatory.

# API OPERATIONS CONFORMANCE

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

## API MANDATORY AND OPTIONAL OPERATIONS

Fill the following table and indicate 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:  PartyAccount BillingAccount SettlementAccount FinancialAccount BillingCycleSpecification BillFormat BillPresentationMedia | POST must be used to create a new resource |
| PATCH | M for resources:  PartyAccount BillingAccount SettlementAccount FinancialAccount BillingCycleSpecification BillFormat BillPresentationMedia | PATCH must be used to partially update a resource |
| DELETE | M for resources:  PartyAccount BillingAccount SettlementAccount FinancialAccount BillingCycleSpecification BillFormat BillPresentationMedia | DELETE must be used to remove a resource |

# API GET OPERATION CONFORMANCE

For every single resource use the following template to specify the mandatory and optional features supported by the GET operation.

**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.:?severity=<value> &status=<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=severity,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

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

|  |  |  |
| --- | --- | --- |
| GET | M |  |
| Response Status Code 200 | M |  |
| Other Status Codes | NA |  |

## /partyAccount?fields=...&{filtering}

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

## /partyAccount/{id}?fields=...&{filtering}

This operation retrieves a party account entity.  
Attribute selection is mandatory for all first level attributes.  
Filtering on sub-resources is optional for all compliance levels.

## /billingAccount?fields=...&{filtering}

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

## /billingAccount/{id}?fields=...&{filtering}

This operation retrieves a billing account entity.  
Attribute selection is mandatory for all first level attributes.  
Filtering on sub-resources is optional for all compliance levels.

## /settlementAccount?fields=...&{filtering}

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

## /settlementAccount/{id}?fields=...&{filtering}

This operation retrieves a settlement account entity.  
Attribute selection is mandatory for all first level attributes.  
Filtering on sub-resources is optional for all compliance levels.

## /financialAccount?fields=...&{filtering}

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

## /financialAccount/{id}?fields=...&{filtering}

This operation retrieves a financial account entity.  
Attribute selection is mandatory for all first level attributes.  
Filtering on sub-resources is optional for all compliance levels.

## /billingCycleSpecification?fields=...&{filtering}

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

## /billingCycleSpecification/{id}?fields=...&{filtering}

This operation retrieves a billing cycle specification entity.  
Attribute selection is mandatory for all first level attributes.  
Filtering on sub-resources is optional for all compliance levels.

## /billFormat?fields=...&{filtering}

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

## /billFormat/{id}?fields=...&{filtering}

This operation retrieves a bill format entity.  
Attribute selection is mandatory for all first level attributes.  
Filtering on sub-resources is optional for all compliance levels.

## /billPresentationMedia?fields=...&{filtering}

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

## /billPresentationMedia/{id}?fields=...&{filtering}

This operation retrieves a bill presentation media entity.  
Attribute selection is mandatory for all first level attributes.  
Filtering on sub-resources is optional for all compliance levels.

# API POST OPERATION CONFORMANCE

For every single resource use the following template to specify the mandatory and optional features supported by the POST operation.

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

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

## /partyAccount

This operation creates a party account entity.

**Mandatory and Non Mandatory Attributes**

The following tables provides the list of mandatory and non mandatory attributes when creating a PartyAccount, 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 |
| creditLimit |  |  |
| description |  |  |
| lastModified |  |  |
| state |  |  |
| type |  |  |
| paymentStatus |  |  |
| billStructure |  |  |
| paymentPlan |  |  |
| financialAccount |  |  |
| defaultPaymentMethod |  |  |
| relatedParty |  |  |
| taxExemption |  |  |
| contact |  |  |
| accountBalance |  |  |
| accountRelationship |  |  |

**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 |
| validFor.startDateTime | Current date |
| billStructure.cycleSpecification.name | "Bill issuer choice" |
| billStructure.format.name | "Standard invoice" |
| billStructure.presentationMedia.name | "Electronic invoice" |

## /billingAccount

This operation creates a billing account entity.

**Mandatory and Non Mandatory Attributes**

The following tables provides the list of mandatory and non mandatory attributes when creating a BillingAccount, 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 |
| paymentStatus |  |  |
| creditLimit |  |  |
| description |  |  |
| lastModified |  |  |
| state |  |  |
| type |  |  |
| billStructure |  |  |
| paymentPlan |  |  |
| financialAccount |  |  |
| defaultPaymentMethod |  |  |
| relatedParty |  |  |
| taxExemption |  |  |
| contact |  |  |
| accountBalance |  |  |
| accountRelationship |  |  |

**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 |
| validFor.startDateTime | Current date |
| billStructure.cycleSpecification.name | "Bill issuer choice" |
| billStructure.format.name | "Standard invoice" |
| billStructure.presentationMedia.name | "Electronic invoice" |

## /settlementAccount

This operation creates a settlement account entity.

**Mandatory and Non Mandatory Attributes**

The following tables provides the list of mandatory and non mandatory attributes when creating a SettlementAccount, 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 |
| paymentStatus |  |  |
| creditLimit |  |  |
| description |  |  |
| lastModified |  |  |
| state |  |  |
| type |  |  |
| billStructure |  |  |
| paymentPlan |  |  |
| financialAccount |  |  |
| defaultPaymentMethod |  |  |
| relatedParty |  |  |
| taxExemption |  |  |
| contact |  |  |
| accountBalance |  |  |
| accountRelationship |  |  |

**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 |
| validFor.startDateTime | Current date |
| billStructure.cycleSpecification.name | "Bill issuer choice" |
| billStructure.format.name | "Standard invoice" |
| billStructure.presentationMedia.name | "Electronic invoice" |

## /financialAccount

This operation creates a financial account entity.

**Mandatory and Non Mandatory Attributes**

The following tables provides the list of mandatory and non mandatory attributes when creating a FinancialAccount, 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 |
| creditLimit |  |  |
| description |  |  |
| lastModified | Automatically generated |  |
| state |  |  |
| type |  |  |
| relatedParty |  |  |
| taxExemption |  |  |
| contact |  |  |
| accountBalance |  |  |
| accountRelationship |  |  |

**Additional Rules**

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

|  |  |
| --- | --- |
| Context | Mandatory Sub-Attributes |
| taxExemption | issuingJurisdiction, validFor |
| accountRelationship | relationshipType, validFor |
| contact | contactType, validFor |
| accountBalance | type, amount, validFor, status |
| paymentPlan | status, amount, paymentFrequency, validFor, paymentMethod |

**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 |
| href | Automatically generated |
| lastModified | Automatically generated |

## /billingCycleSpecification

This operation creates a billing cycle specification entity.

**Mandatory and Non Mandatory Attributes**

The following tables provides the list of mandatory and non mandatory attributes when creating a BillingCycleSpecification, 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 |
| billingDateShift |  |  |
| billingPeriod |  |  |
| chargeDateOffset |  |  |
| creditDateOffset |  |  |
| description |  |  |
| frequency |  |  |
| mailingDateOffset |  |  |
| paymentDueDateOffset |  |  |
| validFor |  |  |

## /billFormat

This operation creates a bill format entity.

**Mandatory and Non Mandatory Attributes**

The following tables provides the list of mandatory and non mandatory attributes when creating a BillFormat, 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 |
| description |  |  |

## /billPresentationMedia

This operation creates a bill presentation media entity.

**Mandatory and Non Mandatory Attributes**

The following tables provides the list of mandatory and non mandatory attributes when creating a BillPresentationMedia, 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 |
| description |  |  |

# 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 |  |

## /partyAccount/{id}

This operation allows partial updates of a party account 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 |
| creditLimit |  |
| description |  |
| lastModified |  |
| name |  |
| state |  |
| type |  |
| paymentStatus |  |
| billStructure |  |
| paymentPlan |  |
| financialAccount |  |
| defaultPaymentMethod |  |
| relatedParty |  |
| taxExemption |  |
| contact |  |
| accountRelationship |  |

|  |  |
| --- | --- |
| Non Patchable Attributes | Rule |
| id |  |
| href |  |
| accountBalance |  |
| creditLimit |  |
| description |  |
| lastModified |  |
| name |  |
| state |  |
| type |  |
| paymentStatus |  |
| billStructure |  |
| paymentPlan |  |
| financialAccount |  |
| defaultPaymentMethod |  |
| relatedParty |  |
| taxExemption |  |
| contact |  |
| accountRelationship |  |

## /billingAccount/{id}

This operation allows partial updates of a billing account 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.  
Notice that patching is possible only for 'admin' API users.

|  |  |
| --- | --- |
| Patchable Attributes | Rule |
| billStructure.cycleSpecification |  |
| billStructure.format |  |
| billStructure.presentationMedia |  |
| paymentStatus |  |
| creditLimit |  |
| description |  |
| lastModified |  |
| name |  |
| state |  |
| type |  |
| billStructure |  |
| paymentPlan |  |
| financialAccount |  |
| defaultPaymentMethod |  |
| relatedParty |  |
| taxExemption |  |
| contact |  |
| accountRelationship |  |

|  |  |
| --- | --- |
| Non Patchable Attributes | Rule |
| id |  |
| href |  |
| accountBalance |  |
| paymentStatus |  |
| creditLimit |  |
| description |  |
| lastModified |  |
| name |  |
| state |  |
| type |  |
| billStructure |  |
| paymentPlan |  |
| financialAccount |  |
| defaultPaymentMethod |  |
| relatedParty |  |
| taxExemption |  |
| contact |  |
| accountRelationship |  |

## /settlementAccount/{id}

This operation allows partial updates of a settlement account 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.  
Notice that patching is possible only for 'admin' API users.

|  |  |
| --- | --- |
| Patchable Attributes | Rule |
| billStructure.cycleSpecification |  |
| billStructure.format |  |
| billStructure.presentationMedia |  |
| paymentStatus |  |
| creditLimit |  |
| description |  |
| lastModified |  |
| name |  |
| state |  |
| type |  |
| billStructure |  |
| paymentPlan |  |
| financialAccount |  |
| defaultPaymentMethod |  |
| relatedParty |  |
| taxExemption |  |
| contact |  |
| accountRelationship |  |

|  |  |
| --- | --- |
| Non Patchable Attributes | Rule |
| id |  |
| href |  |
| accountBalance |  |
| paymentStatus |  |
| creditLimit |  |
| description |  |
| lastModified |  |
| name |  |
| state |  |
| type |  |
| billStructure |  |
| paymentPlan |  |
| financialAccount |  |
| defaultPaymentMethod |  |
| relatedParty |  |
| taxExemption |  |
| contact |  |
| accountRelationship |  |

## /financialAccount/{id}

This operation allows partial updates of a financial account 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 |
| creditLimit |  |
| description |  |
| name |  |
| state |  |
| type |  |
| relatedParty |  |
| taxExemption |  |
| contact |  |
| accountBalance |  |
| accountRelationship |  |

|  |  |
| --- | --- |
| Non Patchable Attributes | Rule |
| id |  |
| href |  |
| lastModified |  |
| creditLimit |  |
| description |  |
| name |  |
| state |  |
| type |  |
| relatedParty |  |
| taxExemption |  |
| contact |  |
| accountBalance |  |
| accountRelationship |  |

## /billingCycleSpecification/{id}

This operation allows partial updates of a billing cycle specification 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 |
| billingDateShift |  |
| billingPeriod |  |
| chargeDateOffset |  |
| creditDateOffset |  |
| description |  |
| frequency |  |
| mailingDateOffset |  |
| name |  |
| paymentDueDateOffset |  |
| validFor |  |

|  |  |
| --- | --- |
| Non Patchable Attributes | Rule |
| id |  |
| href |  |
| billingDateShift |  |
| billingPeriod |  |
| chargeDateOffset |  |
| creditDateOffset |  |
| description |  |
| frequency |  |
| mailingDateOffset |  |
| name |  |
| paymentDueDateOffset |  |
| validFor |  |

## /billFormat/{id}

This operation allows partial updates of a bill format 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.  
Notice that patching is possible only for 'admin' API users.

|  |  |
| --- | --- |
| Patchable Attributes | Rule |
| description |  |
| name |  |

|  |  |
| --- | --- |
| Non Patchable Attributes | Rule |
| id |  |
| href |  |
| description |  |
| name |  |

## /billPresentationMedia/{id}

This operation allows partial updates of a bill presentation media 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.  
Notice that patching is possible only for 'admin' API users.

|  |  |
| --- | --- |
| Patchable Attributes | Rule |
| description |  |
| name |  |

|  |  |
| --- | --- |
| Non Patchable Attributes | Rule |
| id |  |
| href |  |
| description |  |
| name |  |

# 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 |  |

## /partyAccount/{id}

This operation deletes a party account entity.

## /billingAccount/{id}

This operation deletes a billing account entity.

## /settlementAccount/{id}

This operation deletes a settlement account entity.

## /financialAccount/{id}

This operation deletes a financial account entity.

## /billingCycleSpecification/{id}

This operation deletes a billing cycle specification entity.

## /billFormat/{id}

This operation deletes a bill format entity.

## /billPresentationMedia/{id}

This operation deletes a bill presentation media 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}/partyAccount/v1**, where {serverRoot} defines the certification endpoint

For convenience we provide the test cases for only the PartyAccount resource. For the other kinds of accounts the test cases are similar. Simply replace the PartyAccount by the actual resource being considered.

## PartyAccount resource TEST CASES

**Nominal Scenarios**

**TC\_Trou\_N1 – Create new PartyAccount with minimum required information**

* Send a POST message to {apiRoot}/partyAccount/ with the following contents in the BODY

{

"name": "MyAccount",

}

* 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}/partyAccount/{IDtt1} where {IDtt1} indicates the identifier assigned by the server to the new PartyAccount resource
  + The response message includes all mandatory parameters (including description, severity and type 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}/partyAccount/
* Wait for a response from the server with the following characteristics
  + Response Code 200-OK
  + The body of the response includes one PartyAccount resource with ID set to {IDtt1}, 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 {IDtt1} matches the values set in the original request
* Send a GET message to /{apiRoot}/partyAccount/{IDtt1}
* 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 PartyAccount resource structure that matches the values in the original request

**TC\_Trou\_N2 – Search for PartyAccounts with specific characteristics**

* Send a GET message to /{apiRoot}/partyAccount
* Wait for a response from the server with the following characteristics
  + Response Code 200-OK
  + The body of the response includes at least two PartyAccount resources referring to {IDtt1} and {IDtt2}
  + 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}/ partyAccount?type=joint
* Wait for a response from the server with the following characteristics
  + Response Code 200-OK
  + The body of the response includes one PartyAccount resource referring to {IDtt1} and there is no reference to PartyAccount resource {IDtt2}
  + The response message includes all mandatory parameters
  + The body of the response for the resource with identifier {IDtt1} matches the values in the original request
* Send a GET message to /{apiRoot}/partyAccount?state=Active
* Wait for a response from the server with the following characteristics
  + Response Code 200-OK
  + The body of the response includes one PartyAccount resource referring to {IDtt2} and there is no reference to PartyAccount resource {IDtt1}
  + The response message includes all mandatory parameters
  + The body of the response for the resource with identifier {IDtt2} matches the values in the original request

**TC\_Trou\_N3 – Filtered retrieval of PartyAccounts**

* Send a GET message to /{apiRoot}/partyAccount/{IDtt1}?fields=state
* Wait for a response from the server with the following characteristics
  + Response Code 200-OK
  + The body of the response includes one PartyAccount resource referring to {IDtt1} and including only attributes name and status, matching the values in the original request
* Send a GET message to /{apiRoot}/ partyAccount /{IDtt2}?fields=state,type
* Wait for a response from the server with the following characteristics
  + Response Code 200-OK
  + The body of the response includes one PartyAccount resource referring to {IDtt2} and including only attributes severity and status, matching the values in the original request

Notice that this test case is using some specific parameters to filter the data included in the response but any other parameter could be used

**TC\_Trou\_N4 – Filtered Search and Filtered data response**

* Send a GET message to /{apiRoot}/partyAccount?state=Active&fields=state,type
* Wait for a response from the server with the following characteristics
  + Response Code 200-OK
  + The body of the response includes one PartyAccountresource referring to {IDtt1} and there is no reference to PartyAccount resource {IDtt2}
  + The body of the response for the resource with each identifier includes only attribute description, matching the values in the corresponding original request

Notice that this test case is using the parameter ”description” to filter the data included in the response but any other parameter could be used

**Error Scenarios**

**TC\_Trou\_E1 – Unknown PartyAccount identifier**

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

**TC\_Trou\_E2 – Invalid Request – Missing mandatory parameter**

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

{

}

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

## Release History

|  |  |  |  |
| --- | --- | --- | --- |
| **Release Number** | **Date** | **Release led by:** | **Description** |
| Release 1.0 | 07/15/2015 | Pierre Gauthier  TM Forum  pgauthier@tmforum.orf | First Release of Draft Version of the Document. |
| Release 1.1 | 03/15/2017 |  | Updated version including Test scenarios |