



TM Forum Specification

Account Management API REST Specification

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INTRODUCTION

The Account API provides a 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.

SAMPLE USE CASES

Reader will find example of use cases using Account management API in “Open Digital Business Scenarios and Use Cases” document.

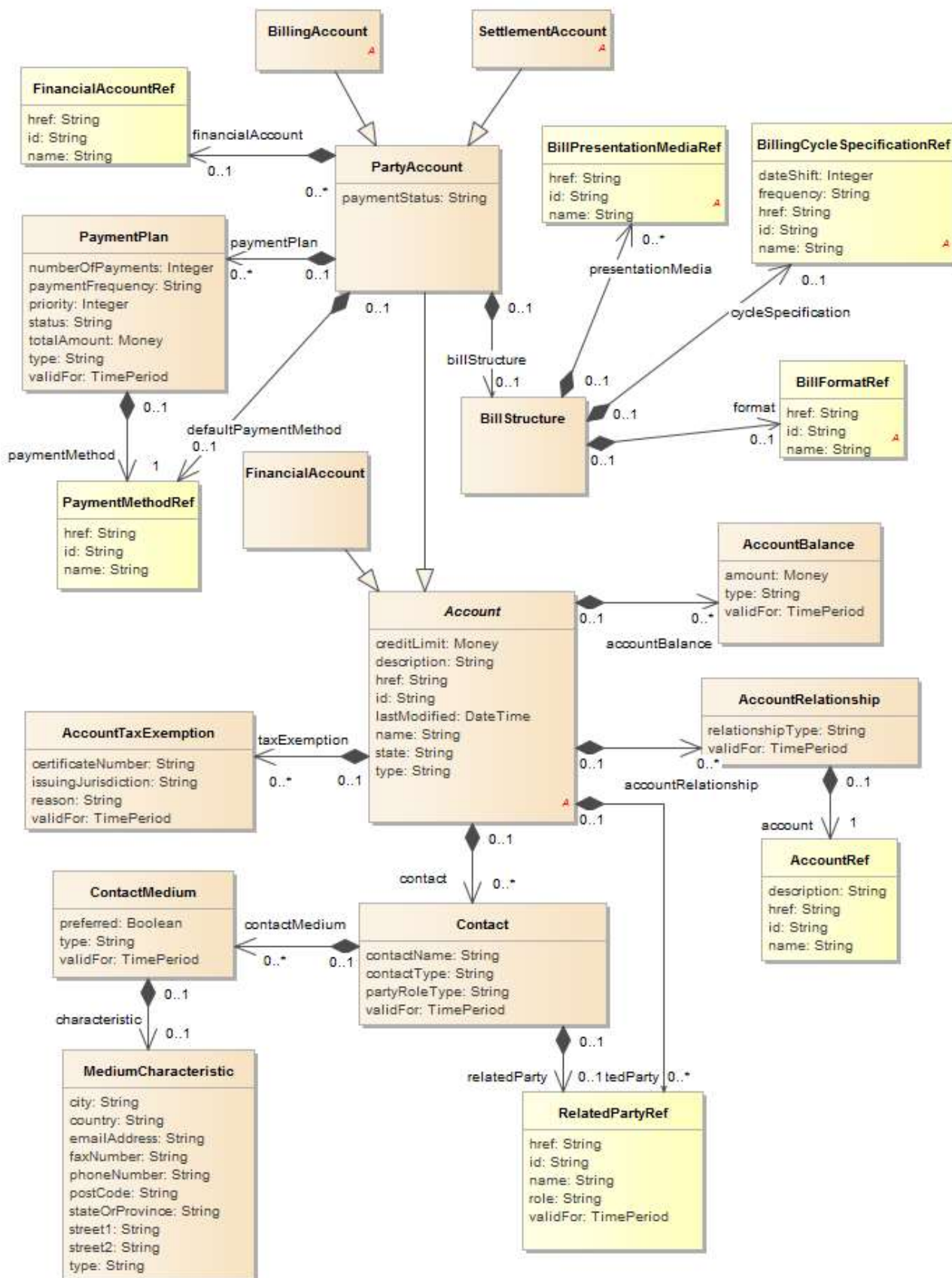
RESOURCE MODEL

Managed Entity and Task Resource Models

PARTY ACCOUNT RESOURCE

Account used for billing or for settlement purposes concerning a given party (an organization or an individual).

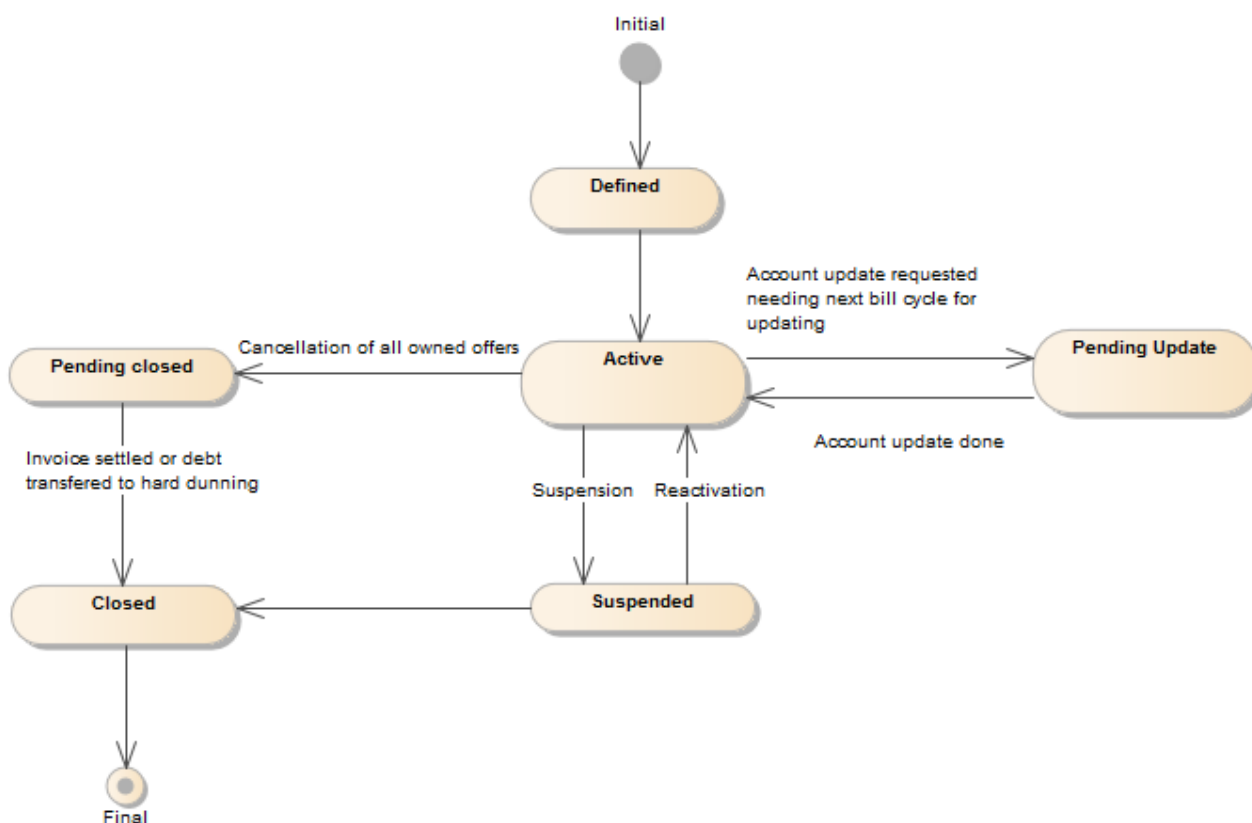
Resource model



Lifecycle

The Party Account lifecycle is tracked by the 'state' attribute. Typical lifecycle values are: Defined, Active, Suspended, pending Update, pending Closed, Closed.

Note that an implementation of the specification may enrich the list of states depicted in the diagram. The state machine specifying the typical state change transitions is provided below.



Field descriptions

PartyAccount fields

| | |
|--------------|--|
| creditLimit | A money (Money). The maximum amount of money that may be charged on an account. |
| description | A string. Detailed description of the party account. |
| href | A string. Unique reference of the account. |
| id | A string. Unique identifier of the account. |
| lastModified | A date time (DateTime). Date of last modification of the account. |
| name | A string. Name of the account. |
| state | A string. Contains the lifecycle state such as: Active, Closed, Suspended and so on. |
| type | A string. A categorization of an account, such as individual, joint, and so forth, |

whose instances share some of the same characteristics. Note: for flexibility we use a String here but an implementation may use an enumeration with a limited list of valid values.

| | |
|----------------------|--|
| billStructure | A bill structure (BillStructure). The structure of the bill for party accounts (billing or settlement). |
| paymentPlan | A list of payment plans (PaymentPlan [*]). Defines a plan for payment (when a party wants to spread his payments). |
| financialAccount | A financial account reference (FinancialAccountRef). AccountReceivable reference. An account of money owed by a party to another entity in exchange for goods or services that have been delivered or used. An account receivable aggregates the amounts of one or more party accounts (billing or settlement) owned by a given party. |
| defaultPaymentMethod | A payment method reference (PaymentMethodRef). A payment method defines a specific mean of payment (e.g direct debit). |
| relatedParty | A list of related party references (RelatedPartyRef [*]). A related party defines party or party role linked to a specific entity. |
| taxExemption | A list of account tax exemptions (AccountTaxExemption [*]). Proof of freedom from taxes imposed by a taxing jurisdiction. |
| contact | A list of contacts (Contact [*]). An individual or an organization used as a contact point for a given account and accessed via some contact medium. |
| accountBalance | A list of account balances (AccountBalance [*]). Balances linked to the account. |
| accountRelationship | A list of account relationships (AccountRelationship [*]). Significant connection between accounts. For instance an aggregating account for a list of shop branches each having its own billing account. |

AccountBalance sub-resource

Balances linked to the account.

| | |
|----------|---|
| amount | A money (Money). Balance amount. |
| type | A string. Type of the balance : deposit balance, disputed balance, loyalty balance, receivable balance... |
| validFor | A time period. Balance validity period. |

AccountRelationship sub-resource

Significant connection between accounts. For instance an aggregating account for a list of shop branches each having its own billing account.

| | |
|------------------|--|
| relationshipType | A string. Type of relationship. |
| validFor | A time period. Validity period of that relationship. |
| account | An account reference (AccountRef). An account may be a party account or a financial account. |

AccountTaxExemption sub-resource

Proof of freedom from taxes imposed by a taxing jurisdiction.

| | |
|---------------------|--|
| certificateNumber | A string. Identifier of a document that shows proof of exemption from taxes for the taxing jurisdiction. |
| issuingJurisdiction | A string. Name of the taxing jurisdiction for which taxes are exempt. |
| reason | A string. Reason of the tax exemption. |
| validFor | A time period. Period for which the exemption is valid. |

BillStructure sub-resource

The structure of the bill for party accounts (billing or settlement).

| | |
|--------------------|---|
| presentationMedia | A list of bill presentation media references (BillPresentationMediaRef [*]). PresentationMedia reference. A mean of communicating a bill, supported by the associated bill format. For example, post mail, email, web page. |
| format | A bill format reference (BillFormatRef). A bill format is a description of the way in which a bill is presented. |
| cycleSpecification | A billing cycle specification reference (BillingCycleSpecificationRef). A description of when to initiate a billing cycle and the various sub steps of a billing cycle. |

Contact sub-resource

An individual or an organization used as a contact point for a given account and accessed via some contact medium.

| | |
|---------------|--|
| contactName | A string. A displayable name for that contact. |
| contactType | A string. Type of contact (primary, secondary...). |
| partyRoleType | A string. Identifies what kind of party role type is linked to the contact (a account manager...). |
| validFor | A time period. Validity period of that contact. |
| contactMedium | A list of contact mediums (ContactMedium [*]). Indicates the contact medium that could be used to contact the party. |
| relatedParty | A related party reference (RelatedPartyRef). A related party defines party or |

party role linked to a specific entity.

ContactMedium sub-resource

Indicates the contact medium that could be used to contact the party.

| | |
|----------------|--|
| preferred | A boolean. If true, indicates that is the preferred contact medium. |
| type | A string. Type of the contact medium, such as: email address, telephone number, postal address. |
| validFor | A time period. The time period that the contact medium is valid for. |
| characteristic | A medium characteristic (MediumCharacteristic). Describes the contact medium characteristics that could be used to contact a party (an individual or an organization). |

MediumCharacteristic sub-resource

Describes the contact medium characteristics that could be used to contact a party (an individual or an organization).

| | |
|-----------------|--|
| city | A string. The city. |
| country | A string. The country. |
| emailAddress | A string. Full email address in standard format. |
| faxNumber | A string. The fax number of the contact. |
| phoneNumber | A string. The primary phone number of the contact. |
| postCode | A string. Postcode. |
| stateOrProvince | A string. State or province. |
| street1 | A string. Describes the street. |
| street2 | A string. Complementary street description. |
| type | A string. Type of medium (fax, mobile phone...). |

Money sub-resource

A base / value business entity used to represent money.

| | |
|-------|--|
| unit | A string. Currency (ISO4217 norm uses 3 letters to define the currency). |
| value | A float. A positive floating point number. |

PaymentPlan sub-resource

Defines a plan for payment (when a party wants to spread his payments).

| | |
|------------------|--|
| numberOfPayments | An integer. Number of payments used to spread the global payment. |
| paymentFrequency | A string. Frequency of the payments, such as monthly and bimonthly. |
| priority | An integer. Priority of the payment plan. |
| status | A string. Status of the payment plan (effective, ineffective). |
| totalAmount | A money (Money). Amount paid. |
| type | A string. Type of payment plan. |
| validFor | A time period. Validity period of the payment plan. |
| paymentMethod | A payment method reference (PaymentMethodRef). A payment method defines a specific mean of payment (e.g direct debit). |

AccountRef relationship

Account reference. A account may be a party account or a financial account.

| | |
|-------------|--|
| description | A string. Detailed description of the account. |
| href | A string. Reference of the account. |
| id | A string. Unique identifier of the account. |
| name | A string. Name of the account. |

BillFormatRef relationship

BillFormat reference. A bill format is a description of the way in which a bill is presented.

| | |
|------|---|
| href | A string. Reference of the bill format. |
| id | A string. Unique identifier of the bill format. |
| name | A string. A short descriptive name. |

BillPresentationMediaRef relationship

PresentationMedia reference. A mean of communicating a bill, supported by the associated bill format. For example, post mail, email, web page.

| | |
|------|---|
| href | A string. Reference of the bill presentation media. |
| id | A string. Unique identifier of the bill presentation media. |
| name | A string. A short descriptive name. |

BillingCycleSpecificationRef relationship

BillingCycleSpecification reference. A description of when to initiate a billing cycle and the various sub steps of a billing cycle.

| | |
|-----------|--|
| dateShift | An integer. An offset of a billing/settlement date. The offset is expressed as number of days with regard to the start of the billing/settlement period. |
| frequency | A string. Frequency of the billing cycle (monthly for instance). |
| href | A string. Reference of the billing cycle specification. |
| id | A string. Unique identifier of the billing cycle specification. |
| name | A string. A short descriptive name. |

FinancialAccountRef relationship

AccountReceivable reference. An account of money owed by a party to another entity in exchange for goods or services that have been delivered or used. An account receivable aggregates the amounts of one or more party accounts (billing or settlement) owned by a given party.

| | |
|----------------|--|
| href | A string. Unique reference of the account. |
| id | A string. Unique identifier of the account. |
| name | A string. Name of the account. |
| accountBalance | An account balance (AccountBalance). Balances linked to the account. |

PaymentMethodRef relationship

PaymentMethod reference. A payment method defines a specific mean of payment (e.g direct debit).

| | |
|------|--|
| href | A string. Reference of the payment mean. |
| id | A string. Unique identifier of the payment mean. |
| name | A string. Name of the payment mean. |

RelatedPartyRef relationship

RelatedParty reference. A related party defines party or party role linked to a specific entity.

| | |
|----------|---|
| href | A string. Reference of the related party, could be a party reference or a party role reference. |
| id | A string. Unique identifier of a related party. |
| name | A string. Name of the related party. |
| role | A string. Role of the related party. |
| validFor | A time period. Validity period of the related party. |

Json representation sample

We provide below the json representation of an example of a 'PartyAccount' resource object

```
{
```



```
"creditLimit": "10000",
"description": "This party account ...",
"href": "https://host:port/accounts/partyAccount/6698",
"id": "6698",
"lastModified": "2017-05-03T00:00",
"name": "Administration account",
"state": "Active",
"type": "Business",
"paymentStatus": "Due",
"billStructure": {
  "presentationMedia": [
    {
      "href": "https://host:port/accounts/billPresentationMedia/5499",
      "id": "5499",
      "name": "Email"
    }
  ],
  "format": {
    "href": "https://host:port/accounts/billFormat/9847",
    "id": "9847",
    "name": "Summary invoice"
  },
  "cycleSpecification": {
    "dateShift": 43,
    "frequency": "monthly",
    "href": "https://host:port/accounts/billingCycleSpecification/4706",
    "id": "4706",
    "name": "Monthly billing"
  }
},
"paymentPlan": [
  {
    "numberOfPayments": 10,
    "paymentFrequency": "monthly",
    "priority": 2,
    "status": "Effective",
    "totalAmount": 543.8,
    "type": "regular",
    "validFor": {
      "startDateTime": "2017-05-01T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "paymentMethod": {
      "href": "https://host:port/onboardingManagement/paymentMethod/2942",
      "id": "2942",
      "name": "family payment"
    }
  }
],
"financialAccount": {
  "href": "https://host:port/accounts/financialAccount/5860",
  "id": "5860",
  "name": "Partnership account",
  "accountBalance": {
    "amount": 55.79,
    "type": "DepositBalance",
```

```
"validFor": {
  "startDateTime": "2017-05-06T00:00",
  "endDateTime": "2017-11-29T00:00"
}
},
"defaultPaymentMethod": {
  "href": "https://host:port/onboardingManagement/paymentMethod/8509",
  "id": "8509",
  "name": "professional payment"
},
"relatedParty": [
  {
    "href": "https://host:port/partyManagement/organization/9653",
    "id": "9653",
    "name": "John Doe",
    "role": "seller",
    "validFor": {
      "startDateTime": "2017-05-05T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"taxExemption": [
  {
    "certificateNumber": "45678909876",
    "issuingJurisdiction": "Embassy",
    "reason": "VIP",
    "validFor": {
      "startDateTime": "2017-04-29T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"contact": [
  {
    "contactName": "Anna Cristal",
    "contactType": "primary",
    "partyRoleType": "Publisher",
    "validFor": {
      "startDateTime": "2017-05-02T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  },
  "contactMedium": [
    {
      "preferred": true,
      "type": "TelephoneNumber",
      "validFor": {
        "startDateTime": "2017-05-01T00:00",
        "endDateTime": "2017-11-29T00:00"
      }
    },
    "characteristic": [
      {
        "name": "Colour",
        "value": "pink"
      }
    ]
  }
],
```

```

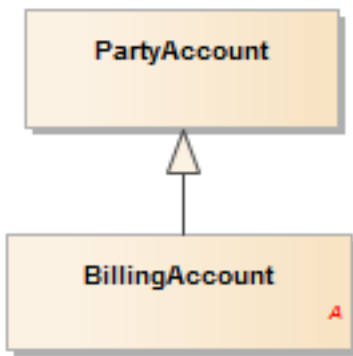
    {
      "name": "Memory",
      "value": "64"
    }
  ]
}
],
"relatedParty": {
  "href": "https://host:port/partyManagement/organization/5755",
  "id": "5755",
  "name": "Richard Cole",
  "role": "bill responsible",
  "validFor": {
    "startDateTime": "2017-05-04T00:00",
    "endDateTime": "2017-11-29T00:00"
  }
}
},
"accountBalance": [
  {
    "amount": 53.41,
    "type": "DepositBalance",
    "validFor": {
      "startDateTime": "2017-05-05T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"accountRelationship": [
  {
    "relationshipType": "contains",
    "validFor": {
      "startDateTime": "2017-05-04T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "account": {
      "description": "This account ...",
      "href": "https://host:port/accounts/account/2126",
      "id": "2126",
      "name": "Travel Account"
    }
  }
]
}

```

BILLING ACCOUNT RESOURCE

A party account used for billing purposes. It includes a description of the bill structure (frequency, presentation media, format and so on).

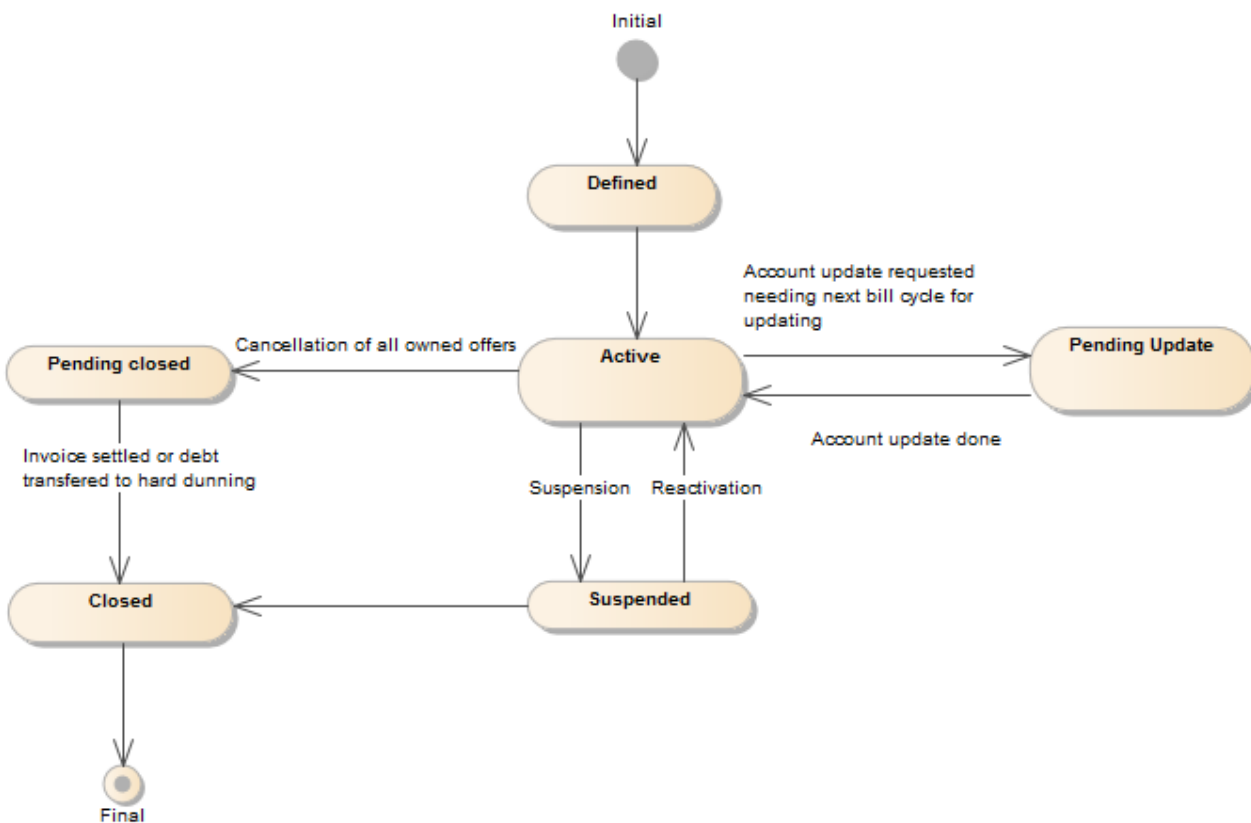
Resource model



Lifecycle

The Billing Account lifecycle is tracked by the 'state' attribute. Typical lifecycle values are: Defined, Active, Suspended, pending Update, pending Closed, Closed.

Note that an implementation of the specification may enrich the list of states depicted in the diagram. The state machine specifying the typical state change transitions is provided below.



Field descriptions

BillingAccount fields

creditLimit A money (Money). The maximum amount of money that may be charged on an account.

| | |
|----------------------|--|
| description | A string. Detailed description of the party account. |
| href | A string. Unique reference of the account. |
| id | A string. Unique identifier of the account. |
| lastModified | A date time (DateTime). Date of last modification of the account. |
| name | A string. Name of the account. |
| state | A string. Contains the lifecycle state such as: Active, Closed, Suspended and so on. |
| type | A string. A categorization of an account, such as individual, joint, and so forth, whose instances share some of the same characteristics. Note: for flexibility we use a String here but an implementation may use an enumeration with a limited list of valid values. |
| billStructure | A bill structure (BillStructure). The structure of the bill for party accounts (billing or settlement). |
| paymentPlan | A list of payment plans (PaymentPlan [*]). Defines a plan for payment (when a party wants to spread his payments). |
| financialAccount | A financial account reference (FinancialAccountRef). AccountReceivable reference. An account of money owed by a party to another entity in exchange for goods or services that have been delivered or used. An account receivable aggregates the amounts of one or more party accounts (billing or settlement) owned by a given party. |
| defaultPaymentMethod | A payment method reference (PaymentMethodRef). A payment method defines a specific mean of payment (e.g direct debit). |
| relatedParty | A list of related party references (RelatedPartyRef [*]). A related party defines party or party role linked to a specific entity. |
| taxExemption | A list of account tax exemptions (AccountTaxExemption [*]). Proof of freedom from taxes imposed by a taxing jurisdiction. |
| contact | A list of contacts (Contact [*]). An individual or an organization used as a contact point for a given account and accessed via some contact medium. |
| accountBalance | A list of account balances (AccountBalance [*]). Balances linked to the account. |
| accountRelationship | A list of account relationships (AccountRelationship [*]). Significant connection between accounts. For instance an aggregating account for a list of shop branches each having its own billing account. |

AccountBalance sub-resource

Balances linked to the account.

| | |
|----------|---|
| amount | A money (Money). Balance amount. |
| type | A string. Type of the balance : deposit balance, disputed balance, loyalty balance, receivable balance... |
| validFor | A time period. Balance validity period. |

AccountRelationship sub-resource

Significant connection between accounts. For instance an aggregating account for a list of shop branches each having its own billing account.

| | |
|------------------|---|
| relationshipType | A string. Type of relationship. |
| validFor | A time period. Validity period of that relationship. |
| account | An account reference (AccountRef). A account may be a party account or a financial account. |

AccountTaxExemption sub-resource

Proof of freedom from taxes imposed by a taxing jurisdiction.

| | |
|---------------------|--|
| certificateNumber | A string. Identifier of a document that shows proof of exemption from taxes for the taxing jurisdiction. |
| issuingJurisdiction | A string. Name of the taxing jurisdiction for which taxes are exempt. |
| reason | A string. Reason of the tax exemption. |
| validFor | A time period. Period for which the exemption is valid. |

BillStructure sub-resource

The structure of the bill for party accounts (billing or settlement).

| | |
|--------------------|---|
| presentationMedia | A list of bill presentation media references (BillPresentationMediaRef [*]). PresentationMedia reference. A mean of communicating a bill, supported by the associated bill format. For example, post mail, email, web page. |
| format | A bill format reference (BillFormatRef). A bill format is a description of the way in which a bill is presented. |
| cycleSpecification | A billing cycle specification reference (BillingCycleSpecificationRef). A description of when to initiate a billing cycle and the various sub steps of a billing cycle. |

Contact sub-resource

An individual or an organization used as a contact point for a given account and accessed via some contact medium.

| | |
|-------------|--|
| contactName | A string. A displayable name for that contact. |
|-------------|--|

| | |
|---------------|---|
| contactType | A string. Type of contact (primary, secondary...). |
| partyRoleType | A string. Identifies what kind of party role type is linked to the contact (a account manager...). |
| validFor | A time period. Validity period of that contact. |
| contactMedium | A list of contact mediums (ContactMedium [*]). Indicates the contact medium that could be used to contact the party. |
| relatedParty | A related party reference (RelatedPartyRef). A related party defines party or party role linked to a specific entity. |

ContactMedium sub-resource

Indicates the contact medium that could be used to contact the party.

| | |
|----------------|--|
| preferred | A boolean. If true, indicates that is the preferred contact medium. |
| type | A string. Type of the contact medium, such as: email address, telephone number, postal address. |
| validFor | A time period. The time period that the contact medium is valid for. |
| characteristic | A medium characteristic (MediumCharacteristic). Describes the contact medium characteristics that could be used to contact a party (an individual or an organization). |

MediumCharacteristic sub-resource

Describes the contact medium characteristics that could be used to contact a party (an individual or an organization).

| | |
|-----------------|--|
| city | A string. The city. |
| country | A string. The country. |
| emailAddress | A string. Full email address in standard format. |
| faxNumber | A string. The fax number of the contact. |
| phoneNumber | A string. The primary phone number of the contact. |
| postCode | A string. Postcode. |
| stateOrProvince | A string. State or province. |
| street1 | A string. Describes the street. |
| street2 | A string. Complementary street description. |
| type | A string. Type of medium (fax, mobile phone...). |

Money sub-resource

A base / value business entity used to represent money.

unit A string. Currency (ISO4217 norm uses 3 letters to define the currency).
 value A float. A positive floating point number.

PaymentPlan sub-resource

Defines a plan for payment (when a party wants to spread his payments).

numberOfPayments An integer. Number of payments used to spread the global payment.
 paymentFrequency A string. Frequency of the payments, such as monthly and bimonthly.
 priority An integer. Priority of the payment plan.
 status A string. Status of the payment plan (effective, ineffective).
 totalAmount A money (Money). Amount paid.
 type A string. Type of payment plan.
 validFor A time period. Validity period of the payment plan.
 paymentMethod A payment method reference (PaymentMethodRef). A payment method defines a specific mean of payment (e.g direct debit).

AccountRef relationship

Account reference. A account may be a party account or a financial account.

description A string. Detailed description of the account.
 href A string. Reference of the account.
 id A string. Unique identifier of the account.
 name A string. Name of the account.

BillFormatRef relationship

BillFormat reference. A bill format is a description of the way in which a bill is presented.

href A string. Reference of the bill format.
 id A string. Unique identifier of the bill format.
 name A string. A short descriptive name.

BillPresentationMediaRef relationship

PresentationMedia reference. A mean of communicating a bill, supported by the associated bill format. For example, post mail, email, web page.

| | |
|------|---|
| href | A string. Reference of the bill presentation media. |
| id | A string. Unique identifier of the bill presentation media. |
| name | A string. A short descriptive name. |

BillingCycleSpecificationRef relationship

BillingCycleSpecification reference. A description of when to initiate a billing cycle and the various sub steps of a billing cycle.

| | |
|-----------|--|
| dateShift | An integer. An offset of a billing/settlement date. The offset is expressed as number of days with regard to the start of the billing/settlement period. |
| frequency | A string. Frequency of the billing cycle (monthly for instance). |
| href | A string. Reference of the billing cycle specification. |
| id | A string. Unique identifier of the billing cycle specification. |
| name | A string. A short descriptive name. |

FinancialAccountRef relationship

AccountReceivable reference. An account of money owed by a party to another entity in exchange for goods or services that have been delivered or used. An account receivable aggregates the amounts of one or more party accounts (billing or settlement) owned by a given party.

| | |
|----------------|--|
| href | A string. Unique reference of the account. |
| id | A string. Unique identifier of the account. |
| name | A string. Name of the account. |
| accountBalance | An account balance (AccountBalance). Balances linked to the account. |

PaymentMethodRef relationship

PaymentMethod reference. A payment method defines a specific mean of payment (e.g direct debit).

| | |
|------|--|
| href | A string. Reference of the payment mean. |
| id | A string. Unique identifier of the payment mean. |
| name | A string. Name of the payment mean. |

RelatedPartyRef relationship

RelatedParty reference. A related party defines party or party role linked to a specific entity.

| | |
|------|---|
| href | A string. Reference of the related party, could be a party reference or a party role reference. |
|------|---|

| | |
|----------|--|
| id | A string. Unique identifier of a related party. |
| name | A string. Name of the related party. |
| role | A string. Role of the related party. |
| validFor | A time period. Validity period of the related party. |

Json representation sample

We provide below the json representation of an example of a 'BillingAccount' resource object

```
{
  "paymentStatus": "Due",
  "creditLimit": "a Money ...",
  "description": "This billing account ...",
  "href": "https://host:port/onboardingManagement/billingAccount/4835",
  "id": "4835",
  "lastModified": "2017-05-03T00:00",
  "name": "Home Account",
  "state": "Active",
  "type": "Business",
  "billStructure": {
    "presentationMedia": [
      {
        "href": "https://host:port/accounts/billPresentationMedia/7176",
        "id": "7176",
        "name": "Paper"
      }
    ],
    "format": {
      "href": "https://host:port/accounts/billFormat/5195",
      "id": "5195",
      "name": "Summary invoice"
    },
    "cycleSpecification": {
      "dateShift": 75,
      "frequency": "monthly",
      "href": "https://host:port/accounts/billingCycleSpecification/1266",
      "id": "1266",
      "name": "Annual billing"
    }
  },
  "paymentPlan": [
    {
      "numberOfPayments": 4,
      "paymentFrequency": "monthly",
      "priority": 4,
      "status": "Effective",
      "totalAmount": 543.8,
      "type": "special",
      "validFor": {
        "startDateTime": "2017-05-06T00:00",
        "endDateTime": "2017-11-29T00:00"
      },
      "paymentMethod": {
```

```
    "href": "https://host:port/onboardingManagement/paymentMethod/8829",
    "id": "8829",
    "name": "family payment"
  }
},
"financialAccount": {
  "href": "https://host:port/accounts/financialAccount/1163",
  "id": "1163",
  "name": "Partnership account",
  "accountBalance": {
    "amount": 57.68,
    "type": "DepositBalance",
    "validFor": {
      "startDateTime": "2017-05-03T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
},
"defaultPaymentMethod": {
  "href": "https://host:port/onboardingManagement/paymentMethod/8092",
  "id": "8092",
  "name": "family payment"
},
"relatedParty": [
  {
    "href": "https://host:port/partyManagement/organization/3332",
    "id": "3332",
    "name": "John Doe",
    "role": "user",
    "validFor": {
      "startDateTime": "2017-04-30T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"taxExemption": [
  {
    "certificateNumber": "98765432345",
    "issuingJurisdiction": "Prefecture",
    "reason": "VIP",
    "validFor": {
      "startDateTime": "2017-05-06T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"contact": [
  {
    "contactName": "Charles Chopin",
    "contactType": "secondary",
    "partyRoleType": "Publisher",
    "validFor": {
      "startDateTime": "2017-05-02T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
```

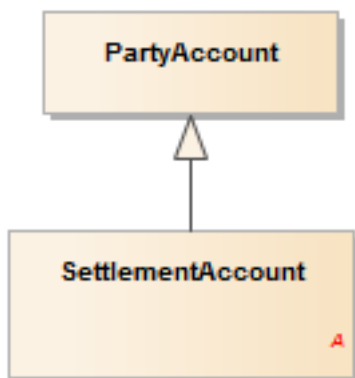
```
"contactMedium": [
  {
    "preferred": true,
    "type": "Email",
    "validFor": {
      "startDateTime": "2017-05-06T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "characteristic": [
      {
        "name": "Colour",
        "value": "white"
      },
      {
        "name": "Memory",
        "value": "64"
      }
    ]
  }
],
"relatedParty": {
  "href": "https://host:port/partyManagement/organization/3665",
  "id": "3665",
  "name": "Richard Cole",
  "role": "customer",
  "validFor": {
    "startDateTime": "2017-05-06T00:00",
    "endDateTime": "2017-11-29T00:00"
  }
}
},
"accountBalance": [
  {
    "amount": 54.88,
    "type": "ReceivableBalance",
    "validFor": {
      "startDateTime": "2017-05-01T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"accountRelationship": [
  {
    "relationshipType": "contains",
    "validFor": {
      "startDateTime": "2017-05-04T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "account": {
      "description": "This account ...",
      "href": "https://host:port/accounts/account/4807",
      "id": "4807",
      "name": "Paradise Account"
    }
  }
]
```

```
]
}
```

SETTLEMENT ACCOUNT RESOURCE

A party account used for settlement purposes. It includes a description of the structure used for the settlement (frequency, presentation media, format and so on).

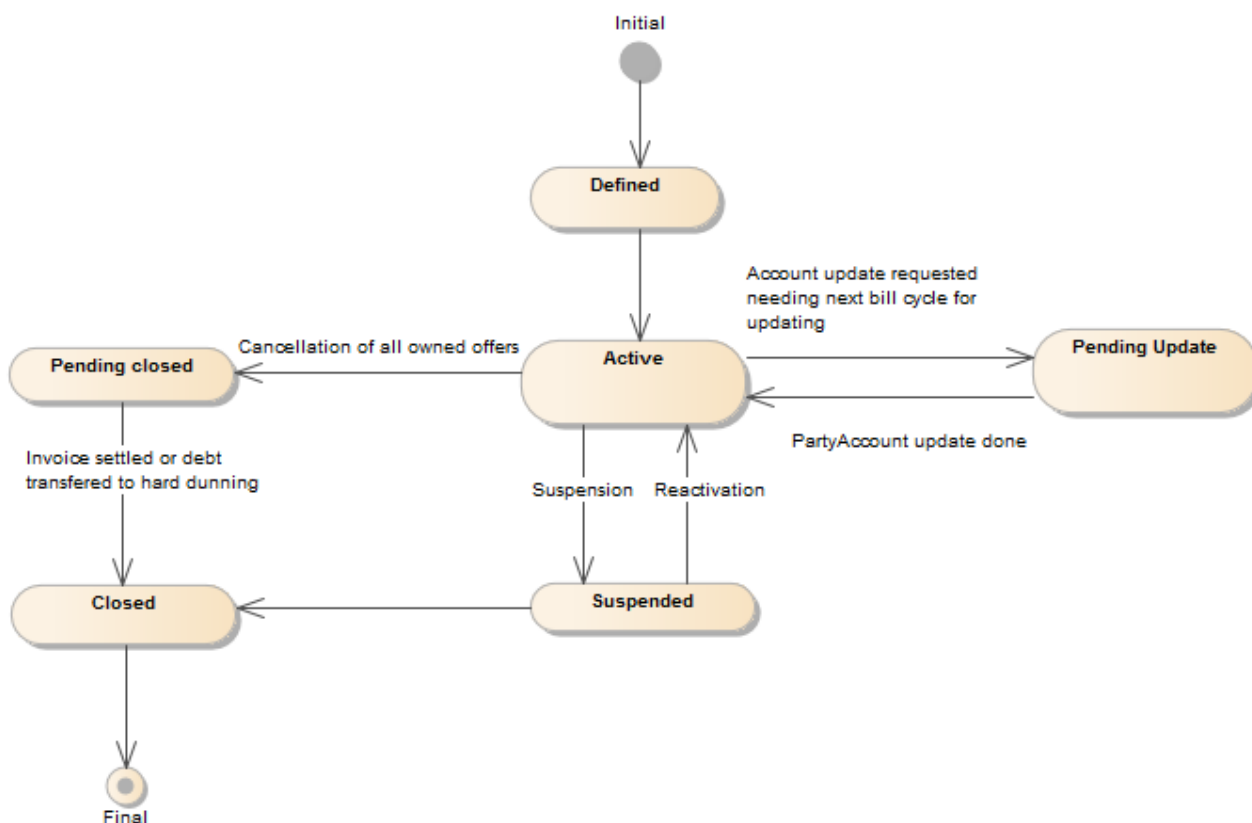
Resource model



Lifecycle

The Settlement Account lifecycle is tracked by the 'state' attribute. Typical lifecycle values are: Defined, Active, Suspended, pending Update, pending Closed, Closed.

Note that an implementation of the specification may enrich the list of states depicted in the diagram. The state machine specifying the typical state change transitions is provided below.



Field descriptions

SettlementAccount fields

| | |
|--------------|---|
| creditLimit | A money (Money). The maximum amount of money that may be charged on an account. |
| description | A string. Detailed description of the party account. |
| href | A string. Unique reference of the account. |
| id | A string. Unique identifier of the account. |
| lastModified | A date time (DateTime). Date of last modification of the account. |
| name | A string. Name of the account. |
| state | A string. Contains the lifecycle state such as: Active, Closed, Suspended and so on. |
| type | A string. A categorization of an account, such as individual, joint, and so forth, whose instances share some of the same characteristics. Note: for flexibility we use a String here but an implementation may use an enumeration with a limited list of valid values. |

| | |
|----------------------|--|
| billStructure | A bill structure (BillStructure). The structure of the bill for party accounts (billing or settlement). |
| paymentPlan | A list of payment plans (PaymentPlan [*]). Defines a plan for payment (when a party wants to spread his payments). |
| financialAccount | A financial account reference (FinancialAccountRef). AccountReceivable reference. An account of money owed by a party to another entity in exchange for goods or services that have been delivered or used. An account receivable aggregates the amounts of one or more party accounts (billing or settlement) owned by a given party. |
| defaultPaymentMethod | A payment method reference (PaymentMethodRef). A payment method defines a specific mean of payment (e.g direct debit). |
| relatedParty | A list of related party references (RelatedPartyRef [*]). A related party defines party or party role linked to a specific entity. |
| taxExemption | A list of account tax exemptions (AccountTaxExemption [*]). Proof of freedom from taxes imposed by a taxing jurisdiction. |
| contact | A list of contacts (Contact [*]). An individual or an organization used as a contact point for a given account and accessed via some contact medium. |
| accountBalance | A list of account balances (AccountBalance [*]). Balances linked to the account. |
| accountRelationship | A list of account relationships (AccountRelationship [*]). Significant connection between accounts. For instance an aggregating account for a list of shop branches each having its own billing account. |

AccountBalance sub-resource

Balances linked to the account.

| | |
|----------|---|
| amount | A money (Money). Balance amount. |
| type | A string. Type of the balance : deposit balance, disputed balance, loyalty balance, receivable balance... |
| validFor | A time period. Balance validity period. |

AccountRelationship sub-resource

Significant connection between accounts. For instance an aggregating account for a list of shop branches each having its own billing account.

| | |
|------------------|---|
| relationshipType | A string. Type of relationship. |
| validFor | A time period. Validity period of that relationship. |
| account | An account reference (AccountRef). An account may be a party account or a |

financial account.

AccountTaxExemption sub-resource

Proof of freedom from taxes imposed by a taxing jurisdiction.

| | |
|---------------------|--|
| certificateNumber | A string. Identifier of a document that shows proof of exemption from taxes for the taxing jurisdiction. |
| issuingJurisdiction | A string. Name of the taxing jurisdiction for which taxes are exempt. |
| reason | A string. Reason of the tax exemption. |
| validFor | A time period. Period for which the exemption is valid. |

BillStructure sub-resource

The structure of the bill for party accounts (billing or settlement).

| | |
|--------------------|---|
| presentationMedia | A list of bill presentation media references (BillPresentationMediaRef [*]). PresentationMedia reference. A mean of communicating a bill, supported by the associated bill format. For example, post mail, email, web page. |
| format | A bill format reference (BillFormatRef). A bill format is a description of the way in which a bill is presented. |
| cycleSpecification | A billing cycle specification reference (BillingCycleSpecificationRef). A description of when to initiate a billing cycle and the various sub steps of a billing cycle. |

Contact sub-resource

An individual or an organization used as a contact point for a given account and accessed via some contact medium.

| | |
|---------------|---|
| contactName | A string. A displayable name for that contact. |
| contactType | A string. Type of contact (primary, secondary...). |
| partyRoleType | A string. Identifies what kind of party role type is linked to the contact (a account manager...). |
| validFor | A time period. Validity period of that contact. |
| contactMedium | A list of contact mediums (ContactMedium [*]). Indicates the contact medium that could be used to contact the party. |
| relatedParty | A related party reference (RelatedPartyRef). A related party defines party or party role linked to a specific entity. |

ContactMedium sub-resource

Indicates the contact medium that could be used to contact the party.

| | |
|----------------|--|
| preferred | A boolean. If true, indicates that is the preferred contact medium. |
| type | A string. Type of the contact medium, such as: email address, telephone number, postal address. |
| validFor | A time period. The time period that the contact medium is valid for. |
| characteristic | A medium characteristic (MediumCharacteristic). Describes the contact medium characteristics that could be used to contact a party (an individual or an organization). |

MediumCharacteristic sub-resource

Describes the contact medium characteristics that could be used to contact a party (an individual or an organization).

| | |
|-----------------|--|
| city | A string. The city. |
| country | A string. The country. |
| emailAddress | A string. Full email address in standard format. |
| faxNumber | A string. The fax number of the contact. |
| phoneNumber | A string. The primary phone number of the contact. |
| postCode | A string. Postcode. |
| stateOrProvince | A string. State or province. |
| street1 | A string. Describes the street. |
| street2 | A string. Complementary street description. |
| type | A string. Type of medium (fax, mobile phone...). |

Money sub-resource

A base / value business entity used to represent money.

| | |
|-------|--|
| unit | A string. Currency (ISO4217 norm uses 3 letters to define the currency). |
| value | A float. A positive floating point number. |

PaymentPlan sub-resource

Defines a plan for payment (when a party wants to spread his payments).

| | |
|------------------|---|
| numberOfPayments | An integer. Number of payments used to spread the global payment. |
| paymentFrequency | A string. Frequency of the payments, such as monthly and bimonthly. |
| priority | An integer. Priority of the payment plan. |

| | |
|---------------|--|
| status | A string. Status of the payment plan (effective, ineffective). |
| totalAmount | A money (Money). Amount paid. |
| type | A string. Type of payment plan. |
| validFor | A time period. Validity period of the payment plan. |
| paymentMethod | A payment method reference (PaymentMethodRef). A payment method defines a specific mean of payment (e.g direct debit). |

AccountRef relationship

Account reference. A account may be a party account or a financial account.

| | |
|-------------|--|
| description | A string. Detailed description of the account. |
| href | A string. Reference of the account. |
| id | A string. Unique identifier of the account. |
| name | A string. Name of the account. |

BillFormatRef relationship

BillFormat reference. A bill format is a description of the way in which a bill is presented.

| | |
|------|---|
| href | A string. Reference of the bill format. |
| id | A string. Unique identifier of the bill format. |
| name | A string. A short descriptive name. |

BillPresentationMediaRef relationship

PresentationMedia reference. A mean of communicating a bill, supported by the associated bill format. For example, post mail, email, web page.

| | |
|------|---|
| href | A string. Reference of the bill presentation media. |
| id | A string. Unique identifier of the bill presentation media. |
| name | A string. A short descriptive name. |

BillingCycleSpecificationRef relationship

BillingCycleSpecification reference. A description of when to initiate a billing cycle and the various sub steps of a billing cycle.

| | |
|-----------|--|
| dateShift | An integer. An offset of a billing/settlement date. The offset is expressed as number of days with regard to the start of the billing/settlement period. |
| frequency | A string. Frequency of the billing cycle (monthly for instance). |

| | |
|------|---|
| href | A string. Reference of the billing cycle specification. |
| id | A string. Unique identifier of the billing cycle specification. |
| name | A string. A short descriptive name. |

FinancialAccountRef relationship

AccountReceivable reference. An account of money owed by a party to another entity in exchange for goods or services that have been delivered or used. An account receivable aggregates the amounts of one or more party accounts (billing or settlement) owned by a given party.

| | |
|----------------|--|
| href | A string. Unique reference of the account. |
| id | A string. Unique identifier of the account. |
| name | A string. Name of the account. |
| accountBalance | An account balance (AccountBalance). Balances linked to the account. |

PaymentMethodRef relationship

PaymentMethod reference. A payment method defines a specific mean of payment (e.g direct debit).

| | |
|------|--|
| href | A string. Reference of the payment mean. |
| id | A string. Unique identifier of the payment mean. |
| name | A string. Name of the payment mean. |

RelatedPartyRef relationship

RelatedParty reference. A related party defines party or party role linked to a specific entity.

| | |
|----------|---|
| href | A string. Reference of the related party, could be a party reference or a party role reference. |
| id | A string. Unique identifier of a related party. |
| name | A string. Name of the related party. |
| role | A string. Role of the related party. |
| validFor | A time period. Validity period of the related party. |

Json representation sample

We provide below the json representation of an example of a 'SettlementAccount' resource object

```
{
  "paymentStatus": "Due",
  "creditLimit": "a Money ...",
  "description": "This settlement account ...",
  "href": "https://host:port/onboardingManagement/settlementAccount/6202",
  "id": "6202",
```

```
"lastModified": "2017-05-03T00:00",
"name": "Per Usage Account",
"state": "active",
"type": "Business",
"billStructure": {
  "presentationMedia": [
    {
      "href": "https://host:port/accounts/billPresentationMedia/7422",
      "id": "7422",
      "name": "Paper"
    }
  ],
  "format": {
    "href": "https://host:port/accounts/billFormat/3588",
    "id": "3588",
    "name": "Detailed invoice"
  },
  "cycleSpecification": {
    "dateShift": 20,
    "frequency": "monthly",
    "href": "https://host:port/accounts/billingCycleSpecification/5190",
    "id": "5190",
    "name": "Annual billing"
  }
},
"paymentPlan": [
  {
    "numberOfPayments": 4,
    "paymentFrequency": "bimonthly",
    "priority": 4,
    "status": "Effective",
    "totalAmount": 543.8,
    "type": "regular",
    "validFor": {
      "startDateTime": "2017-05-04T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "paymentMethod": {
      "href": "https://host:port/onboardingManagement/paymentMethod/1547",
      "id": "1547",
      "name": "family payment"
    }
  }
],
"financialAccount": {
  "href": "https://host:port/accounts/financialAccount/4503",
  "id": "4503",
  "name": "Travel account",
  "accountBalance": {
    "amount": 55.91,
    "type": "ReceivableBalance",
    "validFor": {
      "startDateTime": "2017-04-30T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
}
```

```
},
"defaultPaymentMethod": {
  "href": "https://host:port/onboardingManagement/paymentMethod/3135",
  "id": "3135",
  "name": "family payment"
},
"relatedParty": [
  {
    "href": "https://host:port/partyManagement/organization/2981",
    "id": "2981",
    "name": "Gustave Flaubert",
    "role": "owner",
    "validFor": {
      "startDateTime": "2017-05-06T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"taxExemption": [
  {
    "certificateNumber": "45678909876",
    "issuingJurisdiction": "Embassy",
    "reason": "VIP",
    "validFor": {
      "startDateTime": "2017-05-06T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"contact": [
  {
    "contactName": "Ludwig Borgia",
    "contactType": "secondary",
    "partyRoleType": "CustomerAccountRepresentative",
    "validFor": {
      "startDateTime": "2017-04-30T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  },
  "contactMedium": [
    {
      "preferred": true,
      "type": "TelephoneNumber",
      "validFor": {
        "startDateTime": "2017-05-06T00:00",
        "endDateTime": "2017-11-29T00:00"
      }
    },
    "characteristic": [
      {
        "name": "Colour",
        "value": "blue"
      },
      {
        "name": "Memory",
        "value": "64"
      }
    ]
  }
]
```

```

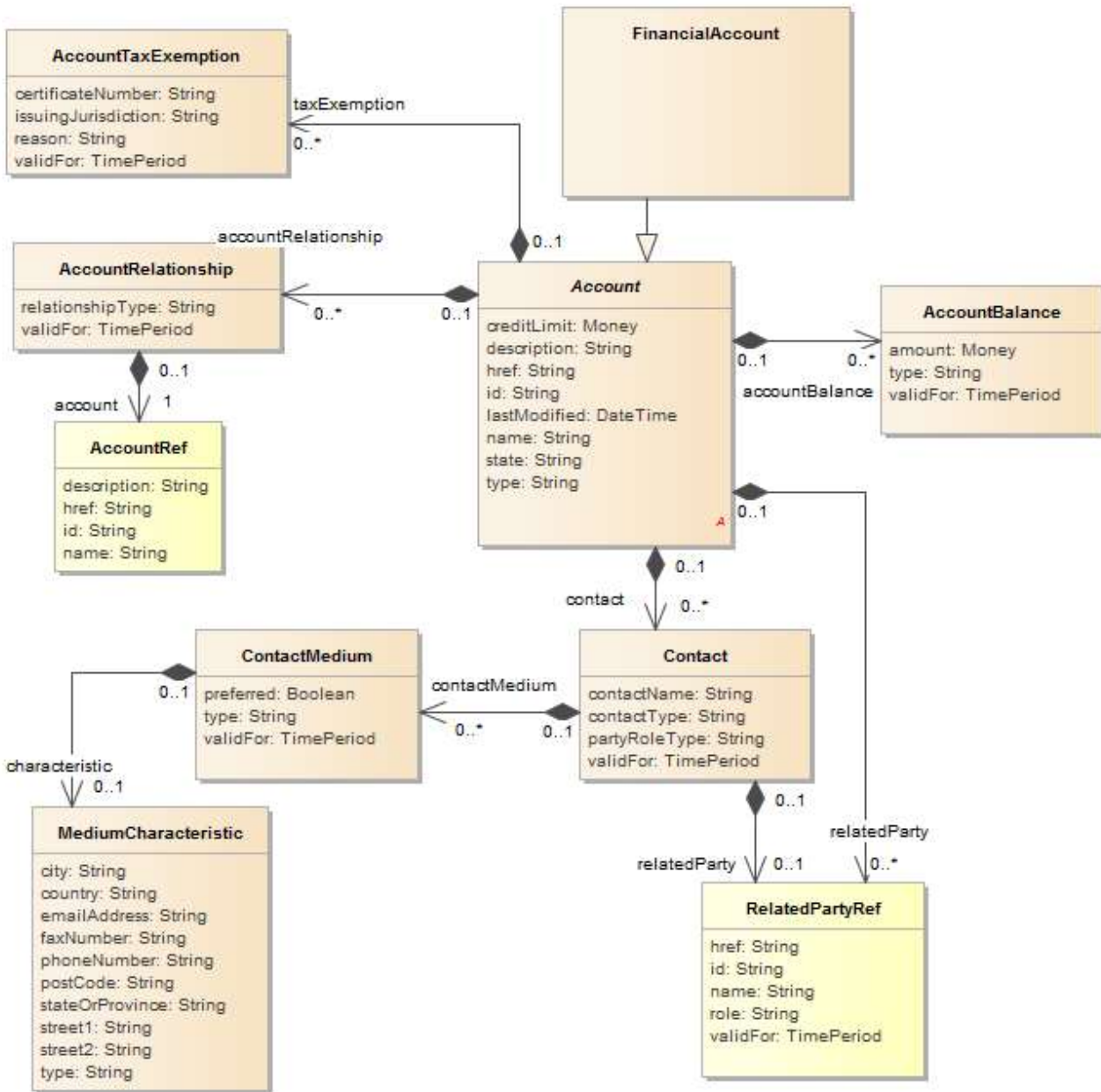
    }
  ],
  "relatedParty": {
    "href": "https://host:port/partyManagement/organization/4985",
    "id": "4985",
    "name": "Gustave Flaubert",
    "role": "vendor",
    "validFor": {
      "startDateTime": "2017-05-06T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
}
],
"accountBalance": [
  {
    "amount": 51.77,
    "type": "DepositBalance",
    "validFor": {
      "startDateTime": "2017-04-29T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"accountRelationship": [
  {
    "relationshipType": "linked",
    "validFor": {
      "startDateTime": "2017-05-04T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "account": {
      "description": "This account ...",
      "href": "https://host:port/accounts/account/2553",
      "id": "2553",
      "name": "Paradise Account"
    }
  }
]
}

```

FINANCIAL ACCOUNT RESOURCE

An account of money owed by a party to another entity in exchange for goods or services that have been delivered or used. A financial (account receivable account/account payable) aggregates the amounts of one or more party accounts (billing or settlement) owned by a given party.

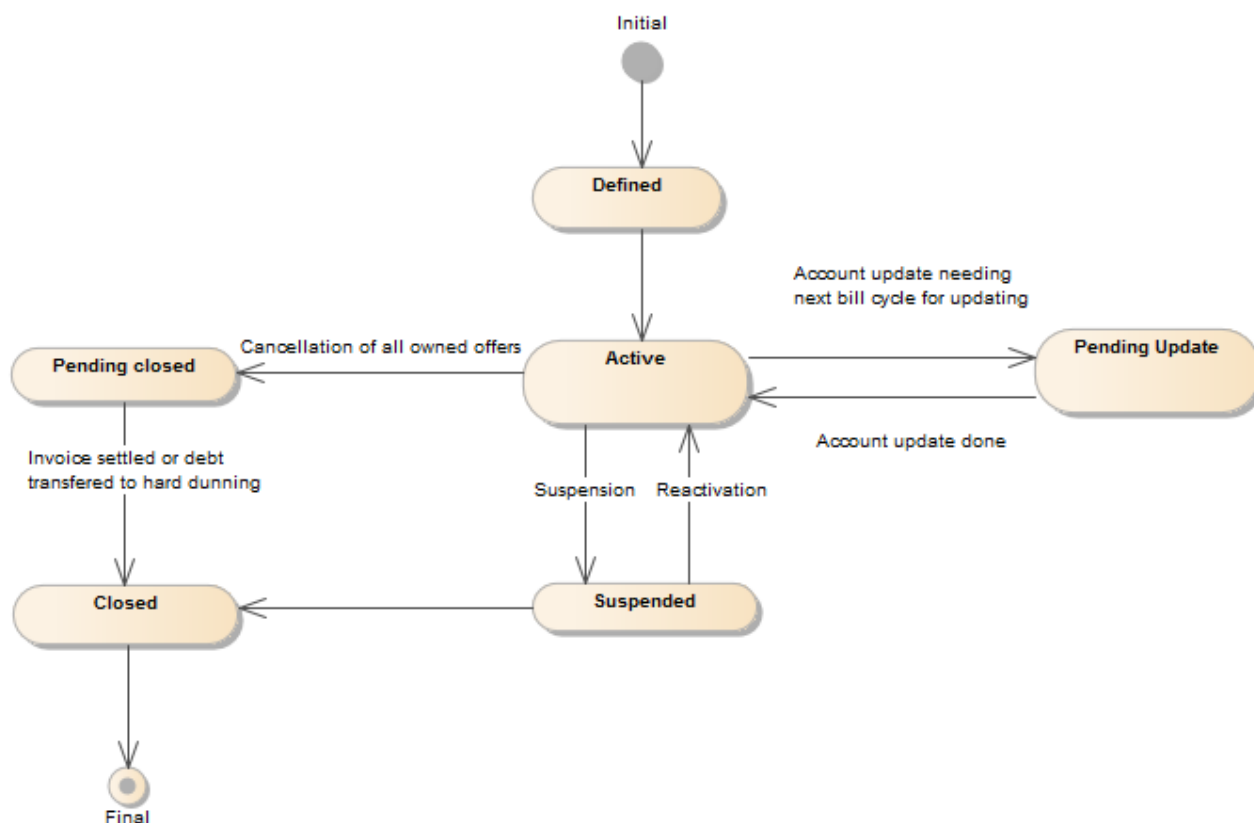
Resource model



Lifecycle

The FinancialAccount lifecycle is tracked by the 'state' attribute. Typical lifecycle values are: Defined, Active, Suspended, pending Update, pending Closed, Closed.

Note that an implementation of the specification may enrich the list of states depicted in the diagram. The state machine specifying the typical state change transitions is provided below.



Field descriptions

FinancialAccount fields

| | |
|--------------|---|
| creditLimit | A money (Money). The maximum amount of money that may be charged on an account. |
| description | A string. Detailed description of the party account. |
| href | A string. Unique reference of the account. |
| id | A string. Unique identifier of the account. |
| lastModified | A date time (DateTime). Date of last modification of the account. |
| name | A string. Name of the account. |
| state | A string. Contains the lifecycle state such as: Active, Closed, Suspended and so on. |
| type | A string. A categorization of an account, such as individual, joint, and so forth, whose instances share some of the same characteristics. Note: for flexibility we use a String here but an implementation may use an enumeration with a limited list of valid values. |

| | |
|---------------------|--|
| relatedParty | A list of related party references (RelatedPartyRef [*]). A related party defines party or party role linked to a specific entity. |
| taxExemption | A list of account tax exemptions (AccountTaxExemption [*]). Proof of freedom from taxes imposed by a taxing jurisdiction. |
| contact | A list of contacts (Contact [*]). An individual or an organization used as a contact point for a given account and accessed via some contact medium. |
| accountBalance | A list of account balances (AccountBalance [*]). Balances linked to the account. |
| accountRelationship | A list of account relationships (AccountRelationship [*]). Significant connection between accounts. For instance an aggregating account for a list of shop branches each having its own billing account. |

AccountBalance sub-resource

Balances linked to the account.

| | |
|----------|---|
| amount | A money (Money). Balance amount. |
| type | A string. Type of the balance : deposit balance, disputed balance, loyalty balance, receivable balance... |
| validFor | A time period. Balance validity period. |

AccountRelationship sub-resource

Significant connection between accounts. For instance an aggregating account for a list of shop branches each having its own billing account.

| | |
|------------------|--|
| relationshipType | A string. Type of relationship. |
| validFor | A time period. Validity period of that relationship. |
| account | An account reference (AccountRef). An account may be a party account or a financial account. |

AccountTaxExemption sub-resource

Proof of freedom from taxes imposed by a taxing jurisdiction.

| | |
|---------------------|--|
| certificateNumber | A string. Identifier of a document that shows proof of exemption from taxes for the taxing jurisdiction. |
| issuingJurisdiction | A string. Name of the taxing jurisdiction for which taxes are exempt. |
| reason | A string. Reason of the tax exemption. |
| validFor | A time period. Period for which the exemption is valid. |

Contact sub-resource

An individual or an organization used as a contact point for a given account and accessed via some contact medium.

| | |
|---------------|---|
| contactName | A string. A displayable name for that contact. |
| contactType | A string. Type of contact (primary, secondary...). |
| partyRoleType | A string. Identifies what kind of party role type is linked to the contact (a account manager...). |
| validFor | A time period. Validity period of that contact. |
| contactMedium | A list of contact mediums (ContactMedium [*]). Indicates the contact medium that could be used to contact the party. |
| relatedParty | A related party reference (RelatedPartyRef). A related party defines party or party role linked to a specific entity. |

ContactMedium sub-resource

Indicates the contact medium that could be used to contact the party.

| | |
|----------------|--|
| preferred | A boolean. If true, indicates that is the preferred contact medium. |
| type | A string. Type of the contact medium, such as: email address, telephone number, postal address. |
| validFor | A time period. The time period that the contact medium is valid for. |
| characteristic | A medium characteristic (MediumCharacteristic). Describes the contact medium characteristics that could be used to contact a party (an individual or an organization). |

MediumCharacteristic sub-resource

Describes the contact medium characteristics that could be used to contact a party (an individual or an organization).

| | |
|-----------------|--|
| city | A string. The city. |
| country | A string. The country. |
| emailAddress | A string. Full email address in standard format. |
| faxNumber | A string. The fax number of the contact. |
| phoneNumber | A string. The primary phone number of the contact. |
| postCode | A string. Postcode. |
| stateOrProvince | A string. State or province. |
| street1 | A string. Describes the street. |

street2 A string. Complementary street description.

type A string. Type of medium (fax, mobile phone...).

Money sub-resource

A base / value business entity used to represent money.

unit A string. Currency (ISO4217 norm uses 3 letters to define the currency).

value A float. A positive floating point number.

AccountRef relationship

Account reference. A account may be a party account or a financial account.

description A string. Detailed description of the account.

href A string. Reference of the account.

id A string. Unique identifier of the account.

name A string. Name of the account.

RelatedPartyRef relationship

RelatedParty reference. A related party defines party or party role linked to a specific entity.

href A string. Reference of the related party, could be a party reference or a party role reference.

id A string. Unique identifier of a related party.

name A string. Name of the related party.

role A string. Role of the related party.

validFor A time period. Validity period of the related party.

Json representation sample

We provide below the json representation of an example of a 'FinancialAccount' resource object

```
{
  "creditLimit": "a Money ...",
  "description": "This financial account ...",
  "href": "https://host:port/accounts/financialAccount/4055",
  "id": "4055",
  "lastModified": "2017-05-03T00:00",
  "name": "Travel account",
  "state": "Active",
  "type": "Global",
  "relatedParty": [
    {
      "href": "https://host:port/partyManagement/organization/2110",
```

```
"id": "2110",
"name": "John Doe",
"role": "owner",
"validFor": {
  "startDateTime": "2017-05-01T00:00",
  "endDateTime": "2017-11-29T00:00"
}
},
"taxExemption": [
  {
    "certificateNumber": "45678909876",
    "issuingJurisdiction": "Prefecture",
    "reason": "VIP",
    "validFor": {
      "startDateTime": "2017-05-06T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"contact": [
  {
    "contactName": "Rachel Douglas",
    "contactType": "secondary",
    "partyRoleType": "CustomerAccountRepresentative",
    "validFor": {
      "startDateTime": "2017-04-29T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  },
  "contactMedium": [
    {
      "preferred": true,
      "type": "PostalAddress",
      "validFor": {
        "startDateTime": "2017-05-03T00:00",
        "endDateTime": "2017-11-29T00:00"
      }
    },
    "characteristic": [
      {
        "name": "Colour",
        "value": "pink"
      },
      {
        "name": "Memory",
        "value": "32"
      }
    ]
  }
],
"relatedParty": {
  "href": "https://host:port/partyManagement/organization/8202",
  "id": "8202",
  "name": "John Doe",
  "role": "bill receiver",
  "validFor": {
    "startDateTime": "2017-04-30T00:00",
```

```

    "endDateTime": "2017-11-29T00:00"
  }
}
],
"accountBalance": [
  {
    "amount": 58.7,
    "type": "DepositBalance",
    "validFor": {
      "startDateTime": "2017-05-02T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"accountRelationship": [
  {
    "relationshipType": "linked",
    "validFor": {
      "startDateTime": "2017-04-29T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "account": {
      "description": "This account ...",
      "href": "https://host:port/accounts/account/9531",
      "id": "9531",
      "name": "Paradise Account"
    }
  }
]
}

```

BILLING CYCLE SPECIFICATION RESOURCE

A detailed description of when to initiate a billing cycle and the various sub steps of a billing cycle.

Resource model

| BillingCycle Specification |
|---|
| billingDateShift: Integer |
| billingPeriod: String |
| chargeDateOffset: int |
| creditDateOffset: int |
| description: String |
| frequency: String |
| href: String |
| id: String |
| mailingDateOffset: Integer |
| name: String |
| paymentDueDateOffset: Integer |
| validFor: TimePeriod A |

Field descriptions

BillingCycleSpecification fields

| | |
|----------------------|---|
| billingDateShift | An integer. An offset of a billing/settlement date. The offset is expressed as number of days with regard to the start of the billing/settlement period. |
| billingPeriod | A string. A billing time period. It can be recurring, for example: week, month, quarter of year, year. |
| chargeDateOffset | An int (int). An offset of a date through which charges previously received by the billing system will appear on the bill. The offset is expressed as number of days with regard to the start of the BillingPeriod. |
| creditDateOffset | An int (int). An offset of a date through which credits previously received by the billing system will appear on the bill. The offset is expressed as number of days with regard to the start of the BillingPeriod. |
| description | A string. An explanation regarding this billing cycle specification. |
| frequency | A string. Frequency of the billing cycle (monthly for instance). |
| href | A string. Reference of the billing cycle specification. |
| id | A string. Unique identifier of the billing cycle specification. |
| mailingDateOffset | An integer. An offset of a customer bill mailing date. The offset is expressed as number of days with regard to the start of the BillingPeriod. |
| name | A string. A short descriptive name. |
| paymentDueDateOffset | An integer. An offset of a payment due date. The offset is expressed as number of days with regard to the start of the BillingPeriod. |
| validFor | A time period. The period for which the billing specification cycle is valid. |

Json representation sample

We provide below the json representation of an example of a 'BillingCycleSpecification' resource object

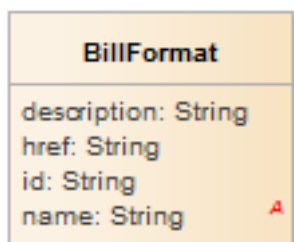
```
{
  "billingDateShift": 20,
  "billingPeriod": "a string ...",
  "chargeDateOffset": "a int ...",
  "creditDateOffset": "a int ...",
  "description": "This billing cycle specification ...",
  "frequency": "monthly",
  "href": "https://host:port/accounts/billingCycleSpecification/3353",
  "id": "3353",
  "mailingDateOffset": 53,
  "name": "Monthly billing on the 15",
  "paymentDueDateOffset": 45,
  "validFor": {
    "startDateTime": "2017-05-06T00:00",
```

```
"endTime": "2017-11-29T00:00"  
}  
}
```

BILL FORMAT RESOURCE

A detailed description of the way in which a bill is presented.

Resource model



Field descriptions

BillFormat fields

| | |
|-------------|---|
| description | A string. An explanatory text for this bill format. |
| href | A string. Reference of the bill format. |
| id | A string. Unique identifier of the bill format. |
| name | A string. A short descriptive name. |

Json representation sample

We provide below the json representation of an example of a 'BillFormat' resource object

```
{  
  "description": "This bill format ...",  
  "href": "https://host:port/accounts/billFormat/4962",  
  "id": "4962",  
  "name": "Summary invoice"  
}
```

BILL PRESENTATION MEDIA RESOURCE

A mean of communicating a bill, supported by the associated bill format. For example, post mail, email, web page.

Resource model

| BillPresentationMedia | |
|-----------------------|---|
| description: String | |
| href: String | |
| id: String | |
| name: String | A |

Field descriptions

BillPresentationMedia fields

| | |
|-------------|--|
| description | A string. An explanatory text describing this bill presentation media. |
| href | A string. Reference of the bill presentation media. |
| id | A string. Unique identifier of the bill presentation media. |
| name | A string. A short descriptive name. |

Json representation sample

We provide below the json representation of an example of a 'BillPresentationMedia' resource object

```
{
  "description": "This bill presentation media ...",
  "href": "https://host:port/accounts/billPresentationMedia/5458",
  "id": "5458",
  "name": "Email"
}
```

Notification Resource Models

10 notifications are defined for this API

Notifications related to PartyAccount:

- PartyAccountAttributeValueChangeNotification
- PartyAccountStateChangeNotification

Notifications related to BillingAccount:

- BillingAccountAttributeValueChangeNotification
- BillingAccountStateChangeNotification

Notifications related to SettlementAccount:

- SettlementAccountAttributeValueChangeNotification
- SettlementAccountStateChangeNotification

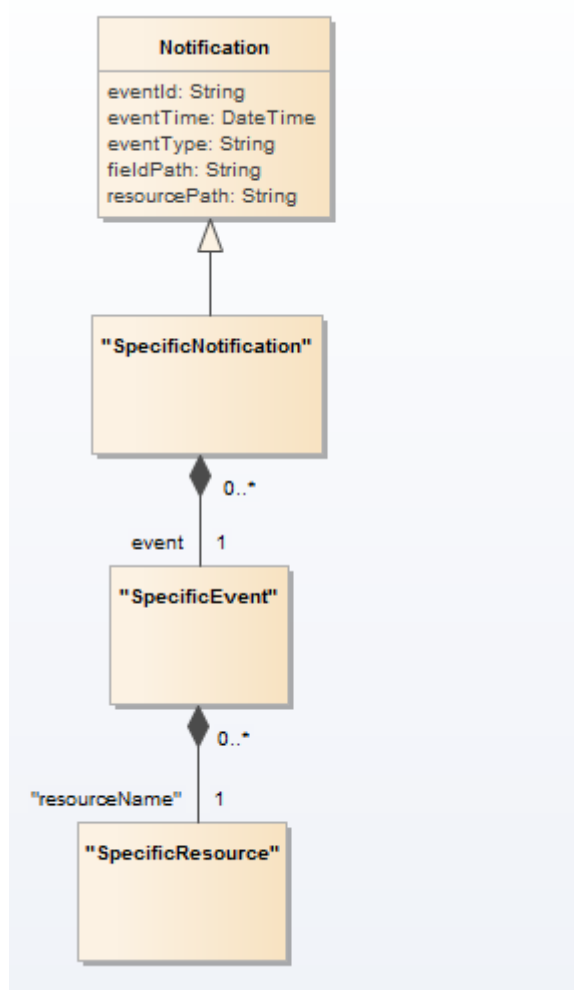
Notifications related to FinancialAccount:

- FinancialAccountCreationNotification

- FinancialAccountAttributeValueChangeNotification
- FinancialAccountStateChangeNotification
- FinancialAccountRemoveNotification

The notification structure for all notifications in this API follow the pattern depicted by the figure below. A notification resource (depicted by "SpecificNotification" placeholder) is a sub class of a generic Notification structure containing an id of the event occurrence (eventId), an event timestamp (eventTime), and the name of the notification resource (eventType).

This notification structure owns an event structure ("SpecificEvent" placeholder) linked to the resource concerned by the notification using the resource name as access field ("resourceName" placeholder).



PARTY ACCOUNT ATTRIBUTE VALUE CHANGE NOTIFICATION

Notification sent when changing an attribute of a PartyAccount resource.

Json representation sample

We provide below the json representation of an example of a 'PartyAccountAttributeValueChangeNotification' notification object

```
{
```

```
"eventId":"00001",
"eventTime":"2015-11-16T16:42:25-04:00",
"eventType":"PartyAccountAttributeValueChangeNotification",
"event": {
  "partyAccount" :
    {-- SEE PartyAccount RESOURCE SAMPLE --}
}
```

PARTY ACCOUNT STATE CHANGE NOTIFICATION

Notification sent when changing the state of a PartyAccount resource.

Json representation sample

We provide below the json representation of an example of a 'PartyAccountStateChangeNotification' notification object

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"PartyAccountStateChangeNotification",
  "event": {
    "partyAccount" :
      {-- SEE PartyAccount RESOURCE SAMPLE --}
  }
}
```

BILLING ACCOUNT ATTRIBUTE VALUE CHANGE NOTIFICATION

Notification sent when changing an attribute of a BillingAccount resource.

Json representation sample

We provide below the json representation of an example of a 'BillingAccountAttributeValueChangeNotification' notification object

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"BillingAccountAttributeValueChangeNotification",
  "event": {
    "billingAccount" :
      {-- SEE BillingAccount RESOURCE SAMPLE --}
  }
}
```

BILLING ACCOUNT STATE CHANGE NOTIFICATION

Notification sent when changing the state of a BillingAccount resource.

Json representation sample

We provide below the json representation of an example of a 'BillingAccountStateChangeNotification' notification object

```
{
  "eventId": "00001",
  "eventTime": "2015-11-16T16:42:25-04:00",
  "eventType": "BillingAccountStateChangeNotification",
  "event": {
    "billingAccount":
      {-- SEE BillingAccount RESOURCE SAMPLE --}
  }
}
```

SETTLEMENT ACCOUNT ATTRIBUTE VALUE CHANGE NOTIFICATION

Notification sent when changing an attribute of a SettlementAccount resource.

Json representation sample

We provide below the json representation of an example of a 'SettlementAccountAttributeValueChangeNotification' notification object

```
{
  "eventId": "00001",
  "eventTime": "2015-11-16T16:42:25-04:00",
  "eventType": "SettlementAccountAttributeValueChangeNotification",
  "event": {
    "settlementAccount":
      {-- SEE SettlementAccount RESOURCE SAMPLE --}
  }
}
```

SETTLEMENT ACCOUNT STATE CHANGE NOTIFICATION

Notification sent when changing the state of a SettlementAccount resource.

Json representation sample

We provide below the json representation of an example of a 'SettlementAccountStateChangeNotification' notification object.

```
{
  "eventId": "00001",
  "eventTime": "2015-11-16T16:42:25-04:00",
  "eventType": "SettlementAccountStateChangeNotification",
  "event": {
    "settlementAccount":
      {-- SEE SettlementAccount RESOURCE SAMPLE --}
  }
}
```

FINANCIAL ACCOUNT CREATION NOTIFICATION

Notification sent when a new FinancialAccount resource is created.

Json representation sample

We provide below the json representation of an example of a 'FinancialAccountCreationNotification' notification object.

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"FinancialAccountCreationNotification",
  "event": {
    "financialAccount" :
      [-- SEE FinancialAccount RESOURCE SAMPLE --]
  }
}
```

FINANCIAL ACCOUNT ATTRIBUTE VALUE CHANGE NOTIFICATION

Notification sent when changing an attribute of a FinancialAccount resource.

Json representation sample

We provide below the json representation of an example of a 'FinancialAccountAttributeValueChangeNotification' notification object

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"FinancialAccountAttributeValueChangeNotification",
  "event": {
    "financialAccount" :
      [-- SEE FinancialAccount RESOURCE SAMPLE --]
  }
}
```

FINANCIAL ACCOUNT STATE CHANGE NOTIFICATION

Notification sent when changing the state of a FinancialAccount resource.

Json representation sample

We provide below the json representation of an example of a 'FinancialAccountStateChangeNotification' notification object.

```
{
  "eventId":"00001",
```

```
"eventTime":"2015-11-16T16:42:25-04:00",
"eventType":"FinancialAccountStateChangeNotification",
"event": {
  "financialAccount" :
    [-- SEE FinancialAccount RESOURCE SAMPLE --]
}
}
```

FINANCIAL ACCOUNT REMOVE NOTIFICATION

Notification sent when removing a FinancialAccount resource.

Json representation sample

We provide below the json representation of an example of a 'FinancialAccountRemoveNotification' notification object.

```
{
  "eventId":"00001",
  "eventTime":"2015-11-16T16:42:25-04:00",
  "eventType":"FinancialAccountRemoveNotification",
  "event": {
    "financialAccount" :
      [-- SEE FinancialAccount RESOURCE SAMPLE --]
  }
}
```

API OPERATIONS

Remember the following Uniform Contract:

| Operation on Entities | Uniform API Operation | Description |
|--------------------------------|-----------------------|---|
| Query Entities | GET Resource | GET must be used to retrieve a representation of a resource. |
| Create Entity | POST Resource | POST must be used to create a new resource |
| Partial Update of an Entity | PATCH Resource | PATCH must be used to partially update a resource |
| Complete Update of an Entity | PUT Resource | PUT must be used to completely update a resource identified by its resource URI |
| Remove an Entity | DELETE Resource | DELETE must be used to remove a resource |
| Execute an Action on an Entity | POST on TASK Resource | POST must be used to execute Task Resources |
| Other Request Methods | POST on TASK Resource | GET and POST must not be used to tunnel other request methods. |

Filtering and attribute selection rules are described in the TMF REST Design Guidelines.

Notifications are also described in a subsequent section.

OPERATIONS ON PARTY ACCOUNT

LIST PARTY ACCOUNTS

GET `/partyAccount?fields=...&{filtering}`

Description

This operation list party account entities.

Attribute selection is enabled for all first level attributes.

Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving PartyAccount resources.

Retrieving all party accounts of type 'Business' with 'due' status. The result items are shrunk to show only the id, name and the credit limit (fields=id,name,creditLimit)

| |
|---|
| Request |
| GET /accountManagement/partyAccount?fields=id,name,creditLimit&status=due Accept: application/json |
| Response |
| 200 [{ "creditLimit": "50000", "id": "9473", "name": "Administration Account" }, { "creditLimit": "1000000", "id": "9899", "name": "Bahamas Account" }] |

RETRIEVE PARTY ACCOUNT

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

Description

This operation retrieves a party account entity.

Attribute selection is enabled for all first level attributes.

Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving a PartyAccount resource.

| Request |
|--|
| GET /accountManagement/partyAccount/6698 Accept: application/json |
| Response |
| 200 <pre> { "creditLimit": "10000", "description": "This party account ...", "href": "https://host:port/accounts/partyAccount/6698", "id": "6698", "lastModified": "2017-05-03T00:00", "name": "Administration account", "state": "Active", "type": "Business", "paymentStatus": "Due", "billStructure": { "presentationMedia": [{ "href": "https://host:port/accounts/billPresentationMedia/5499", "id": "5499", "name": "Email" }], "format": { "href": "https://host:port/accounts/billFormat/9847", "id": "9847", "name": "Summary invoice" }, "cycleSpecification": { "dateShift": 43, "frequency": "monthly", "href": "https://host:port/accounts/billingCycleSpecification/4706", "id": "4706", "name": "Monthly billing" } }, "paymentPlan": [{ "numberOfPayments": 10, "paymentFrequency": "monthly", "priority": 2, "status": "Effective", "totalAmount": 543.8, "type": "regular", </pre> |


```
"validFor": {
  "startDateTime": "2017-05-01T00:00",
  "endDateTime": "2017-11-29T00:00"
},
"paymentMethod": {
  "href": "https://host:port/onboardingManagement/paymentMethod/2942",
  "id": "2942",
  "name": "family payment"
}
},
"financialAccount": {
  "href": "https://host:port/accounts/financialAccount/5860",
  "id": "5860",
  "name": "Partnership account",
  "accountBalance": {
    "amount": 55.79,
    "type": "DepositBalance",
    "validFor": {
      "startDateTime": "2017-05-06T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
},
"defaultPaymentMethod": {
  "href": "https://host:port/onboardingManagement/paymentMethod/8509",
  "id": "8509",
  "name": "professional payment"
},
"relatedParty": [
  {
    "href": "https://host:port/partyManagement/organization/9653",
    "id": "9653",
    "name": "John Doe",
    "role": "seller",
    "validFor": {
      "startDateTime": "2017-05-05T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"taxExemption": [
  {
    "certificateNumber": "45678909876",
    "issuingJurisdiction": "Embassy",
    "reason": "VIP",
    "validFor": {
      "startDateTime": "2017-04-29T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"contact": [
  {
    "contactName": "Anna Cristal",
    "contactType": "primary",
```

```
"partyRoleType": "Publisher",
"validFor": {
  "startDateTime": "2017-05-02T00:00",
  "endDateTime": "2017-11-29T00:00"
},
"contactMedium": [
  {
    "preferred": true,
    "type": "TelephoneNumber",
    "validFor": {
      "startDateTime": "2017-05-01T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "characteristic": [
      {
        "name": "Colour",
        "value": "pink"
      },
      {
        "name": "Memory",
        "value": "64"
      }
    ]
  }
],
"relatedParty": {
  "href": "https://host:port/partyManagement/organization/5755",
  "id": "5755",
  "name": "Richard Cole",
  "role": "bill responsible",
  "validFor": {
    "startDateTime": "2017-05-04T00:00",
    "endDateTime": "2017-11-29T00:00"
  }
}
},
"accountBalance": [
  {
    "amount": 53.41,
    "type": "DepositBalance",
    "validFor": {
      "startDateTime": "2017-05-05T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"accountRelationship": [
  {
    "relationshipType": "contains",
    "validFor": {
      "startDateTime": "2017-05-04T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "account": {
      "description": "This account ...",
```

```

    "href": "https://host:port/accounts/account/2126",
    "id": "2126",
    "name": "Travel Account"
  }
}
]
}

```

CREATE PARTY ACCOUNT

POST /partyAccount

Description

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 | |
| ownerParty | |

| 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" |
| currencyCode | "National currency" |

Usage Samples

Here's an example of a request for creating a PartyAccount resource. In this example the request only passes mandatory attributes.

| |
|--|
| Request |
| <pre>POST /accountManagement/partyAccount Content-Type: application/json { "name": "Administration account" }</pre> |
| Response |
| <pre>201 { "href": "https://host:port/accounts/partyAccount/6698", "id": "6698", "name": "Administration account" }</pre> |

PATCH PARTY ACCOUNT

PATCH /partyAccount/{id}

Description

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 | |

Usage Samples

Here's an example of a request for patching a PartyAccount resource.

Changing the credit limit and the description of the account (using json-merge)

| Request |
|--|
| PATCH /accountManagement/partyAccount/42 |

| |
|---|
| Content-Type: application/merge-patch+json <pre>{ "description": "Premium credit limit", "creditLimit": "5000" }</pre> |
| Response |
| 201 { Similar JSON as in GET response with credit limit and description changed } |

DELETE PARTY ACCOUNT

DELETE /partyAccount/{id}

Note: this operation is available only to ADMIN API users

Description

This operation deletes a party account entity.

Usage Samples

Here's an example of a request for deleting a PartyAccount resource.

| |
|---|
| Request |
| DELETE /accountManagement/partyAccount/42 |
| Response |
| 204 |

OPERATIONS ON BILLING ACCOUNT

LIST BILLING ACCOUNTS

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

Description

This operation list billing account entities.

Attribute selection is enabled for all first level attributes.

Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving BillingAccount resources.

List all billing accounts using Canadian currency. The result items are shrunk to show only the id and name (fields=id,name)

| |
|--|
| Request |
| <pre>GET /accountManagement/billingAccount?fields=id,name&currencyCode=CAD Accept: application/json</pre> |
| Response |
| <pre>200 [{ "id": "42", "name": "Lakes Agency Account" }, { "id": "43", "name": "Santa Claus Donate Account" }]</pre> |

RETRIEVE BILLING ACCOUNT

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

Description

This operation retrieves a billing account entity.

Attribute selection is enabled for all first level attributes.

Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving a BillingAccount resource.

Request

```
GET /accountManagement/billingAccount/4835
Accept: application/json
```

Response

200

```
{
  "paymentStatus": "Due",
  "creditLimit": "a Money ...",
  "description": "This billing account ...",
  "href": "https://host:port/onboardingManagement/billingAccount/4835",
  "id": "4835",
  "lastModified": "2017-05-03T00:00",
  "name": "Home Account",
  "state": "Active",
  "type": "Business",
  "billStructure": {
    "presentationMedia": [
      {
        "href": "https://host:port/accounts/billPresentationMedia/7176",
        "id": "7176",
        "name": "Paper"
      }
    ],
    "format": {
      "href": "https://host:port/accounts/billFormat/5195",
      "id": "5195",
      "name": "Summary invoice"
    },
    "cycleSpecification": {
      "dateShift": 75,
      "frequency": "monthly",
      "href": "https://host:port/accounts/billingCycleSpecification/1266",
      "id": "1266",
      "name": "Annual billing"
    }
  },
  "paymentPlan": [
    {
      "numberOfPayments": 4,
      "paymentFrequency": "monthly",
      "priority": 4,
      "status": "Effective",
      "totalAmount": 543.8,
      "type": "special",
      "validFor": {
        "startDateTime": "2017-05-06T00:00",
        "endDateTime": "2017-11-29T00:00"
      }
    }
  ]
}
```



```
"paymentMethod": {
  "href": "https://host:port/onboardingManagement/paymentMethod/8829",
  "id": "8829",
  "name": "family payment"
}
],
"financialAccount": {
  "href": "https://host:port/accounts/financialAccount/1163",
  "id": "1163",
  "name": "Partnership account",
  "accountBalance": {
    "amount": 57.68,
    "type": "DepositBalance",
    "validFor": {
      "startDateTime": "2017-05-03T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
},
"defaultPaymentMethod": {
  "href": "https://host:port/onboardingManagement/paymentMethod/8092",
  "id": "8092",
  "name": "family payment"
},
"relatedParty": [
  {
    "href": "https://host:port/partyManagement/organization/3332",
    "id": "3332",
    "name": "John Doe",
    "role": "user",
    "validFor": {
      "startDateTime": "2017-04-30T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"taxExemption": [
  {
    "certificateNumber": "98765432345",
    "issuingJurisdiction": "Prefecture",
    "reason": "VIP",
    "validFor": {
      "startDateTime": "2017-05-06T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"contact": [
  {
    "contactName": "Charles Chopin",
    "contactType": "secondary",
    "partyRoleType": "Publisher",
    "validFor": {
      "startDateTime": "2017-05-02T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
]
```

```
},
"contactMedium": [
  {
    "preferred": true,
    "type": "Email",
    "validFor": {
      "startDateTime": "2017-05-06T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "characteristic": [
      {
        "name": "Colour",
        "value": "white"
      },
      {
        "name": "Memory",
        "value": "64"
      }
    ]
  }
],
"relatedParty": {
  "href": "https://host:port/partyManagement/organization/3665",
  "id": "3665",
  "name": "Richard Cole",
  "role": "customer",
  "validFor": {
    "startDateTime": "2017-05-06T00:00",
    "endDateTime": "2017-11-29T00:00"
  }
}
},
"accountBalance": [
  {
    "amount": 54.88,
    "type": "ReceivableBalance",
    "validFor": {
      "startDateTime": "2017-05-01T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"accountRelationship": [
  {
    "relationshipType": "contains",
    "validFor": {
      "startDateTime": "2017-05-04T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "account": {
      "description": "This account ...",
      "href": "https://host:port/accounts/account/4807",
      "id": "4807",
      "name": "Paradise Account"
    }
  }
]
```

```

    }
  ]
}

```

CREATE BILLING ACCOUNT

POST /billingAccount

Note: this operation is available only to ADMIN API users

Description

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 | |
| ownerParty | |

| 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" |
| currencyCode | "National currency" |

Usage Samples

Here's an example of a request for creating a BillingAccount resource. In this example the request only passes mandatory attributes.

| |
|--|
| Request |
| <pre>POST /accountManagement/billingAccount Content-Type: application/json { "name": "Home Account" }</pre> |
| Response |
| <pre>201 { "href": "https://host:port/onboardingManagement/billingAccount/4835", "id": "4835", "name": "Home Account" }</pre> |

PATCH BILLING ACCOUNT

PATCH /billingAccount/{id}

Description

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 | |

Usage Samples

Here's an example of a request for patching a BillingAccount resource.

Changing the currency code (using json-patch)

| Request |
|--|
| PATCH /accountManagement/billingAccount/42 |

| |
|--|
| Content-Type: application/json-patch+json <pre>{ "path": "/currencyCode", "value": "USD", "op": "replace" }</pre> |
| Response |
| 201 { Similar JSON as in GET response with currency code changed } |

DELETE BILLING ACCOUNT

DELETE `/billingAccount/{id}`

Note: this operation is available only to ADMIN API users

Description

This operation deletes a billing account entity.

Usage Samples

Here's an example of a request for deleting a BillingAccount resource.

| |
|---|
| Request |
| DELETE /accountManagement/billingAccount/42 |
| Response |
| 204 |

OPERATIONS ON SETTLEMENT ACCOUNT

LIST SETTLEMENT ACCOUNTS

GET `/settlementAccount?fields=...&{filtering}`

Description

This operation list settlement account entities.

Attribute selection is enabled for all first level attributes.

Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving SettlementAccount resources.

List all settlement accounts connected to a given party account. The result items are shrunk to show only the id and name (fields=id,name).

| |
|--|
| Request |
| GET /accountManagement/settlementAccount?fields=id,name&partyAccount.id=7876543 Accept: application/json |
| Response |
| 200 [{ "id": "42", "name": "API Usage Account" }, { "id": "43", "name": "Storage Usage Account" }] |

RETRIEVE SETTLEMENT ACCOUNT

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

Description

This operation retrieves a settlement account entity.

Attribute selection is enabled for all first level attributes.

Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving a SettlementAccount resource.

| Request |
|---|
| GET /accountManagement/settlementAccount/6202 Accept: application/json |
| Response |
| <pre> 200 { "paymentStatus": "Due", "creditLimit": "a Money ...", "description": "This settlement account ...", "href": "https://host:port/onboardingManagement/settlementAccount/6202", "id": "6202", "lastModified": "2017-05-03T00:00", "name": "Per Usage Account", "state": "active", "type": "Business", "billStructure": { "presentationMedia": [{ "href": "https://host:port/accounts/billPresentationMedia/7422", "id": "7422", "name": "Paper" }], "format": { "href": "https://host:port/accounts/billFormat/3588", "id": "3588", "name": "Detailed invoice" }, "cycleSpecification": { "dateShift": 20, "frequency": "monthly", "href": "https://host:port/accounts/billingCycleSpecification/5190", "id": "5190", "name": "Annual billing" } }, "paymentPlan": [{ "numberOfPayments": 4, "paymentFrequency": "bimonthly", "priority": 4, "status": "Effective", "totalAmount": 543.8, "type": "regular", "validFor": { "startDateTime": "2017-05-04T00:00", </pre> |


```
"endDateTime": "2017-11-29T00:00"
},
"paymentMethod": {
  "href": "https://host:port/onboardingManagement/paymentMethod/1547",
  "id": "1547",
  "name": "family payment"
}
],
"financialAccount": {
  "href": "https://host:port/accounts/financialAccount/4503",
  "id": "4503",
  "name": "Travel account",
  "accountBalance": {
    "amount": 55.91,
    "type": "ReceivableBalance",
    "validFor": {
      "startDateTime": "2017-04-30T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
},
"defaultPaymentMethod": {
  "href": "https://host:port/onboardingManagement/paymentMethod/3135",
  "id": "3135",
  "name": "family payment"
},
"relatedParty": [
  {
    "href": "https://host:port/partyManagement/organization/2981",
    "id": "2981",
    "name": "Gustave Flaubert",
    "role": "owner",
    "validFor": {
      "startDateTime": "2017-05-06T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"taxExemption": [
  {
    "certificateNumber": "45678909876",
    "issuingJurisdiction": "Embassy",
    "reason": "VIP",
    "validFor": {
      "startDateTime": "2017-05-06T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"contact": [
  {
    "contactName": "Ludwig Borgia",
    "contactType": "secondary",
    "partyRoleType": "CustomerAccountRepresentative",
    "validFor": {
```

```
"startDateTime": "2017-04-30T00:00",
"endDateTime": "2017-11-29T00:00"
},
"contactMedium": [
  {
    "preferred": true,
    "type": "TelephoneNumber",
    "validFor": {
      "startDateTime": "2017-05-06T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "characteristic": [
      {
        "name": "Colour",
        "value": "blue"
      },
      {
        "name": "Memory",
        "value": "64"
      }
    ]
  }
],
"relatedParty": {
  "href": "https://host:port/partyManagement/organization/4985",
  "id": "4985",
  "name": "Gustave Flaubert",
  "role": "vendor",
  "validFor": {
    "startDateTime": "2017-05-06T00:00",
    "endDateTime": "2017-11-29T00:00"
  }
}
},
"accountBalance": [
  {
    "amount": 51.77,
    "type": "DepositBalance",
    "validFor": {
      "startDateTime": "2017-04-29T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"accountRelationship": [
  {
    "relationshipType": "linked",
    "validFor": {
      "startDateTime": "2017-05-04T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "account": {
      "description": "This account ...",
      "href": "https://host:port/accounts/account/2553",
      "id": "2553",
```

```

    "name": "Paradise Account"
  }
}
]
}

```

CREATE SETTLEMENT ACCOUNT

POST /settlementAccount

Note: this operation is available only to ADMIN API users

Description

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 | |
| ownerParty | |

| 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" |
| currencyCode | "National currency" |

Usage Samples

Here's an example of a request for creating a SettlementAccount resource. In this example the request only passes mandatory attributes.

| |
|--|
| Request |
| POST /accountManagement/settlementAccount Content-Type: application/json <pre>{ "name": "Per Usage Account" }</pre> |
| Response |
| 201 <pre>{ "href": "https://host:port/onboardingManagement/settlementAccount/6202", "id": "6202", "name": "Per Usage Account" }</pre> |

PATCH SETTLEMENT ACCOUNT

PATCH /settlementAccount/{id}

Description

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 | |

Usage Samples

Here's an example of a request for patching a SettlementAccount resource.

Changing the currency code (using json-patch)

| |
|---|
| Request |
| PATCH /accountManagement/settlementAccount/42 Content-Type: application/json-patch+json <pre>{ "path": "/currencyCode", "value": "USD", "op": "replace" }</pre> |
| Response |
| 201 { Similar JSON as in GET response with currency code changed } |

DELETE SETTLEMENT ACCOUNT

DELETE /settlementAccount/{id}

Note: this operation is available only to ADMIN API users

Description

This operation deletes a settlement account entity.

Usage Samples

Here's an example of a request for deleting a SettlementAccount resource.

| |
|--|
| Request |
| DELETE /accountManagement/settlementAccount/42 |
| Response |
| 204 |

OPERATIONS ON FINANCIAL ACCOUNT

LIST FINANCIAL ACCOUNTS

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

Description

This operation list financial account entities.

Attribute selection is enabled for all first level attributes.

Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving FinancialAccount resources.

| |
|--|
| Request |
| GET /accountManagement/financialAccount Accept: application/json |
| Response |
| <pre> 200 [{ "creditLimit": "a Money ...", "description": "This financial account ...", "href": "https://host:port/accounts/financialAccount/4055", "id": "4055", "lastModified": "2017-05-03T00:00", "name": "Travel account", "state": "Active", "type": "Global", "relatedParty": [{ "href": "https://host:port/partyManagement/organization/2110", "id": "2110", "name": "John Doe", "role": "owner", "validFor": { "startDateTime": "2017-05-01T00:00", "endDateTime": "2017-11-29T00:00" } }], "taxExemption": [{ "certificateNumber": "45678909876", "issuingJurisdiction": "Prefecture", </pre> |

```
"reason": "VIP",
"validFor": {
  "startDateTime": "2017-05-06T00:00",
  "endDateTime": "2017-11-29T00:00"
}
],
"contact": [
  {
    "contactName": "Rachel Douglas",
    "contactType": "secondary",
    "partyRoleType": "CustomerAccountRepresentative",
    "validFor": {
      "startDateTime": "2017-04-29T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "contactMedium": [
      {
        "preferred": true,
        "type": "PostalAddress",
        "validFor": {
          "startDateTime": "2017-05-03T00:00",
          "endDateTime": "2017-11-29T00:00"
        },
        "characteristic": [
          {
            "name": "Colour",
            "value": "pink"
          },
          {
            "name": "Memory",
            "value": "32"
          }
        ]
      }
    ]
  },
  {
    "href": "https://host:port/partyManagement/organization/8202",
    "id": "8202",
    "name": "John Doe",
    "role": "bill receiver",
    "validFor": {
      "startDateTime": "2017-04-30T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"accountBalance": [
  {
    "amount": 58.7,
    "type": "DepositBalance",
    "validFor": {
      "startDateTime": "2017-05-02T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
]
```



```

    }
  ],
  "accountRelationship": [
    {
      "relationshipType": "linked",
      "validFor": {
        "startDateTime": "2017-04-29T00:00",
        "endDateTime": "2017-11-29T00:00"
      },
      "account": {
        "description": "This account ...",
        "href": "https://host:port/accounts/account/9531",
        "id": "9531",
        "name": "Paradise Account"
      }
    }
  ]
}
]

```

RETRIEVE FINANCIAL ACCOUNT

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

Description

This operation retrieves a financial account entity.

Attribute selection is enabled for all first level attributes.

Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving a FinancialAccount resource.

| Request |
|--|
| GET /accountManagement/financialAccount/4055 Accept: application/json |
| Response |
| 200 { "creditLimit": "a Money ...", "description": "This financial account ...", } |

```
"href": "https://host:port/accounts/financialAccount/4055",
"id": "4055",
"lastModified": "2017-05-03T00:00",
"name": "Travel account",
"state": "Active",
"type": "Global",
"relatedParty": [
  {
    "href": "https://host:port/partyManagement/organization/2110",
    "id": "2110",
    "name": "John Doe",
    "role": "owner",
    "validFor": {
      "startDateTime": "2017-05-01T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"taxExemption": [
  {
    "certificateNumber": "45678909876",
    "issuingJurisdiction": "Prefecture",
    "reason": "VIP",
    "validFor": {
      "startDateTime": "2017-05-06T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"contact": [
  {
    "contactName": "Rachel Douglas",
    "contactType": "secondary",
    "partyRoleType": "CustomerAccountRepresentative",
    "validFor": {
      "startDateTime": "2017-04-29T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  },
  "contactMedium": [
    {
      "preferred": true,
      "type": "PostalAddress",
      "validFor": {
        "startDateTime": "2017-05-03T00:00",
        "endDateTime": "2017-11-29T00:00"
      }
    },
    "characteristic": [
      {
        "name": "Colour",
        "value": "pink"
      },
      {
        "name": "Memory",
        "value": "32"
      }
    ]
  }
]
```

```

    }
  ],
  "relatedParty": {
    "href": "https://host:port/partyManagement/organization/8202",
    "id": "8202",
    "name": "John Doe",
    "role": "bill receiver",
    "validFor": {
      "startDateTime": "2017-04-30T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
}
],
"accountBalance": [
  {
    "amount": 58.7,
    "type": "DepositBalance",
    "validFor": {
      "startDateTime": "2017-05-02T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"accountRelationship": [
  {
    "relationshipType": "linked",
    "validFor": {
      "startDateTime": "2017-04-29T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "account": {
      "description": "This account ...",
      "href": "https://host:port/accounts/account/9531",
      "id": "9531",
      "name": "Paradise Account"
    }
  }
]
}

```

CREATE FINANCIAL ACCOUNT

POST /financialAccount

Note: this operation is available only to ADMIN API users

Description

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 |
| ownerParty | id, name |
| 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 |

Usage Samples

Here's an example of a request for creating a FinancialAccount resource. In this example the request only passes mandatory attributes.

| |
|--|
| Request |
| <pre>POST /accountManagement/financialAccount Content-Type: application/json { "name": "Travel account" }</pre> |
| Response |
| <pre>201 { "href": "https://host:port/accounts/financialAccount/4055", "id": "4055", "lastModified": "2017-05-03T00:00", "name": "Travel account" }</pre> |

PATCH FINANCIAL ACCOUNT

PATCH /financialAccount/{id}

Description

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 | |

Usage Samples

Here's an example of a request for patching a FinancialAccount resource.

| Request |
|--|
| PATCH /accountManagement/financialAccount/4055 Content-Type: application/merge-patch+json <pre>{ "name": "new name" }</pre> |
| Response |
| 201 <pre>{ "creditLimit": "a Money ...", "description": "This financial account ...", "href": "https://host:port/accounts/financialAccount/4055", "id": "4055", "lastModified": "2017-05-03T00:00", "name": "new name", "state": "Active", "type": "Global", "relatedParty": [{ "href": "https://host:port/partyManagement/organization/2110", "id": "2110", "name": "John Doe", }] }</pre> |

```
"role": "owner",
"validFor": {
  "startDateTime": "2017-05-01T00:00",
  "endDateTime": "2017-11-29T00:00"
}
],
"taxExemption": [
  {
    "certificateNumber": "45678909876",
    "issuingJurisdiction": "Prefecture",
    "reason": "VIP",
    "validFor": {
      "startDateTime": "2017-05-06T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"contact": [
  {
    "contactName": "Rachel Douglas",
    "contactType": "secondary",
    "partyRoleType": "CustomerAccountRepresentative",
    "validFor": {
      "startDateTime": "2017-04-29T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  },
  "contactMedium": [
    {
      "preferred": true,
      "type": "PostalAddress",
      "validFor": {
        "startDateTime": "2017-05-03T00:00",
        "endDateTime": "2017-11-29T00:00"
      }
    },
    "characteristic": [
      {
        "name": "Colour",
        "value": "pink"
      },
      {
        "name": "Memory",
        "value": "32"
      }
    ]
  }
],
"relatedParty": {
  "href": "https://host:port/partyManagement/organization/8202",
  "id": "8202",
  "name": "John Doe",
  "role": "bill receiver",
  "validFor": {
    "startDateTime": "2017-04-30T00:00",
    "endDateTime": "2017-11-29T00:00"
  }
}
```

```

    }
  }
],
"accountBalance": [
  {
    "amount": 58.7,
    "type": "DepositBalance",
    "validFor": {
      "startDateTime": "2017-05-02T00:00",
      "endDateTime": "2017-11-29T00:00"
    }
  }
],
"accountRelationship": [
  {
    "relationshipType": "linked",
    "validFor": {
      "startDateTime": "2017-04-29T00:00",
      "endDateTime": "2017-11-29T00:00"
    },
    "account": {
      "description": "This account ...",
      "href": "https://host:port/accounts/account/9531",
      "id": "9531",
      "name": "Paradise Account"
    }
  }
]
}

```

DELETE FINANCIAL ACCOUNT

DELETE `/financialAccount/{id}`

Note: this operation is available only to ADMIN API users

Description

This operation deletes a financial account entity.

Usage Samples

Here's an example of a request for deleting a FinancialAccount resource.

| Request |
|---|
| DELETE /accountManagement/financialAccount/42 |
| |

Response

204

OPERATIONS ON BILLING CYCLE SPECIFICATION

LIST BILLING CYCLE SPECIFICATIONS

GET /billingCycleSpecification?fields=...&{filtering}**Description**

This operation lists billing cycle specification entities.

Attribute selection is enabled for all first level attributes.

Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving BillingCycleSpecification resources.

Retrieving all billing cycle specifications. The result items are shrunk to show only the id and name (fields=id,name)

Request

```
GET /accountManagement/billingCycleSpecification?fields=id,name
Accept: application/json
```

Response

200

```
[
  {
    "id": "9473",
    "name": "bimonthly"
  },
  {
    "id": "9473",
    "name": "monthly"
  },
  {
    "id": "9899",
    "name": "weekly"
  }
]
```

]

RETRIEVE BILLING CYCLE SPECIFICATION

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

Description

This operation retrieves a billing cycle specification entity.

Attribute selection is enabled for all first level attributes.

Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving a BillingCycleSpecification resource.

| Request |
|---|
| GET /accountManagement/billingCycleSpecification/3353 Accept: application/json |
| Response |
| 200 <pre>{ "billingDateShift": 20, "billingPeriod": "a string ...", "chargeDateOffset": "a int ...", "creditDateOffset": "a int ...", "description": "This billing cycle specification ...", "frequency": "monthly", "href": "https://host:port/accounts/billingCycleSpecification/3353", "id": "3353", "mailingDateOffset": 53, "name": "Monthly billing on the 15", "paymentDueDateOffset": 45, "validFor": { "startDateTime": "2017-05-06T00:00", "endDateTime": "2017-11-29T00:00" } }</pre> |

CREATE BILLING CYCLE SPECIFICATION

POST /billingCycleSpecification

Note: this operation is available only to ADMIN API users

Description

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 | | |

Usage Samples

Here's an example of a request for creating a BillingCycleSpecification resource. In this example the request only passes mandatory attributes.

| Request |
|---|
| POST /accountManagement/billingCycleSpecification Content-Type: application/json <pre>{ "name": "Monthly billing on the 15" }</pre> |
| Response |
| 201 <pre>{ "href": "https://host:port/accounts/billingCycleSpecification/3353",</pre> |

```

  "id": "3353",
  "name": "Monthly billing on the 15"
}

```

PATCH BILLING CYCLE SPECIFICATION

PATCH /billingCycleSpecification/{id}

Description

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 | |

Usage Samples

Here's an example of a request for patching a BillingCycleSpecification resource.

Changing the frequency (using json-merge)

| |
|--|
| Request |
| PATCH /accountManagement/billingCycleSpecification/42 Content-Type: application/merge-patch+json <pre>{ "frequency": "bimonthly" }</pre> |
| Response |
| 201 { Similar JSON as in GET response with frequency changed } |

DELETE BILLING CYCLE SPECIFICATION

DELETE /billingCycleSpecification/{id}

Note: this operation is available only to ADMIN API users

Description

This operation deletes a billing cycle specification entity.

Usage Samples

Here's an example of a request for deleting a BillingCycleSpecification resource.

| |
|--|
| Request |
| DELETE /accountManagement/billingCycleSpecification/42 |
| Response |
| 204 |

OPERATIONS ON BILL FORMAT

LIST BILL FORMATS

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

Description

This operation list bill format entities.

Attribute selection is enabled for all first level attributes.

Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving BillFormat resources.

Retrieving all bill formats. The result items are shrunk to show only the id and name (fields=id,name)

Request

```
GET /accountManagement/billFormat?fields=id,name
Accept: application/json
```

Response

```
200

[
  {
    "id": "42",
    "name": "simple invoice"
  },
  {
    "id": "43",
    "name": "detailed invoice"
  }
]
```

RETRIEVE BILL FORMAT

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

Description

This operation retrieves a bill format entity.
 Attribute selection is enabled for all first level attributes.
 Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving a BillFormat resource.

| |
|--|
| Request |
| GET /accountManagement/billFormat/4962 Accept: application/json |
| Response |
| 200 <pre>{ "description": "This bill format ...", "href": "https://host:port/accounts/billFormat/4962", "id": "4962", "name": "Summary invoice" }</pre> |

CREATE BILL FORMAT

POST /billFormat

Note: this operation is available only to ADMIN API users

Description

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 | | |

Usage Samples

Here's an example of a request for creating a BillFormat resource. In this example the request only passes mandatory attributes.

| Request |
|---|
| POST /accountManagement/billFormat Content-Type: application/json <pre>{ "name": "Summary invoice" }</pre> |
| Response |
| 201 <pre>{ "href": "https://host:port/accounts/billFormat/4962", "id": "4962", "name": "Summary invoice" }</pre> |

PATCH BILL FORMAT

PATCH /billFormat/{id}

Note: this operation is available only to ADMIN API users

Description

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 | |

Usage Samples

Here's an example of a request for patching a BillFormat resource.

Changing the description (using json-merge)

| Request |
|---|
| PATCH /accountManagement/billFormat/42 Content-Type: application/merge-patch+json <pre>{ "description": "Detailed billing containing full phone numbers of calls" }</pre> |
| Response |
| 201 { Similar JSON as in GET response with description changed } |

DELETE BILL FORMAT

DELETE /billFormat/{id}

Note: this operation is available only to ADMIN API users

Description

This operation deletes a bill format entity.

Usage Samples

Here's an example of a request for deleting a BillFormat resource.

| Request |
|---------|
|---------|

| |
|---|
| DELETE /accountManagement/billFormat/42 |
| Response |
| 204 |

OPERATIONS ON BILL PRESENTATION MEDIA

LIST BILL PRESENTATION MEDIAS

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

Description

This operation list bill presentation media entities.

Attribute selection is enabled for all first level attributes.

Filtering may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving BillPresentationMedia resources.

Retrieving all bill presentation formats. The result items are shrunk to show only the id and name (fields=id,name)

| |
|---|
| Request |
| GET /accountManagement/billPresentationMedia?fields=id,name Accept: application/json |
| Response |
| 200 [{ "id": "42", "name": "signed mail" }, { "id": "43", "name": "postal" }] |

```
},
{
  "id": "44",
  "name": "web"
}
]
```

RETRIEVE BILL PRESENTATION MEDIA

GET `/billPresentationMedia/{id}?fields=...&{filtering}`

Description

This operation retrieves a bill presentation media entity. Attribute selection is enabled for all first level attributes. Filtering on sub-resources may be available depending on the compliance level supported by an implementation.

Usage Samples

Here's an example of a request for retrieving a BillPresentationMedia resource.

| Request |
|---|
| GET /accountManagement/billPresentationMedia/5458 Accept: application/json |
| Response |
| 200 <pre>{ "description": "This bill presentation media ...", "href": "https://host:port/accounts/billPresentationMedia/5458", "id": "5458", "name": "Email" }</pre> |

CREATE BILL PRESENTATION MEDIA

POST `/billPresentationMedia`

Note: this operation is available only to ADMIN API users

Description

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 | | |

Usage Samples

Here's an example of a request for creating a BillPresentationMedia resource. In this example the request only passes mandatory attributes.

| Request |
|--|
| POST /accountManagement/billPresentationMedia Content-Type: application/json <pre>{ "name": "Email" }</pre> |
| Response |
| 201 <pre>{ "href": "https://host:port/accounts/billPresentationMedia/5458", "id": "5458", "name": "Email" }</pre> |

PATCH BILL PRESENTATION MEDIA

PATCH /billPresentationMedia/{id}

Note: this operation is available only to ADMIN API users

Description

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 | |

Usage Samples

Here's an example of a request for patching a BillPresentationMedia resource.

Changing the name (using json-merge)

| Request |
|--|
| PATCH /accountManagement/billPresentationMedia/42 Content-Type: application/merge-patch+json <pre>{ "name": "secure post mail" }</pre> |
| Response |
| 201 { Similar JSON as in GET response with name changed } |

DELETE BILL PRESENTATION MEDIA

DELETE /billPresentationMedia/{id}

Note: this operation is available only to ADMIN API users

Description

This operation deletes a bill presentation media entity.

Usage Samples

Here's an example of a request for deleting a BillPresentationMedia resource.

| |
|--|
| Request |
| DELETE /accountManagement/billPresentationMedia/42 |
| Response |
| 204 |

API NOTIFICATIONS

For every single of operation on the entities use the following templates and provide sample REST notification POST calls.

It is assumed that the Pub/Sub uses the Register and UnRegister mechanisms described in the REST Guidelines reproduced below.

REGISTER LISTENER

POST /hub

Description

Sets the communication endpoint address the service instance must use to deliver information about its health state, execution state, failures and metrics. Subsequent POST calls will be rejected by the service if it does not support multiple listeners. In this case DELETE /api/hub/{id} must be called before an endpoint can be created again.

Behavior

Returns HTTP/1.1 status code 204 if the request was successful.

Returns HTTP/1.1 status code 409 if request is not successful.

Usage Samples

Here's an example of a request for registering a listener.

| |
|---|
| Request |
| POST /api/hub Accept: application/json {"callback": "http://in.listener.com"} |
| Response |
| 201 Content-Type: application/json Location: /api/hub/42 {"id": "42", "callback": "http://in.listener.com", "query": null} |

UNREGISTER LISTENER

DELETE /hub/{id}**Description**

Clears the communication endpoint address that was set by creating the Hub.

Behavior

Returns HTTP/1.1 status code 204 if the request was successful.

Returns HTTP/1.1 status code 404 if the resource is not found.

Usage Samples

Here's an example of a request for un-registering a listener.

| |
|--|
| Request |
| DELETE /api/hub/42 Accept: application/json |
| Response |
| 204 |

PUBLISH EVENT TO LISTENER**POST /client/listener****Description**

Clears the communication endpoint address that was set by creating the Hub.

Provides to a registered listener the description of the event that was raised. The /client/listener url is the callback url passed when registering the listener.

Behavior

Returns HTTP/1.1 status code 201 if the service is able to set the configuration.

Usage Samples

Here's an example of a notification received by the listener. In this example "EVENT TYPE" should be replaced by one of the notification types supported by this API (see Notification resources Models section) and EVENT BODY refers to the data structure of the given notification type.

| |
|-----------------------|
| Request |
| POST /client/listener |

Accept: application/json

```
{  
  "event": {  
    EVENT BODY  
  },  
  "eventType": "EVENT_TYPE"  
}
```

Response

201

For detailed examples on the general TM Forum notification mechanism, see the TMF REST Design Guidelines.

ACKNOWLEDGMENTS

RELEASE HISTORY

| Release Number | Date | Release led by: | Description |
|----------------|------------|---|--|
| Release 1.0 | 04/15/2017 | Pierre Gauthier TM Forum pgauthier@tmforum.org | First Release of the Document. Generated from API Data Model. It is a rebrand of the old Billing Management specification since its scope has been enlarged to other accounting aspects. |

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