

BANK OF AMERICA

Recurring Billing

REST API

Developer Guide v1.0.0

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1. Recurring Billing

Recurring Billing enables you to manage payment plans and subscriptions for recurring payments.

1.1 Document Revision History

Version	Release	Changes
1.0.0	December 2020	Initial Release – Beta Version

1.2 Prerequisites

Your account must be configured for the Token Management Service and enabled for Recurring Billing. See [Token Management Service](#).

2. Plans

A plan defines the billing amount and billing frequency for a recurring billing event. Merchants can create multiple plans. There are two types of recurring billing plans:

- With a defined plan period
- Without a defined plan period

All recurring billing plans comprise:

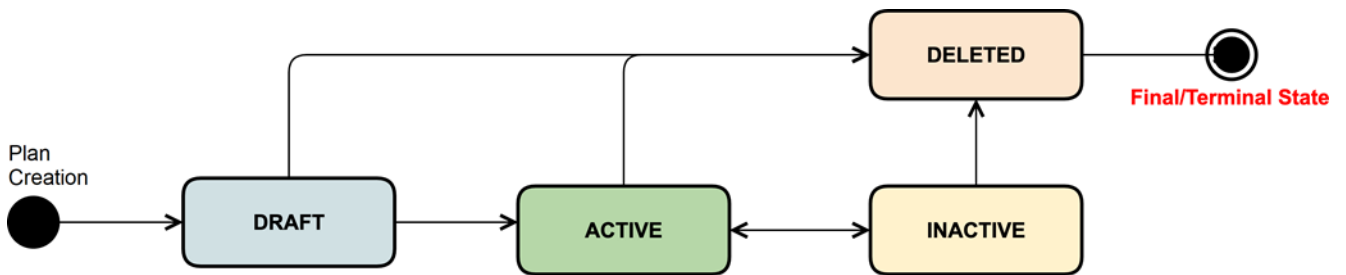
- Plan code
- Plan type
- Plan name
- Plan description
- Billing amount
- Currency
- Billing period length
- Billing period unit
- Billing cycles
- Setup fee

Plans with a defined period also include a billing cycle length.

You can assign a single plan to multiple subscriptions. You can make changes to the plan and apply the changes to all new and existing subscriptions that are assigned to the plan or apply the changes to only new subscriptions assigned to the plan.

Plans can be updated, activated, deactivated, and deleted.

2.1 Plan Statuses



A plan has one of the following statuses:

- Draft: can be changed to active or deleted.
- Active: currently in use. Can be changed to inactive or deleted.
- Inactive: can be changed to active.
- Deleted

Important: A plan can be deleted only if it has not been assigned to any subscriptions during its lifetime.

2.2 Create a Plan

You can create a plan with or without a defined plan period.

2.2.1 Creating a Plan

1. Include the required fields:
 - `orderInformation.amountDetails.billingAmount`
 - `orderInformation.amountDetails.currency`
 - `planInformation.billingCycles.total`: required for a plan with a defined plan period.
 - `planInformation.name`
 - `planInformation.billingPeriod.length`
 - `planInformation.billingPeriod.unit`
2. Include any optional fields:
 - `orderInformation.amountDetails.setupFee`
 - `planInformation.code`
 - `planInformation.description`
 - `planInformation.status`

3. Send the request to the recurring billing endpoint:

```
POST https://<url_prefix>/rbs/v1/plans
```

The URL prefix is:

- Test: apitest.merchant-services.bankofamerica.com
- Production: api.merchant-services.bankofamerica.com

2.2.2 Examples for Creating a Plan

Request

```
{
  "planInformation": {
    "billingPeriod": {
      "unit": "w",
      "length": "1"
    },
    "billingCycles": {
      "total": "4"
    },
    "code": "1619310018",
    "name": "Test plan",
    "description": "Description",
    "status": "active"
  },
  "orderInformation": {
    "amountDetails": {
      "billingAmount": "7",
      "currency": "USD",
      "setupFee": "0"
    }
  }
}
```

Successful Response

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/plans/1619212820",
      "method": "GET"
    },
    "update": {
      "href": "/rbs/v1/plans/1619212820",
      "method": "PATCH"
    },
    "deactivate": {
      "href": "/rbs/v1/plans/1619212820/deactivate",
      "method": "POST"
    }
  },
  "id": "1619212820",
  "status": "COMPLETED",
  "planInformation": {
    "code": "1619310018",
    "status": "ACTIVE"
  }
}
```

Error Response

```
{
  "status": "INVALID_REQUEST",
  "reason": "INVALID_DATA",
  "message": "One or more fields in the request contains invalid data.",
  "details": [
    {
      "field": "planInformation.code",
      "reason": "DUPLICATE"
    }
  ]
}
```

2.3 Retrieve a List of Plans

You can retrieve a list of plans. The plan details returned in the response include:

- Plan ID
- Plan code
- Plan type

- Plan name
- Description
- Status
- Billing period unit
- Billing period length
- Billing cycles total
- Currency
- Billing amount
- Setup fee

2.3.1. Retrieving a List of Plans

1. Filter the list of plans by these query string parameters:

- filters — Use Lucene query syntax. Only keyword matching is supported. Only AND is supported. Example:

```
name:"Test plan" AND code:"009" AND status:"ACTIVE"
```

- offset — Page offset number.
- limit — Number of items to be returned. Default is 20 and maximum is 100.

2. Format the endpoint as follows:

```
GET https://<url_prefix>/rbs/v1/plans
```

The URL prefix is:

- Test: apitest.merchant-services.bankofamerica.com
- Production: api.merchant-services.bankofamerica.com

2.3.2 Examples for Retrieving a List of Plans

Successful Response

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/plans?limit=2",
```

```
    "method": "GET"
  },
  "next": {
    "href": "/rbs/v1/plans?offset=2&limit=2",
    "method": "GET"
  }
},
"totalCount": 96,
"plans": [
  {
    "_links": {
      "self": {
        "href": "/rbs/v1/plans/1619212820",
        "method": "GET"
      },
      "update": {
        "href": "/rbs/v1/plans/1619212820",
        "method": "PATCH"
      },
      "deactivate": {
        "href": "/rbs/v1/plans/1619212820/deactivate",
        "method": "POST"
      }
    },
    "id": "1619212820",
    "planInformation": {
      "code": "1619310018",
      "status": "ACTIVE",
      "name": "Test plan",
      "description": "Description",
      "billingPeriod": {
        "length": "1",
        "unit": "W"
      },
      "billingCycles": {
        "total": "4"
      }
    },
    "orderInformation": {
      "amountDetails": {
        "currency": "USD",
        "billingAmount": "7.00",
        "setupFee": "0.00"
      }
    }
  },
  {
    "_links": {
      "self": {
```

```
        "href": "/rbs/v1/plans/6183561970436023701960",
        "method": "GET"
    },
    "update": {
        "href": "/rbs/v1/plans/6183561970436023701960",
        "method": "PATCH"
    },
    "activate": {
        "href": "/rbs/v1/plans/6183561970436023701960/activate",
        "method": "POST"
    }
},
"id": "6183561970436023701960",
"planInformation": {
    "code": "1616024773",
    "status": "DRAFT",
    "name": "Plan Test",
    "description": "12123",
    "billingPeriod": {
        "length": "9999",
        "unit": "Y"
    },
    "billingCycles": {
        "total": "123"
    }
},
"orderInformation": {
    "amountDetails": {
        "currency": "USD",
        "billingAmount": "1.00",
        "setupFee": "0.00"
    }
}
}
]
```

Error Response

```
{
  "status": "INVALID_REQUEST",
  "reason": "VALIDATION_ERROR",
  "message": "Field validation errors.",
  "details": [
    {
      "field": "customerInformation.email",
      "reason": "Invalid email"
    }
  ]
}
```

2.4 Retrieve a Plan

You can retrieve the details of a specific plan. The plan details returned in the response include:

- Plan ID
- Plan code
- Plan type
- Plan name
- Description
- Status
- Billing period unit
- Billing period length
- Billing cycles total
- Currency
- Billing amount
- Setup fee

2.4.1 Retrieving a Plan

1. In the endpoint path, include the plan ID that you received in the Retrieve a List of Plans response.
2. Send the request to the recurring billing endpoint:

```
GET https://<url_prefix>/rbs/v1/plans/{id}
```

The URL prefix is:

- Test: `apitest.merchant-services.bankofamerica.com`

- Production: api.merchant-services.bankofamerica.com

2.4.2 Examples for Retrieving a Plan

Successful Response

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/plans/6183561970436023701960",
      "method": "GET"
    },
    "update": {
      "href": "/rbs/v1/plans/6183561970436023701960",
      "method": "PATCH"
    },
    "activate": {
      "href": "/rbs/v1/plans/6183561970436023701960/activate",
      "method": "POST"
    }
  },
  "id": "6183561970436023701960",
  "planInformation": {
    "code": "1616024773",
    "status": "DRAFT",
    "name": "Plan Test",
    "description": "12123",
    "billingPeriod": {
      "length": "9999",
      "unit": "Y"
    },
    "billingCycles": {
      "total": "123"
    }
  },
  "orderInformation": {
    "amountDetails": {
      "currency": "USD",
      "billingAmount": "1.00",
      "setupFee": "0.00"
    }
  }
}
```

Error Response

```
{
  "status": "NOT_FOUND",
  "reason": "INVALID_DATA"
}
```

2.5 Retrieve a Plan Code

When you specify your plan codes, you can request the next consecutive alphabetical or numeric plan code based on the last plan code that you specified.

Example: If the last plan code you specified was Plan104, the system will return the code Plan105.

2.5.1 Retrieving a Plan Code

Send the request to the recurring billing endpoint:

```
GET https://<url_prefix>/rbs/v1/plans/code
```

The URL prefix is:

- Test: apitest.merchant-services.bankofamerica.com
- Production: api.merchant-services.bankofamerica.com

2.5.2 Examples for Retrieving a Plan Code

Successful Response

```
{
  "code": "1619310019",
}
```

Error Response

```
{
  "status": "NOT_FOUND",
  "reason": "INVALID_DATA"
}
```

2.6 Amend a Plan

For a draft plan, you can amend only the following information:

- `planInformation.name`
- `planInformation.description`
- `planInformation.code`
- `planInformation.billingPeriod.length`
- `planInformation.billingPeriod.unit`
- `orderInformation.amountDetails.currency`
- `orderInformation.amountDetails.billingAmount`
- `orderInformation.amountDetails.setupFee`

For an active plan, you can amend only the following information:

- `planInformation.name`
- `planInformation.description`
- `planInformation.code`
- `orderInformation.amountDetails.billingAmount`
- `orderInformation.amountDetails.setupFee`

For an inactive plan, you cannot amend any information.

2.6.1 Amending a Plan

1. Include any optional fields:
 - `planInformation.code`
 - `planInformation.name`
 - `planInformation.description`
 - `planInformation.billingCycles.total`
 - `processingInformation.subscriptionBillingOptions.applyTo`: default value is NEW.
 - `orderInformation.amountDetails.billingAmount`
 - `orderInformation.amountDetails.setupFee`
2. In the endpoint path, include the plan ID that you received in the Retrieve a List of Plans response.
3. Send the request to the recurring billing endpoint:

```
PATCH https://<url_prefix>/rbs/v1/plans/{id}
```

The URL prefix is:

- Test: apitest.merchant-services.bankofamerica.com
- Production: api.merchant-services.bankofamerica.com

2.6.2 Examples for Amending a Plan

Request

```
{
  "planInformation": {
    "name": "AmendPlan",
    "description": "Amend Plan 1610394600",
    "billingPeriod": {
      "length": "4",
      "unit": "M"
    },
    "billingCycles": {
      "total": "7"
    }
  },
  "orderInformation": {
    "amountDetails": {
      "billingAmount": "38.00",
      "setupFee": "35"
    }
  },
  "processingInformation": {
    "subscriptionBillingOptions": {
      "applyTo": "all"
    }
  }
}
```

Successful Response

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/plans/6183561970436023701960",
      "method": "GET"
    },
    "update": {
      "href": "/rbs/v1/plans/6183561970436023701960",
      "method": "PATCH"
    },
    "activate": {
      "href": "/rbs/v1/plans/6183561970436023701960/activate",
      "method": "POST"
    }
  },
  "id": "6183561970436023701960",
  "submitTimeUtc": "2021-04-23T21:39:34.993Z",
  "status": "COMPLETED",
  "planInformation": {
    "code": "1616024773",
    "status": "DRAFT"
  }
}
```

2.7 Activate a Plan

You can activate a plan that has a DRAFT or INACTIVE status and has not been assigned to any subscriptions during its lifetime.

2.7.1 Activating a Plan

1. In the endpoint path, include the plan ID that you received in the Retrieve a List of Plans response.
2. Send the request to the recurring billing endpoint:

```
POST https://<url_prefix>/rbs/v1/plans{id}/activate
```

The URL prefix is:

- Test: `apitest.merchant-services.bankofamerica.com`
- Production: `api.merchant-services.bankofamerica.com`

2.7.2 Examples for Activating a Plan

Request

```
{
  "additionalInformation": {
    "comments": "Activate a plan"
  }
}
```

Successful Response

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/plans/1619214189",
      "method": "GET"
    },
    "update": {
      "href": "/rbs/v1/plans/1619214189",
      "method": "PATCH"
    },
    "deactivate": {
      "href": "/rbs/v1/plans/1619214189/deactivate",
      "method": "POST"
    }
  },
  "id": "1619214189",
  "status": "COMPLETED",
```

```
  "planInformation": {
    "code": "1619214189",
    "status": "ACTIVE"
  }
}
```

Error Response

```
{
  "status": "NOT_FOUND",
  "reason": "INVALID_DATA",
  "message": "One or more fields in the request contains invalid data.",
  "details": [
    {
      "field": "subscriptionInformation.planId",
      "reason": "NOT_FOUND"
    }
  ]
}
```

2.8 Deactivate a Plan

You can deactivate a specific plan that has an ACTIVE status.

2.8.1 Deactivating a Plan

1. In the endpoint path, include the plan ID that you received in the Retrieve a List of Plans response.
2. Send the request to the recurring billing endpoint:

```
POST https://<url_prefix>/rbs/v1/plans{id}/deactivate
```

The URL prefix is:

- Test: apitest.merchant-services.bankofamerica.com
- Production: api.merchant-services.bankofamerica.com

For more details, see the Deactivate a Plan section of the interactive API Reference.

2.8.2 Examples for Deactivating a Plan

Request

```
{
  "additionalInformation": {
    "comments": "Deactivating a plan"
  }
}
```

Successful Response

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/plans/1619214189",
      "method": "GET"
    },
    "activate": {
      "href": "/rbs/v1/plans/1619214189/activate",
      "method": "POST"
    }
  },
  "id": "1619214189",
  "status": "COMPLETED",
  "planInformation": {
    "code": "1619214189",
    "status": "INACTIVE"
  }
}
```

Error Response

```
{
  "status": "INVALID_REQUEST",
  "reason": "INVALID_DATA",
  "message": "One or more fields in the request contains invalid data.",
  "details": [
    {
      "field": "planInformation.status",
      "reason": "INVALID_DATA"
    }
  ]
}
```

2.9 Delete a Plan

You can delete a plan that has a DRAFT status or has an ACTIVE or INACTIVE status and has not been assigned to any subscriptions during its lifetime.

2.9.1 Deleting a Plan

1. In the endpoint path, include the plan ID that you received in the Retrieve a List of Plans response.
2. Send the request to the recurring billing endpoint:

```
DELETE https://<url_prefix>/rbs/v1/plans/{id}
```

The URL prefix is:

- Test: apitest.merchant-services.bankofamerica.com
- Production: api.merchant-services.bankofamerica.com

For more details, see the Delete a Plan section of the interactive API Reference.

2.9.2 Examples for Deleting a Plan

Request

```
{
  "additionalInformation": {
    "comments": "Deleting a plan"
  }
}
```

Success Response

```
{
  "status": "COMPLETED"
}
```

Error Response

```
{
  "status": "NOT_FOUND",
  "reason": "NOT_FOUND",
  "message": "One or more fields in the request contains invalid data.",
  "details": [
    {
      "field": "subscriptionInformation.planId",
      "reason": "INVALID_DATA"
    }
  ]
}
```

3. Subscriptions

Subscriptions store customer details using a customer token and an assigned payment plan.

Subscriptions include:

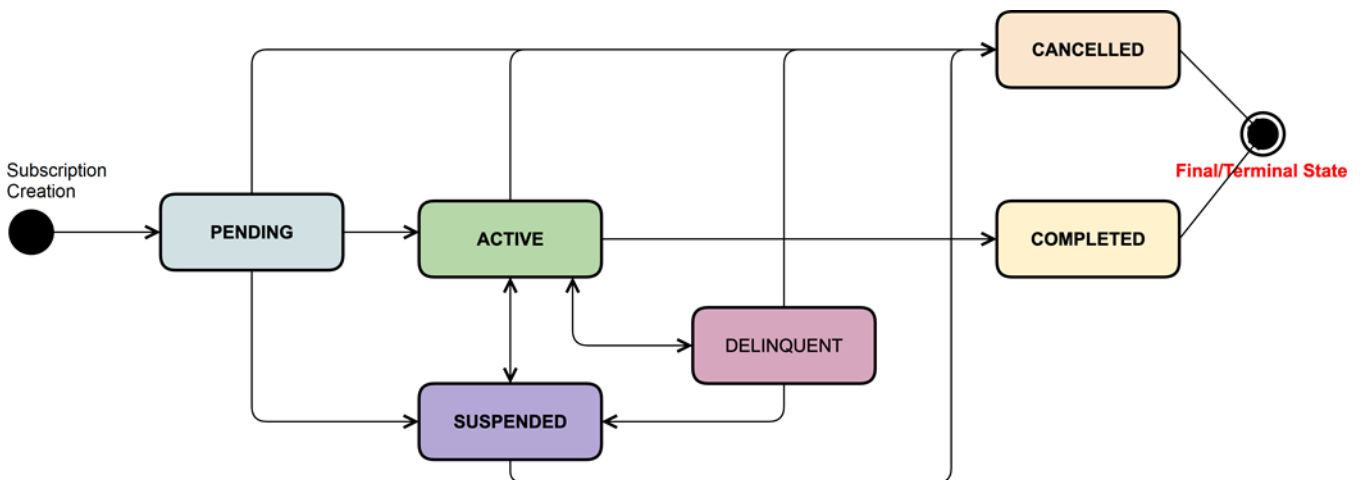
- Plan ID
- Subscription name
- Start date
- Customer token

Subscriptions can be updated, activated, suspended, and cancelled.

Subscription Prerequisites:

- Before creating a subscription, you must create a plan and a high-value token. See [Token Management Service](#).

3.1 Subscription Statuses



- Active: currently in use.
- Cancelled: cannot return to active.
- Completed: all scheduled payments have been made.
- Delinquent: when a payment is declined.
- Pending: during creation or in transition to another status.
- Suspended: when a payment is declined after five failed payment attempts. To continue payments, you can reactivate the subscription or create a new subscription.

3.2 Create a Subscription

You can create a subscription with a pre-existing plan, with subscription overrides, or with a fully customized one-time payment.

3.2.1 Creating a Subscription

1. Include the required fields:
 - `subscriptionInformation.planId`
 - `subscriptionInformation.name`
 - `subscriptionInformation.startDate`
 - `paymentInformation.customer.id`
2. Include any optional fields:
 - `clientReferenceInformation.code`
 - `clientReferenceInformation.transactionId`
 - `clientReferenceInformation.partner.developerId`
 - `clientReferenceInformation.partner.solutionId`
 - `subscriptionInformation.code`
 - `planInformation.name`
 - `planInformation.description`
 - `planInformation.status`
 - `planInformation.billingPeriod.length`
 - `planInformation.billingPeriod.unit`
 - `planInformation.billingPeriod.billingCycles`: required for a plan with a defined plan period.
 - `orderInformation.amountDetails.currency`
 - `orderInformation.amountDetails.billingAmount`
 - `orderInformation.amountDetails.setupFee`

3. Send the request to the recurring billing endpoint:

```
POST https://<url_prefix>/rbs/v1/subscriptions
```

The URL prefix is:

- Test: `apitest.merchant-services.bankofamerica.com`

- Production: api.merchant-services.bankofamerica.com

3.2.2 Examples for Creating a Subscription

Request to Create a Subscription with a Pre-Existing Plan

```
{
  "subscriptionInformation": {
    "planId": "1619214515",
    "name": "Daily Gym Subscription",
    "startDate": "2021-04-25"
  },
  "paymentInformation": {
    "customer": {
      "id": "C09F227C54F94951E0533F36CF0A3D91"
    }
  }
}
```

Response from Creating a Subscription with a Pre-Existing Plan

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/subscriptions/1619214690",
      "method": "GET"
    },
    "update": {
      "href": "/rbs/v1/subscriptions/1619214690",
      "method": "PATCH"
    },
    "cancel": {
      "href": "/rbs/v1/subscriptions/1619214690/cancel",
      "method": "POST"
    }
  },
  "id": "1619214690",
  "status": "COMPLETED",
  "subscriptionInformation": {
    "code": "AWC-47",
    "status": "PENDING"
  }
}
```

Error Response to Create a Subscription with a Pre-Existing Plan

```
{
  "status": "INVALID_REQUEST",
  "reason": "INVALID_DATA",
  "message": "One or more fields in the request contains invalid data.",
  "details": [
    {
      "field": "subscriptionInformation.startDate",
      "reason": "INVALID_DATA"
    }
  ]
}
```

Request to Create a Subscription With Subscription Overrides

```
{
  "subscriptionInformation": {
    "planId": "1619214515",
    "name": "SubName With Overrides",
    "startDate": "2021-04-26"
  },
  "planInformation": {
    "billingCycles": {
      "total": "3"
    }
  },
  "orderInformation": {
    "amountDetails": {
      "billingAmount": "13.14",
      "setupFee": "1.27"
    }
  },
  "paymentInformation": {
    "customer": {
      "id": "C09F227C54F94951E0533F36CF0A3D91"
    }
  }
}
```

Successful Response to Create a Subscription With Subscription Overrides

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/subscriptions/1619214795",
      "method": "GET"
    },
    "update": {
      "href": "/rbs/v1/subscriptions/1619214795",
      "method": "PATCH"
    },
    "cancel": {
      "href": "/rbs/v1/subscriptions/1619214795/cancel",
      "method": "POST"
    }
  },
  "id": "1619214795",
  "status": "COMPLETED",
  "subscriptionInformation": {
    "code": "AWC-48",
    "status": "PENDING"
  }
}
```

Error Response to Create a Subscription With Subscription Overrides

```
{
  "status": "INVALID_REQUEST",
  "reason": "DUPLICATE_REQUEST",
  "message": "Duplicate requests are not supported within 15 minutes.",
  "details": [
    {
      "field": "subscriptionInformation.planId or
paymentInformation.customer.id or subscriptionInformation.startDate or
subscriptionInformation.name",
      "subscriptionId": "1619214795",
      "reason": "INVALID_DATA"
    }
  ]
}
```

Request to Create a Fully Customized Subscription with a One-Time Payment

```
{
  "subscriptionInformation": {
    "name": "SubName Testing",
    "startDate": "2021-04-28"
  },
  "planInformation": {
    "billingCycles": {
      "total": "5"
    },
    "billingPeriod": {
      "length": "3",
      "unit": "D"
    }
  },
  "orderInformation": {
    "amountDetails": {
      "billingAmount": "1.21",
      "setupFee": "1.44",
      "currency": "USD"
    }
  },
  "paymentInformation": {
    "customer": {
      "id": "C09F227C54F94951E0533F36CF0A3D91"
    }
  }
}
```

Successful Response to Create a Fully Customized Subscription with a One-Time Payment

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/subscriptions/1619214861",
      "method": "GET"
    },
    "update": {
      "href": "/rbs/v1/subscriptions/1619214861",
      "method": "PATCH"
    },
    "cancel": {
      "href": "/rbs/v1/subscriptions/1619214861/cancel",
      "method": "POST"
    }
  }
}
```

```

    },
    "id": "1619214861",
    "status": "COMPLETED",
    "subscriptionInformation": {
      "code": "AWC-49",
      "status": "PENDING"
    }
  }
}

```

Error Response to Create a Fully Customized Subscription with a One-Time Payment

```

{
  "status": "INVALID_REQUEST",
  "reason": "INVALID_DATA",
  "message": "One or more fields in the request contains invalid data.",
  "details": [
    {
      "field": "planInformation.billingPeriod.length",
      "reason": "MAX_LENGTH"
    }
  ]
}

```

3.3 Retrieve a List of Subscriptions

You can retrieve a list of subscriptions. The subscription details returned in the response include:

- Subscription ID
- Subscription code
- Subscription status
- Subscription name
- Customer ID
- Plan ID
- Plan code
- Plan type
- Plan name
- Plan description
- Plan status
- Billing period unit

- Billing period length
- Billing cycles total
- Billing cycles current
- Currency
- Billing amount
- Setup fee

3.3.1 Retrieving a List of Subscriptions

1. Filter the list of subscriptions by these query string parameters:

- filters — Use Lucene query syntax. Only keyword matching is supported. Only AND is supported. Example:

```
status:"ACTIVE" AND code:"01" AND id:"21345"
```

- offset — Page offset number.
- limit — Number of items to be returned. Default is 20 and maximum is 100.

2. Format the endpoint as follows:

```
GET https://<url_prefix>/rbs/v1/subscriptions
```

The URL prefix is:

- Test: apitest.merchant-services.bankofamerica.com
- Production: api.merchant-services.bankofamerica.com

3.3.2 Examples for Retrieving a List of Subscriptions

Successful Response

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/subscriptions?status=ACTIVE&limit=2",
      "method": "GET"
    },
    "next": {
      "href": "/rbs/v1/subscriptions?status=ACTIVE&offset=2&limit=2",
      "method": "GET"
    }
  },
  "totalCount": 29,
  "subscriptions": [
    {
      "_links": {
        "self": {
          "href": "/rbs/v1/subscriptions/6192112872526176101960",
          "method": "GET"
        },
        "update": {
          "href": "/rbs/v1/subscriptions/6192112872526176101960",
          "method": "PATCH"
        },
        "cancel": {
          "href": "/rbs/v1/subscriptions/6192112872526176101960/cancel",
          "method": "POST"
        }
      }
    }
  ]
}
```

```

    },
    "suspend": {
      "href": "/rbs/v1/subscriptions/6192112872526176101960/suspend",
      "method": "POST"
    }
  },
  "id": "6192112872526176101960",
  "planInformation": {
    "code": "34873819306413101960",
    "name": "RainTree Books Daily Plan",
    "billingPeriod": {
      "length": "1",
      "unit": "D"
    },
    "billingCycles": {
      "total": "2",
      "current": "1"
    }
  },
  "subscriptionInformation": {
    "code": "AWC-44",
    "planId": "6034873819306413101960",
    "name": "Test",
    "startDate": "2021-04-23",
    "status": "ACTIVE"
  },
  "paymentInformation": {
    "customer": {
      "id": "C09F227C54F94951E0533F36CF0A3D91"
    }
  },
  "orderInformation": {
    "amountDetails": {
      "currency": "USD",
      "billingAmount": "2.00",
      "setupFee": "1.00"
    },
    "billTo": {
      "firstName": "JENNY",
      "lastName": "AUTO"
    }
  }
},
{
  "_links": {
    "self": {
      "href": "/rbs/v1/subscriptions/6192115800926177701960",
      "method": "GET"
    }
  }
},

```

```

    "update": {
      "href": "/rbs/v1/subscriptions/6192115800926177701960",
      "method": "PATCH"
    },
    "cancel": {
      "href": "/rbs/v1/subscriptions/6192115800926177701960/cancel",
      "method": "POST"
    },
    "suspend": {
      "href": "/rbs/v1/subscriptions/6192115800926177701960/suspend",
      "method": "POST"
    }
  },
  "id": "6192115800926177701960",
  "planInformation": {
    "code": "SITPlanCode6",
    "name": "Jan11DeployPlan1",
    "billingPeriod": {
      "length": "1",
      "unit": "W"
    },
    "billingCycles": {
      "total": "6",
      "current": "1"
    }
  },
  "subscriptionInformation": {
    "code": "AWC-45",
    "planId": "6104313186846711501956",
    "name": "Testsub1",
    "startDate": "2021-04-23",
    "status": "ACTIVE"
  },
  "paymentInformation": {
    "customer": {
      "id": "C09F227C54F94951E0533F36CF0A3D91"
    }
  },
  "orderInformation": {
    "amountDetails": {
      "currency": "USD",
      "billingAmount": "1.00",
      "setupFee": "5.00"
    },
    "billTo": {
      "firstName": "JENNY",
      "lastName": "AUTO"
    }
  }
}

```

```
}  
  ]  
}
```

Error Response

```
{  
  "status": "NOT_FOUND",  
  "reason": "INVALID_DATA"  
}
```

3.4 Retrieve a Subscription

You can retrieve the details of a specific subscription. The subscription details returned in the response include:

- Subscription ID
- Subscription code
- Subscription status
- Subscription name
- Customer ID
- Plan ID
- Plan code
- Plan type
- Plan name
- Plan description
- Plan status
- Billing period unit
- Billing period length
- Billing cycles total
- Billing cycles current
- Currency
- Billing amount
- Setup fee

3.4.1 Retrieving a Subscription

1. In the endpoint path, include the subscription ID that you received in the Retrieve a List of Subscriptions response.
2. Send the request to the recurring billing endpoint:

```
GET https://<url_prefix>/rbs/v1/subscriptions{id}
```

The URL prefix is:

- Test: apitest.merchant-services.bankofamerica.com
- Production: api.merchant-services.bankofamerica.com

3.4.2 Examples for Retrieving a Subscription

Successful Response

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/subscriptions/6192115800926177701960",
      "method": "GET"
    },
  },
}
```

```

    "update": {
      "href": "/rbs/v1/subscriptions/6192115800926177701960",
      "method": "PATCH"
    },
    "cancel": {
      "href": "/rbs/v1/subscriptions/6192115800926177701960/cancel",
      "method": "POST"
    },
    "suspend": {
      "href": "/rbs/v1/subscriptions/6192115800926177701960/suspend",
      "method": "POST"
    }
  },
  "id": "6192115800926177701960",
  "planInformation": {
    "code": "SITPlanCode6",
    "name": "Jan11DeployPlan1",
    "billingPeriod": {
      "length": "1",
      "unit": "W"
    },
    "billingCycles": {
      "total": "6",
      "current": "1"
    }
  },
  "subscriptionInformation": {
    "code": "AWC-45",
    "planId": "6104313186846711501956",
    "name": "Testsub1",
    "startDate": "2021-04-23",
    "status": "ACTIVE"
  },
  "paymentInformation": {
    "customer": {
      "id": "C09F227C54F94951E0533F36CF0A3D91"
    }
  },
  "orderInformation": {
    "amountDetails": {
      "currency": "USD",
      "billingAmount": "1.00",
      "setupFee": "5.00"
    },
    "billTo": {
      "firstName": "JENNY",
      "lastName": "AUTO"
    }
  }
}

```

```

}

```

Error Response

```
{
  "status": "NOT_FOUND",
  "reason": "INVALID_DATA",
  "details": []
}
```

3.5 Retrieve the Next Subscription Code

When you specify your subscription codes, you can request the next consecutive alphabetical or numeric subscription code based on the last subscription code you specified. Example: If the last subscription code that you specified was 24B, the system will return the code 24C.

3.5.1 Retrieving a Subscription Code

Send the request to the recurring billing endpoint:

```
GET https://<url_prefix>/rbs/v1/subscriptions/code
```

The URL prefix is:

- Test: apitest.merchant-services.bankofamerica.com
- Production: api.merchant-services.bankofamerica.com

3.5.2 Example for Retrieving a Subscription Code

Successful Response

```
{
  "code": "AWC-50",
}
```

Error Response

```
{
  "status": "NOT_FOUND",
  "reason": "INVALID_DATA"
}
```

3.6 Amend a Subscription

For a pending subscription, you cannot change the following information:

- customer ID
- currency
- billing period unit and length

For an active subscription, you cannot change the following information:

- customer ID
- currency
- start date
- billing period unit and length
- setup fee

For a delinquent, suspended, cancelled, or completed subscription, you can update only the subscription name and code.

3.6.1 Amending a Subscription

1. Include any optional amendable fields.
2. In the endpoint path, include the subscription ID that you received in the Retrieve a List of Subscriptions response.
3. Send the request to the recurring billing endpoint:

```
PATCH https://<url_prefix>/rbs/v1/subscriptions/{id}
```

The URL prefix is:

- Test: apitest.merchant-services.bankofamerica.com
- Production: api.merchant-services.bankofamerica.com

3.6.2 Examples for Amending a Subscription

Request to Switch a Subscription to Different Plan

```
{
  "note": "Switch Plan Note",
  "reason": "Switch Plan Reason",
  "subscriptionInformation": {
    "name": "Update Sub Name - Switch Plan 6192115800926177701960",
    "code": "1619215852Code",
    "startDate": "2021-04-25"
  },
  "orderInformation": {
    "amountDetails": {
      "billingAmount": "13.23",
      "currency": "USD",
      "setupFee": "8.43"
    }
  }
},
"reasonCode": "Switch Plan Reason Code"
}
```

Successful Response

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/subscriptions/1619215852",
      "method": "GET"
    },
    "update": {
      "href": "/rbs/v1/subscriptions/1619215852",
      "method": "PATCH"
    },
    "cancel": {
      "href": "/rbs/v1/subscriptions/1619215852/cancel",
      "method": "POST"
    }
  },
  "id": "1619215852",
  "status": "COMPLETED",
  "subscriptionInformation": {
    "code": "1619215852Code",
    "status": "PENDING"
  }
}
```

Error Response

```
{
  "status": "INVALID_REQUEST",
  "reason": "INVALID_DATA",
  "message": "One or more fields in the request contains invalid data.",
  "details": [
    {
      "field": "subscriptionInformation.code",
      "reason": "DUPLICATE"
    }
  ]
}
```

3.7 Activate a Suspended Subscription

You can reactivate a suspended subscription.

You cannot reactivate a cancelled or completed subscription.

3.7.1 Activating a Subscription

1. In the endpoint path, include the subscription ID that you received in the Retrieve a List of Subscriptions response.
2. Send the request to the recurring billing endpoint:

```
POST https://<url_prefix>/rbs/v1/subscriptions{id}/activate
```

The URL prefix is:

- Test: apitest.merchant-services.bankofamerica.com
- Production: api.merchant-services.bankofamerica.com

3.7.2 Examples for Reactivating a Subscription

Successful Response

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/subscriptions/6149715492756032001956",
      "method": "GET"
    },
    "update": {
      "href": "/rbs/v1/subscriptions/6149715492756032001956",
      "method": "PATCH"
    },
    "cancel": {
      "href": "/rbs/v1/subscriptions/6149715492756032001956/cancel",
      "method": "POST"
    },
    "suspend": {
      "href": "/rbs/v1/subscriptions/6149715492756032001956/suspend",
      "method": "POST"
    }
  },
  "id": "6149715492756032001956",
  "status": "COMPLETED",
  "subscriptionInformation": {
    "code": "AWC-35",
    "status": "ACTIVE"
  }
}
```

Error Response

```
{
  "status": "INVALID_REQUEST",

  "reason": "INVALID_DATA",
  "message": "The subscription cannot be reactivated at this time.",
  "details": [
    {
      "field": "subscriptionInformation.status",
      "reason": "INVALID_FOR_ACTIVATION"
    }
  ]
}
```

3.8 Suspend a Subscription

You can suspend a pending, active, or delinquent subscription.

3.8.1 Suspending a Subscription

1. In the endpoint path, include the subscription ID that you received in the Retrieve a List of Subscriptions response.
2. Send the request to the recurring billing endpoint:

```
POST https://<url_prefix>/rbs/v1/subscriptions/{id}/suspend
```

The URL prefix is:

- Test: apitest.merchant-services.bankofamerica.com
- Production: api.merchant-services.bankofamerica.com

3.8.2 Examples for Suspending a Subscription

Successful Response

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/subscriptions/6192112872526176101960",
      "method": "GET"
    },
    "update": {
      "href": "/rbs/v1/subscriptions/6192112872526176101960",
      "method": "PATCH"
    },
    "cancel": {
      "href": "/rbs/v1/subscriptions/6192112872526176101960/cancel",
      "method": "POST"
    },
    "suspend": {
      "href": "/rbs/v1/subscriptions/6192112872526176101960/suspend",
      "method": "POST"
    }
  },
  "id": "6192112872526176101960",
  "status": "ACCEPTED",
  "subscriptionInformation": {
    "code": "AWC-44",
    "status": "ACTIVE"
  }
}
```

Error Response

```
{
  "status": "NOT_FOUND",
  "reason": "INVALID_DATA",
  "details": []
}
```

3.9 Cancel a Subscription

You can cancel a pending, active, or delinquent subscription.

3.9.1 Canceling a Subscription

1. In the endpoint path, include the subscription ID that you received in the Retrieve a List of Subscriptions response.
2. Send the request to the recurring billing endpoint:

```
POST https://<url_prefix>/rbs/v1/subscriptions/{id}/cancel
```

The URL prefix is:

- Test: apitest.merchant-services.bankofamerica.com
- Production: api.merchant-services.bankofamerica.com

3.9.2 Examples for Canceling a Subscription

Successful Response

```
{
  "_links": {
    "self": {
      "href": "/rbs/v1/subscriptions/6192115800926177701960",
      "method": "GET"
    }
  }
}
```

```

    },
    "update": {
      "href": "/rbs/v1/subscriptions/6192115800926177701960",
      "method": "PATCH"
    },
    "cancel": {
      "href": "/rbs/v1/subscriptions/6192115800926177701960/cancel",
      "method": "POST"
    },
    "suspend": {
      "href": "/rbs/v1/subscriptions/6192115800926177701960/suspend",
      "method": "POST"
    }
  },
  "id": "6192115800926177701960",
  "status": "ACCEPTED",
  "subscriptionInformation": {
    "code": "6192177701960Code",
    "status": "ACTIVE"
  }
}

```

Error Response

```

{
  "status": "NOT_FOUND",
  "reason": "INVALID_DATA",
  "details": []
}

```

4. Response Status Codes

Responses include one of the following HTTP status codes:

- 200: Successful.
- 201: Successful.
- 202: Accepted.
- 400: Invalid request.
- 404: Not found.
- 502: Unexpected system error or system timeout.