

TM Forum Specification

Promotion API REST Specification

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INTRODUCTION

The following document is the specification of the REST API for Promotion. It includes the model definition as well as all available operations.

It provides a standardized mechanism for Promotion management such as creation, update, retrieval, deletion and notification of events.

Promotion API manages the following data resources:

- **Promotion** (also called product offering promotion, according to the name in Business Process Framework)
 - o Promotion is widely used in e-commerce domain. It is used to provide the additional discount, voucher, bonus or gift to the customer who meets the pre-defined criteria. Using promotion, the enterprise is able to attract the users and encourage more consumption, especially continuous purchases. Normally Promotion is not regarded as one type of product or product offering. It is often applied when the customer buys the product offerings with the price or amount surpassing the certain limit. The typical example is the “buy 1 and get 1 free” or “buy \$100 and get \$10 bonus”.



The example of promotion in Amazon can be browsed online. It shows the typical promotion in the e-commerce world.

Promotion API REST Specification

Promotion Type	Qualifying Action	Benefit Options	Example
Money Off (Purchase Discount)	Customer reaches a minimum threshold, either by spending a dollar amount you've specified, or by buying a certain quantity of a product or products.	<ul style="list-style-type: none"> • Buy \$X or more, and get \$Y off purchase of qualifying products • Buy \$X or more, and get Y% off qualifying products • Buy n items or more, and get \$Y off purchase of qualifying products • Buy n items or more, and get Y% off qualifying products • Buy every n items, and get \$Y off purchase of qualifying products • Buy every n items, and get Y% off qualifying products • Buy every n items at a fixed reduced price 	<ul style="list-style-type: none"> • Spend \$25 or more and receive \$5 off • Save 30% when you purchase one or more qualifying items • For every 5 pairs of socks purchased, save 20%
Buy One Get One (Free Product)		<ul style="list-style-type: none"> • Buy \$X or more, and get n items for free on qualifying products • Buy N items or more, and get n items for free on qualifying products • Buy every N items, and get n items for free on qualifying products 	<ul style="list-style-type: none"> • Buy 2 lipsticks, and get 1 free • Buy 1 muffin pan, get 1 box of muffin cups free • For every 5 pencils purchased, get a pencil sharpener for free
External Benefit		<ul style="list-style-type: none"> • Buy \$X or more, and get a post-order benefit • Buy n items or more, and get a post-order benefit 	Receive free instructional video with purchase

Note: Promotion API in this document is about the configuration and maintenance of this business object, not the execution of such promotion. This API follows the example of Product Catalog Management API which focuses on the “configuration phase” instead of the “use phase”. The execution of promotion is the responsibility of e-commerce platform which has to apply the discount (or gift, voucher, etc.) based on the information retrieved from Promotion API.

Promotion API performs the following operation on the resource of Promotion

- Retrieval of an existing promotion depending on filter criteria
- Partial update of an existing promotion
- Creation (configuration) of a new promotion
- Deletion of an existing promotion
- Notification of events:
 - o promotion creation

Promotion API REST Specification

- promotion updating
- promotion deletion

MAPPING WITH SID ABE

Promotion is mapped to “*Product Offering ABE::Product Promotion ABE*” in TMF Information Framework (SID).

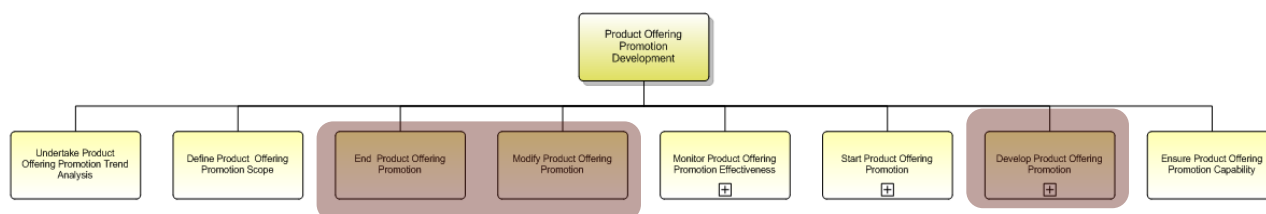
MAPPING WITH ETOM PROCESS

In Business Process Framework there is the description for promotion:

- Level 2 Process: 1.2.7 Product Specification & Offering Development & Retirement
- Level 3 Process: 1.2.7.2 Product Offering Development & Retirement
- Level 4 Process : 1.2.7.2.6 Product Offering Promotion Development

Brief Description of “Product Offering Promotion Development” is to develop **a promotion** for one or more product offerings delivered using different mediums (television, radio, print, online) that advertise the promotion to reach the market, customers and channels.

The level 4 process of “Product Offering Promotion Development” is illustrated as a group of Level 5 processes.



In these processes, there are several of them requiring the API to support the design and development of the promotion, including:

- ✓ End Product Offering Promotion
- ✓ Modify Product Offering Promotion
- ✓ Develop Product Offering Promotion

DISTINCTION BETWEEN THIS API AND OTHER EXISTING TMF APIS

Here the differences between promotion API and other existing published TMF APIs are explained to clarify why this separate API is not covered simply with those APIs.

Promotion API REST Specification

✓ **Difference with Product Catalog API**

Promotion and Product Offering in the Product Catalog has some similarities. The product offering and promotion has the relationship of mutual complement.

Since Product Catalog API focuses on the configuration of product offering, it is necessary to distinguish the relationship between Product Offering and Promotion. The key comparison points are listed as the table below, especially the yellow background color.

Feature	Product Offering	Promotion
Definition	Formal sellable entity on the shelf for sales.	Indirectly acquired benefits to promote the sales of offering.
Role	Product Manager	Marketing or sales team
Target customer	Most customer, sometimes for specific customers	For specific customer, and only available for all customer in short term
Time Span	Long Term	Certain period
Relation with product	Depending on product	No direct relation with product
Tariff and Charge	Often including tariff plan	None
Discount & rebate	Sometimes included	Included
Awarding	None	Awarding the customer with gift, code, or loyalty points
Criteria	Conditions consist of place, channel, term	More flexible condition including the combination of factors (customer attribute, offering attribute, resource elements, channel)
Acquisition	By purchasing	Only available by awarding for free, or by joining the activity. Promotion cannot be sold directly.
Relationship	Multiple type: dependency, mutual exclusive, replacement, inheritance	Mutual Exclusive and Dependency
Terms & Condition	Necessary	Contract restraint is optional

Promotion API REST Specification

Feature	Product Offering	Promotion
Penalty	Sometimes with penalty	None
Redemption	None	Redeem code or coupon

From the comparison, it is self-evident the promotion is another type of data entity which is not same as Product Offering.

✓ **Difference with Service Qualification**

This API is used to provide the validation on eligibility and compatibility business rules during the purchase phase of the offering.

On the other side, **Promotion API** is used after the product offering is validated and chosen for purchase. The confirmed and selected product offering is the prerequisite of filtering the promotion.

✓ **Difference with Product Ordering**

This API focuses on the order (purchase) action and the implementation after the chosen offering and promotion has been submitted.

As for Promotion API, it only acts before the product order is created.

✓ **Difference with Shopping Cart API**

The Shopping Cart API is a container to load the selected offerings for the customer to purchase. It does not replace the offering or promotion.

Promotion API only depends on the “selected offering”, not the shopping cart itself. There could be two scenarios:

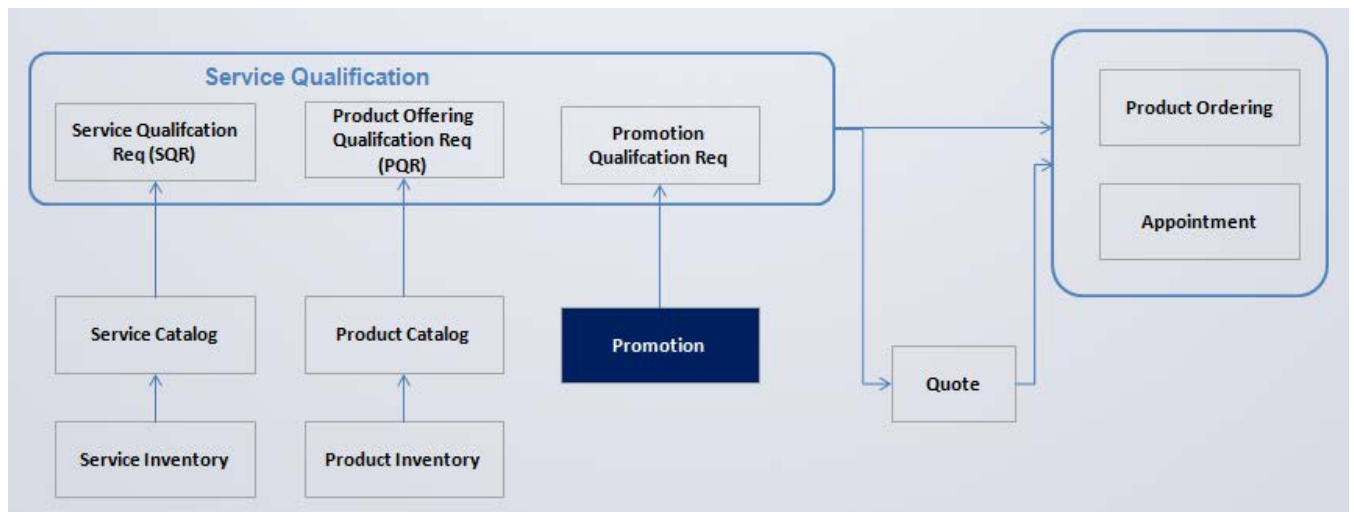
- 1) The offering in the shopping cart will be used as the input condition of the Promotion API. Based on the selected offering in the cart, the relevant promotion can be queried and shown to the user (customer or agent) on e-commerce portal. If the user changes the offering in the shopping cart, promotion will also be impacted.
- 2) The user is also allowed to purchase the offering without adding it into the cart. The promotion will still be effective based on the chosen offering information.

Promotion API in the Transaction Flow

Promotion API REST Specification

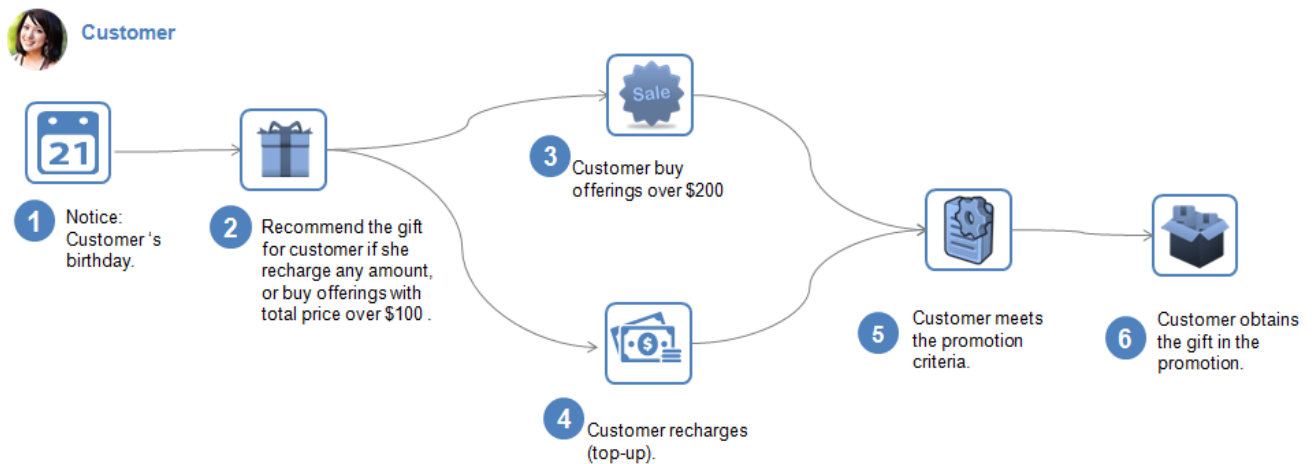
Based on the flow in the *TMF645_Service_Qualification_API_REST_Specification_R16.0.1*, the various APIs are organized in the sequence to show their relationship with the customer journey.

The position of Promotion API can be found in this diagram. It is invoked after the product offering has been selected and before the Product Ordering is submitted (created).



SAMPLE USE CASES

Examples of use cases using Promotion API is as following



Use Case Id	UC_TMF_Promotion_0001
Use Case Name	Customer consumes and acquires promotion.
Summary	This case describes the customer purchases the offering, meets the criteria of the promotion, and obtains the promotion.
Actor(s)	Customer (person)
Pre-Conditions	Promotion API has been used to configure the promotion.
Begins When	When the marketing team or marketing system starts disseminating the information (advertisement) for the promotion.
Description	<ol style="list-style-type: none"> 1) The customer gets the notice. It is the customer 's birthday so there is promotion. 2) The system or agent recommends the gift for customer if she recharge any amount or buy offerings with total price over \$100 . <i>Note: Promotion API is used in this step.</i> 3) Customer buy offerings over \$200 4) (Or) Customer recharges (top-up). 5) Customer meets the promotion criteria. 6) Customer obtains the gift which is defined in the promotion.

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Ends When	<p><i>In case of submitting successfully:</i></p> <p>The promotion is handled by the e-commerce platform and the customer gains the promotion.</p> <p><i>In case of failure:</i></p> <p>The promotion is not given to the customer even if he/she should have one. Such exception needs manual interference to redeem (save) the situation.</p>
Post-Conditions	
Exceptions	
Traceability	

SUPPORT OF POLYMORPHISM AND EXTENSION PATTERNS

Support of polymorphic collections and types and schema based extension is provided by means of a list of generic meta-attributes that we describe below.

Generic support of polymorphism and pattern extensions is described in the TMF API Guidelines v3.0 Part 2 document.

The @type attribute provides a way to represent the actual class type of an entity. All resources and sub-resources of this API have a @type attributes that can be provided when this is useful. Such as Promotion, PromotionPattern Entity. All resources and sub-resources of this API have a @type attributes that can be provided when this is useful.

The @schemaLocation property can be used in resources to allow specifying user-defined properties of an Entity or to specify the expected characteristics of an entity.

The @baseType attribute gives a way to provide explicitly the base of class of a given resource that has been extended.

Notice that because these meta-attributes have a generic meaning we will not repeat their definition in the resource description tables of each resource and each sub-resource.

RESOURCE MODEL

MANAGED ENTITY AND TASK RESOURCE MODELS

COMMUNICATION MESSAGE RESOURCE MODEL

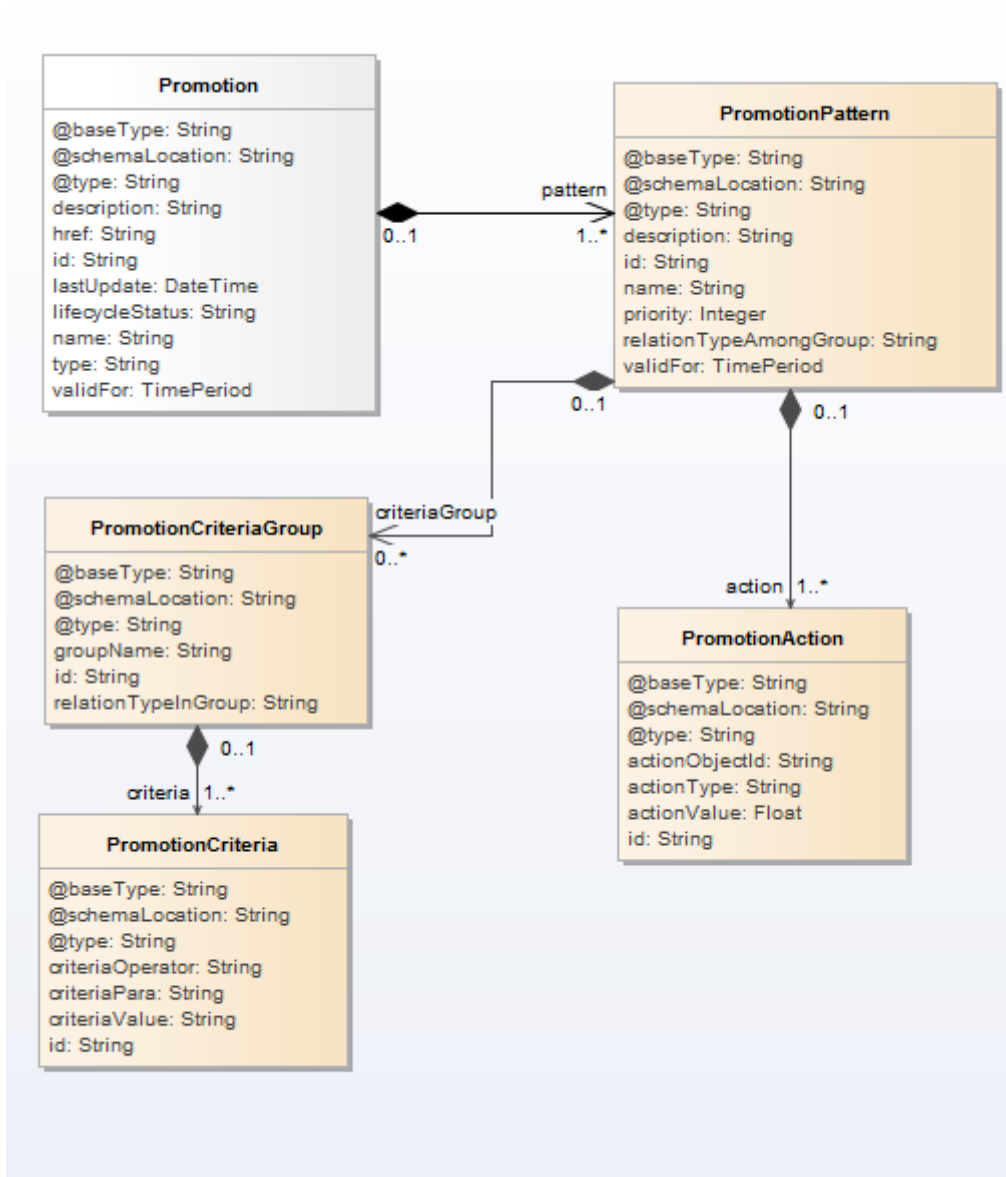


Fig.1. Promotion Resource

FIELD DESCRIPTIONS

Promotion

Promotion Resource is used to provide the additional discount, voucher, bonus or gift to the customer who meets the pre-defined criteria. Using promotion, the enterprise is able to attract the users and encourage more consumption, especially continuous purchases. Normally Promotion is not regarded as one type of product or product offering. It is often applied when the customer buys the product offerings with the price or amount surpassing the certain limit.

Promotion

Field	Type	Description
@type	String	Indicates the type of resource. Here can be promotion.
@baseType	String	Indicates the type of resource. Here can be promotion.
@schemaLocation	String	Link to schema describing this REST resource.
description	String	Description of Promotion
lastUpdate	DateTime	Latest update date of Promotion
lifecycleStatus	String	Status of Promotion, incl. <ul style="list-style-type: none"> ✓ Draft ✓ Test ✓ WaitForApproval ✓ Release ✓ Suspend ✓ Retirement
name	String	Name of Promotion
type	String	This field is optional. Type of promotion. The basic type is :

Promotion API REST Specification

Field	Type	Description
		<p>1: Award. It means the gift or telecom free unit is given to the customer for free.</p> <p>2: Discount. It means the promotion will cause the discount on the price of the offering.</p> <p>3: Reduction. It means the promotion will cause the reduction on the price of the offering.</p> <p>More types can be extended in future.</p>
validFor	TimePeriod	The period in which the Promotion is valid.
id	String	Unique identifier of Promotion
href	String	Hypertext Reference of the Promotion.
pattern	Array	A list of promotion patterns.(PromotionPattern[*])

PromotionPattern

Detailed pattern of the promotion.

The pattern decides the conditions of promotion and the benefit of the promotion to be given to the eligible customer.

Field	Type	Description
@type	String	Indicates the type of resource. Here can be promotion pattern.
@baseType	String	Indicates the base type of resource. Here can be promotion pattern.
@schemaLocation	String	Link to schema describing this REST resource.
name	String	Name
priority	integer	This field is optional. Priority.

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Field	Type	Description
		Smaller number means “high”.
description	String	This field is optional. Description
relationTypeAmongGroup	String	This field is optional. The logical relation type amongst the “promotion criteria group”. “AND”: AND logical relation “OR”: OR logical relation
action	Array	A list of promotion actions.(promotionAction [*])
criteriaGroup	Array	A list of promotion criteria groups.(PromotionCriteriaGroup[*])

PromotionCriteriaGroup

The group of the criteria of the promotion.

The logical relationship between different groups is decided by the “relationTypeInGroup”.

Field	Type	Description
id	String	Unique identifier.
groupName	String	Name of the group
relationTypeInGroup	String	The logical relation type amongst the various criteria inside a “promotion criteria group”. “AND”: AND logical relation “OR”: OR logical relation
criteria	Array	A list of promotion criteria.(PromotionCriteria[*])
@type	String	Indicates the type of resource.

Promotion API REST Specification

Field	Type	Description
@baseType	String	Indicates the base type of resource.
@schemaLocation	String	Link to schema describing this REST resource.

PromotionCriteria

Criteria of the promotion.

Field	Type	Description
@type	String	Indicates the type of resource.
@baseType	String	Indicates the base type of resource.
@schemaLocation	String	Link to schema describing this REST resource.
id	String	Unique identifier.
criteriaPara	String	<p>The parameter (factor) of the criteria.</p> <p>The basic factors are abstracted from these data sources:</p> <ul style="list-style-type: none"> ✓ customer information ✓ subscribed offering ✓ subscribed product ✓ category of the subscriber offering <p>The detail parameters are:</p> <ul style="list-style-type: none"> - 1.1: Customer id - 1.2: Customer name - 1.3 Customer birthday - 1.4 customer level - 2.1 subscribed offering ID - 2.2 monthly fee amount of subscriber offering - 2.3 business fee amount of subscriber offering - 2.4 total monthly fee amount of all the subscriber offering in the single order - 2.5 total business fee amount of all the subscriber offering in the single order - 3.1 subscribed product ID

Promotion API REST Specification

Field	Type	Description
		<ul style="list-style-type: none"> - 4.1 category ID of the subscribed offering - 5.1 recharge amount per day - 5.2 recharge amount per week - 5.3 recharge amount per month - 6.1 bill amount - 7.1 channel type (e.g. retail shop, mobile app) <p>More factors can be extended in future.</p>
criteriaOperator	String	<p>The logic expression including parameter and operator.</p> <p>"="</p> <p>">"</p> <p>"<"</p> <p>">="</p> <p>"<="</p> <p>"<>"</p>
criteriaValue	String	<p>The value is filled for the comparison of the criteria.</p> <p>For example, when the criteriaPara is "1.2 customer birthday", the value can be "1997/12/30".</p>

PromotionAction

Action of the promotion.

When the customer meets the conditions in the "promotion pattern", the customer can be given the benefits in the "action".

Field	Type	Description
@type	String	Indicates the type of resource.
@baseType	String	Indicates the base type of resource.

Promotion API REST Specification

Field	Type	Description
@schemaLocation	String	Link to schema describing this REST resource.
id	String	Unique identifier.
actionType	String	<p>When the “Promotion -> type” is “1: Award”, the action type can be one of the following:</p> <ul style="list-style-type: none"> 1.1. voice (minute) 1.2 data (MB) 1.3 data (GB) 1.4 SMS 2.1 bonus point 3.1 physical gift (e.g. a cup, a USB disk) 3.2 voucher 4.1 promotion code (it could be used by the customer to redeem another gift) 5.1 an existing offering 6.1 currency (i.e. money, balance on the account) <p>The customer who meets the criteria can acquire the awards.</p> <p>Nota bene: More types of action can be extended in future.</p>
actionValue	Float	<p>When the “Promotion -> type” is “1: Award”, it means the amount or value of the awards decided by “actionType”, such as:</p> <ul style="list-style-type: none"> ✓ Amount of gift ✓ Amount of bonus (money or point) ✓ Value of discount <ul style="list-style-type: none"> ▪ When the “Promotion -> type” is “2: Discount”, it means the value of the discount ▪ When the “Promotion -> type” is “3: reduction”, it means the value of the reduced money (e.g. USD50, 20 Euro).

Field	Type	Description
actionObjectId	Integer	<p>It refers to the object (entity) ID which is impacted by the promotion action.</p> <ul style="list-style-type: none"> When the "Promotion -> type" is "1: Award", and the actionType is "1.1, 1.2, 1.3, 1.4", the "actionObjectId" is the sub-account ID. When the "Promotion -> type" is "2: Discount", it is the offering ID <p>When the "Promotion -> type" is "3: reduction", it is the offering ID.</p>

JSON REPRESENTATION SAMPLE

We provide below the JSON representation of an example of Promotion Resource object:

```
{
  "id": "1001",
  "href": "http://serverlocation:port/promotion/v2/promotion/1001",
  "name": "Promotion of birthday",
  "description": "VIP Customer can get gift on the birthday if the customer recharges over $50 or the same customer purchase $100 monthly fee in one order",
  "lastUpdate": "2016-05-21 T04:00:00.0Z",
  "validFor": {
    "startDateTime": "2017-12-19 T04:00:00.0Z",
    "endDateTime": "2017-12-31 T20:42:23.0Z"
  },
  "lifecycleStatus": "Test",

  "pattern": {
    "id": "1109",
    "name": "Gift for recharge or purchase on birthday",
    "description": "Gift is effective when the customer is on birthday, and buys offerings with total price over $100 or recharge over $50",
    "priority": "0",
    "relationTypeAmongGroup": "AND",
    "validFor": {

```

```

    "startDateTime": "2016-06-19 T04:00:00.0Z",
    "endDateTime": "2016-09-19 T20:42:23.0Z"
  },
  "criteriaGroup":
  [
    {
      "id": "Group.A ",
      "groupName": "birthday as condition ",
      "relationTypeInGroup": "AND"
      "promotionCriteria":
      [{
        "id": "Group.A.1",
        "criteriaPara": "1.3",
        "criteriaOperator": "=",
        "criteriaValue": "#currentDate"
      }
    ],
    {
      "id": "Group.B",
      "groupName": "recharge amount or payment amount as condition",
      "relationTypeInGroup": "OR"
      "criteria": [
        {
          "id": "Group.B.1",
          "criteriaPara": "5.1",
          "criteriaOperator": ">=",
          "criteriaValue": "50"
        },
        {
          "id": "Group.B.2",
          "criteriaPara": "2.4",
          "criteriaOperator": ">=",
          "criteriaValue": "100"
        }
      ]
    }
  ],
  "action":
  [{
    "actionValue": 1.0
    "actionObjectId": "2001",
    "actionType": "3.1",
    "id": "2209",
  }
]
}
}

```

NOTIFICATION RESOURCE MODELS

3 notifications are defined for this API

Notifications related to CommunicationMessage:

- PromotionCreationNotification
- PromotionChangeNotification
- CommunicationMessageDeletionNotification

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).

PROMOTION CREATION NOTIFICATION

Notification sent when a new Promotion resource is created.

Json representation sample

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

```
{
  "eventId": "8976",
  "eventTime": "2014-09-27T05:46:25.0Z",
  "eventType": "PromotionCreationNotification",
  "event":
```

```
{
  "promotion": {-- SEE Promotion RESOURCE --}
}
```

PROMOTION CHANGE NOTIFICATION

Notification sent when changing a Promotion resource.

Json representation sample

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

```
{
  "eventId": "8976",
  "eventTime": "2014-09-27T05:46:25.0Z",
  "eventType": "PromotionChangeNotification",
  "event":
    {
      "promotion": {-- SEE Promotion RESOURCE --}
    }
}
```


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.

POST /PROMOTION

Description

This operation creates a promotion entity.

Status Code	Description
201	The resource has been added successfully
400	Request Error
500	The server encountered an unexpected condition which prevented it from fulfilling the request
Other	The server may use other HTTP error status codes to reflect the error, the client must be processed in accordance with the error messages in other HTTP specifications.

Usage Samples

REQUEST
POST /promotion/v1/promotion Content-type: application/json <pre>{ "name": "Promotion of birthday", "description": "VIP Customer can get gift on the birthday if the customer recharges over \$50 or the same customer purchase \$100 monthly fee in one order", "lastUpdate": "2016-05-21 T04:00:00.OZ", "validFor": { "startDateTime": "2017-12-19 T04:00:00.OZ", "endDateTime": "2017-12-31 T20:42:23.OZ" }, }</pre>

```
"lifecycleStatus": "Test",

"pattern ":
{
  "id": "1109",
  "name": "Gift for recharge or purchase on birthday",
  "priority": "0",
  "relationTypeAmongGroup": "AND",
  "criteriaGroup":
  [
    {
      "id": "Group.B",
      "groupName": "recharge amount or payment amount as condition",
      "relationTypeInGroup": "OR"
      "criteria": [
        {
          "id": "Group.B.1",
          "criteriaPara": "5.1",
          "criteriaOperator": ">=",
          "criteriaValue": "50"
        },
        {
          "id": "Group.B.2",
          "criteriaPara": "2.4",
          "criteriaOperator": ">=",
          "criteriaValue": "100"
        }
      ]
    }
  ],
  "action":
```

```
{
  {
    "actionValue": 1.0,
    "actionObjectId": "2001",
    "actionType": "3.1",
    "id": "2209"
  }
}
```

RESPONSE

201

Content-Type: application/json

```
{
  "id": "1001",
  "href": "http://serverlocation:port/promotion/v1/promotion/1001",
  "name": "Promotion of birthday",
  "description": "VIP Customer can get gift on the birthday if the customer recharges over $50 or the same customer purchase $100 monthly fee in one order",
  "lastUpdate": "2016-05-21 T04:00:00.0Z",
  "validFor":
  {
    "startDateTime": "2017-12-19 T04:00:00.0Z",
    "endDateTime": "2017-12-31 T20:42:23.0Z"
  },
  "lifecycleStatus": "Test",
  "pattern ":
  {
    "id": "1109",
    "name": "Gift for recharge or purchase on birthday",
    "priority": "0",
    "relationTypeAmongGroup": "AND",
```

```
"criteriaGroup":
[
  {
    "id": "Group.B",
    "groupName": "recharge amount or payment amount as condition",
    "relationTypeInGroup": "OR"
    "criteria": [
      {
        "id": "Group.B.1",
        "criteriaPara": "5.1",
        "criteriaOperator": ">=",
        "criteriaValue": "50"
      },
      {
        "id": "Group.B.2",
        "criteriaPara": "2.4",
        "criteriaOperator": ">=",
        "criteriaValue": "100"
      }
    ]
  },
  "action":
  [{
    "actionValue": 1.0,
    "actionObjectId": "2001",
    "actionType": "3.1",
    "id": "2209"
  }]
}
```

GET / PROMOTION/{ID}?FIELDS=...&{FILTERING}

Description:

This operation retrieves a promotion 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.

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

Request
GET /promotion/v1/promotion/11006 Accept: application/json
Response
200 Content-Type: application/json { <i>a whole representation of the promotion resource with all its attributes.</i> <i>Refer to promotion Resource.</i> }

GET /PROMOTION?FIELDS=...&{FILTERING}

Description:

This operation is used to list promotion 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 Promotion resources.

REQUEST
GET /promotion/v1/promotion Accept: application/json
RESPONSE
200 Content-Type: application/json [{ <i>a whole representation of the promotion resource with all its attributes.</i> <i>Refer to promotion Resource.</i> }]

PATCH /PROMOTION/{ID}

Description

This operation allows partial updates of a promotion 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.

Usage Samples

Promotion API REST Specification

Here's an example of a request for patching a Promotion resource. It is a request for changing the contact medium.

Request
<pre>PATCH /promotion/v1/promotion/5074 Content-Type: application/merge-patch+json { "name": "Promotion of new year", "validFor": { "startDateTime": "2018-1-1 T04:00:00.OZ", "endDateTime": "2018-2-15 T20:42:23.OZ" }, "lifecycleStatus": "Release", }</pre>
Response
<pre>200 Content-Type: application/json <i>Following a whole representation of the promotion resource with all its attributes. Refer to promotion Resource.</i></pre>

DELETE /PROMOTION/{ID}**Description**

This operation deletes a Promotion entity.

Usage Samples

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

Request
DELETE /promotion/v1/promotion/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
<pre>POST /api/hub Accept: application/json {"callback": "http://in.listener.com"}</pre>
Response
<pre>201 Content-Type: application/json Location: /api/hub/42 {"id": "42", "callback": "http://in.listener.com", "query": null}</pre>

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.

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RELEASE HISTORY

Release Number	Date	Release led by:	Description
17.5.0	January 2018	Maxu maxu@huawei.com	Initial Release
18.0.0	June 2018	Hongxia Hao haohongxia@huawei.com	Updated Release

VERSION HISTORY

Version Number	Date	Modified by:	Description
1.0	5/9/2017		First Release of Draft Version of the Document.
	6/14/2017	Hongxia Hao	Updated version to address comments.
	26/02/2018	Hongxia Hao	Aligned to DG3.0.
2.0	20/03/2018	Hongxia Hao	Corrected some typos. Removed the 'Mandatory/Non-Mandatory' and 'Patchable' description to avoid the conflict with Conformance Profile. Aligned with conformance profile and new swagger.
2.1	12-Jun-2018	Hongxia Hao	Updated to TM Forum new brand guidelines.
2.1.1	28-Jun-2018	Adrienne Walcott	Formatting/style edits prior to R18 publishing.

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