SAP Customer Activity Repository 3.0 FP1
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Client API for Omnichannel Promotion Pricing

SAP

Document History

Version	Date	Change
1.0	2016-06-08	Initial version

Client API 2.0

Interface Summary

The Client API 2.0 is part of the promotion pricing service 2.0 and defines the data model for price calculation requests and responses. The request contains a shopping cart with one or multiple line items. The promotion pricing service applies monetary discounts and loyalty points (for example) to the given shopping cart based on its content (items, prices, scanned coupons, assigned customer groups, and so on) and on the master data accessbile via the Data Access API. After the price calculation, it returns added information about the promotions that have been applied.

> The communication is stateless and without any graphical user interface (GUI); it is up to the client to build up a context for the data that it receives.

Preconditions

The promotion pricing service is an autonomous service. It does not need to invoke other services in order to be able to calculate monetary discounts and loyalty points because the necessary data is provided as part of the request response that is available via its Data Access API.

The promotion pricing service receives the following information as part of the request:

- Regular prices (RegularSalesUnitPrice)

  > The regular price can also be retrieved via the Data Access API

- Complete article and merchandise hierarchies of an item (MerchandiseHierarchy)
  For example not only the merchandise hierarchy groups that are assigned directly to the items, but the whole merchandise hierarchy trees above them.
- Customer group assignments (Loyalty)
- Manual triggers (PromotionManualTriggerType)
- Extension elements (any)

Calling the Client API

Basically, there a two different ways how to call (use) the Client API.
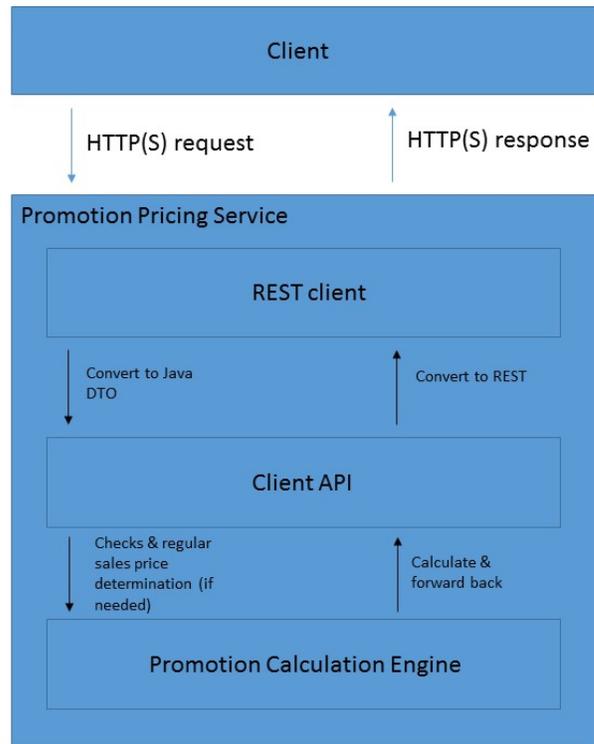
HTTP(S) based REST access

The client, for example, a POS system sends an HTTP(S) based REST request to the promotion pricing service.

Call Details	Value
HTTP(S) method	POST
URL	http[s]://<HOSTNAME>:<PORT>/restapi/

POST header field	Header field value	Mandatory	Description
Content-Type	application/xml or application/json	yes	The content type of the body. If the body contains XML then use application/xml. If the body contains JSON then use application/json.
Authorization	Basic authentication	yes	The basic authentication contains ID and password of the service user that is used to carry out the Promotion Pricing Service.

POST body content	Mandatory	Data type	Description
Price calulation request as XML or JSON	Yes	PriceCalculate (see chapter Data Model)	The price calculation request It contains the version numbers, an ARTS header and the shopping cart (see chapter Data Model).

HTTP(S) status code	Response body content	Data type	Description
200 (OK)	Price calculation response as XML or JSON	PriceCalculateResponse (see chapter Data Model)	The response of the promotion pricing service to the shopping cart. This can be the updated shopping cart that includes the calculated discounts and bonus points, information about used promotion master data, and applied coupons.
400 (Bad Request)	Price calculation response as XML or JSON	Price calculation response as XML or JSON	Calculation request could not be fulfilled due to wrong or missing data.
401 (Unauthorized)			Calculation request could not be fulfilled due to a non-existing service user and/or a wrong password.
403 (Forbidden)			Calculation request could not be fulfilled due to a service user without the necessary permissions.
500 (Internal Server Error)			Calculation request could not be fulfilled due to unforeseen technical problems, for example, database exceptions.

Java Access

The needed libraries for the promotion pricing service are integrated into the system of the client. With this, the client can directly call the method *calculate()* of an implementation of the *PromotionPricingService* interface:

PromotionPricingService interface

```
/*************************************************************************
Class: PromotionPricingService

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*************************************************************************/

package com.sap.ppengine.client.service;
import java.util.Map;
import com.sap.ppengine.client.dto.PriceCalculate;
import com.sap.ppengine.client.dto.PriceCalculateResponse;
/**
 * The (external) pricing and promotion service interface
 *
 */
public interface PromotionPricingService {
  /**
   * The single entry method for the pricing and promotion service
   *
   * @param priceCalculate
   *            Price Calculate request
   * @param configParams
   *            Configuration parameters
   * @return Price Calculate response
   */
 public PriceCalculateResponse calculate(PriceCalculate priceCalculate,
    Map<String, String> configParams);
}
```

Data Model

This chapter describes all entities of the SAP Client API 2.0 version of the promotion pricing service 2.0. The SAP Client API 2.0 version of the promotion pricing service 2.0 is based on the ARTS Pricing Service Interface 4.0.0. It is a subset of the ARTS data model without the elements that are not needed for price calculation and enriched by elements that are not present in the ARTS standard. Simple types, for example string or decimal, are not described in detail. The cardinality of the elements is provided by the underlying ARTS data model. Restrictions to this cardinality, and restrictions to the possible enumeration values are described in the corresponding field.
In case of JSON, the column *Attribute/Element* is not relevant as there are no attributes in JSON but only elements.
In the column *Available as of Client API Version* refers to the Client API version, not the version of the promotion pricing service which might differ from each other in the future releases.

PriceCalculateType

Generated Java class: com.sap.ppengine.client.dto.PriceCalculate

Top-Level entity that contains a price calculation request.

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks

InternalMajorVersion	integer	Attribute		Yes	1.0	Major part of the version, for example the value *4* if the version is 4.6.
						This is the version of the SAP Client API and not the ARTS Pricing Service Interface version that is always 4.0.0.
						The current major version is *2* but requests with major version 1 are also still supported, other values lead to error ID *SAP-0009*. If this attribute is missing in the request, error ID *SAP-0008* is sent back.
InternalMinorVersion	integer	Attribute		No	1.0	Minor part of the version, For example the value *6* if the version is 4.6.
						This is the version of the SAP Client API and not the ARTS Pricing Service Interface version that is always 4.0.0.
						The current supported minor version is *0* (for both supported major versions), other values lead to error ID *SAP-0009*. The default value is set to *0*.
ARTSHeader	ARTSCommon Header Type	Element	[0..1] **Restricted to 1.**	Yes	1.0	Header information about the ARTS request or response If this element is missing in the request, error ID *SAP-0007* is sent back. For more information, see chapter ARTSCommon Header Type.
PriceCalculateBody	PriceCalculateBase	Element	[0..*] **Restricted to 1.**	Yes	1.0	Price calculation information of the ARTS request/response. In case of no or more than one PriceCalculateBody, error ID *SAP-0013* is sent back. For more information, see chapter PriceCalculateBase.
any		Element	[0..*]	No	1.0	Extensibility element

PriceCalculateResponseType

Generated Java class: com.sap.ppengine.client.dto.PriceCalculateResponse

Top-Level entity that contains the response to a price calculation request.

In the data model, there is no difference between the request and the response. Therefore, *PriceCalculateResponseType* is identical to *PriceCalculateType*.

ARTSCommonHeaderType

Generated Java class: com.sap.ppengine.client.dto.ARTSCommonHeaderType

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
ActionCode	ActionCommonData TypeCodes	Attribute		No	1.0	Defines the action of the request Only *Calculate* is supported, other values lead to error ID *SAP-0010*. For more information, see chapter ActionCommonDataTypeCodes.

MessageType	MessageTypeCode	Attribute		No	1.0	Defines the type of the message, for example *Request* The following values are supported: • *Request* for the request Other values than Request lead to error ID *SAP-0011*. • *Response* (for the response) For more information, see chapter MessageTypeCode.
MessageID	MessageIDType (string)	Element	[0..1] Restricted to 1	Yes	1.0	UUID of the request that is generated by the calling application, for example, a POS workstation or a Hybris online store. In case of a response, the UUID is generated by the promotion pricing service. If missing in the request, error ID *GKR-100506* is returned.
DateTime	DateTimeType (dateTime)	Element	[0..*]	No	1.0	Timestamp (which is always interpreted as local time) of the message with the following format: **2015-01-13T04:48:30.427** {table below}
Response	ResponseType	Element	[0..1]	No	1.0	Unique information needed in a response > In case of a request, this information is not available. For more information, see chapter ResponseType.
Requestor	string	Element	[0..1]	No	1.0	This entity that requests the message.
BusinessUnit	BusinessUnitCommon Data	Element	[0..*] Restricted to 1	Yes	1.0	Defines the location If there are no business units, or more than one business unit maintained, error ID *SAP-0012* is generated. For more information, see chapter BusinessUnitCommon Data.
WorkstationID	WorkstationIDCommon Data (string)	Element	[0..1]	No	1.0	Identifier of the workstation, typically the serial number,that sends the request
RequestedLanguage	string	Element	[0..1]	No	1.0	Language code in ISO 639-1 format for texts requested from client (**deprecated**: use **RequestedMultiLanguage** instead). If missing in the request, the first language found in the database is returned.

DateTime format table:

Value	DescriptionDescription
2015	Year
01	Month
13	Day
T	Time
04	Hours
48	Minutes
30	Seconds
427	Milliseconds

RequestedMultiLanguage	string	Element	[0..*]	No	2.0	Language codes in ISO 639-1 format for texts requested from client. If missing in the request, all available languages in the database are returned.
any		Element	[0..*]	No	1.0	Extensibility element

ActionCommonDataTypeCodes

Generated Java enum: com.sap.ppengine.client.dto.ActionCommonDataTypeCodesEnumeration

This enum consists of the values listed below. The values that are supported by the promotion pricing service are marked in bold:

- Add
- Adjust
- Begin
- **Calculate**
- Cancel
- Complete
- Create
- Delete
- Delivered
- Dispatch
- Donate
- Error
- Lookup
- Initiate
- Inquiry
- Instruction
- Information
- Packed
- PartialCancel
- PartialComplete
- Picked
- Read
- Refusal
- Remove
- Request
- Replace
- Reserve
- Return
- Search
- Settle
- Shipped
- Subtract
- Suggest
- Update

MessageTypeCode

Generated Java enum: com.sap.ppengine.client.dto.MessageTypeCodeEnumeration

This enum consists of the values listed below. The values that are supported by the promotion pricing service are marked in bold:

- **Request**
- **Response**
- Publish
- Acknowledge

ResponseType

ResponseType extends **ResponseCommonData**.

Currently, only an extensibility element is added in entity **ResponseType**.

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
any		Element	[0..*]	No	1.0	Extensibility element

ResponseCommonData

Generated Java class: com.sap.ppengine.client.dto.ResponseCommonData

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
ResponseCode	ResponseTypeCode	Attribute		No	1.0	Indicates if the message was successful (*OK*), or not (*Rejected*). The default value is set to *OK*. For more information, see chapter ResponseTypeCode.
RequestID	string	Element	[1]	Yes	1.0	This is a UUID that ties this response to the original request (**MessageID** from request).
ResponseTimestamp	dateTime	Element	[0..1]	No	1.0	Timestamp of the request to which the response belongs to with the following format: **2015-01-13T04:48:30.427-05:00** Value / Description: 2015 Year; 01 Month; 13 Day; T Time; 04 Hours; 48 Minutes; 30 Seconds; 427 Milliseconds; -05:00 Timezone
BusinessError	BusinessErrorType	Element	[0..*]	No	1.0	Error reporting mechanism between two applications. If there is no error, this class remains empty. For more information, see chapter BusinessErrorType.

ResponseTypeCode

Generated Java enum: com.sap.ppengine.client.dto.ResponseTypeCodeEnumeration

This enum consists of the values listed below. The values that are supported by the promotion pricing service are marked in bold:

- **OK**
- **Rejected**

BusinessErrorType

BusinessErrorType extends BusinessErrorCommonData.

> Currently, only an extensibility element is added in entity BusinessErrorType.

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
any		Element	[0..*]	No	1.0	Extensibility element

BusinessErrorCommonData

Generated Java class: com.sap.ppengine.client.dto.BusinessErrorCommonData

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
Severity	SeverityCodeType	Attribute		No	1.0	Evaluates the error. There are different error types, for example *Warning*. The default error type is *Information*. For more information, see chapter SeverityCodeType.
ErrorID	string	Element	[0..1]	No	1.0	Identifier for this particular instance of the error. For the entire list of possible error IDs, see chapter Error Handling.
Description	DescriptionCommonData	Element	[0..1]	No	1.0	Detailed information about the error. For more information, see chapter DescriptionCommonData.

SeverityCodeType

Generated Java enum: com.sap.ppengine.client.dto.SeverityCodeEnumeration

This enum consists of the following values (supported values in **bold**):

- **Information**
- **Warning**
- **Error**

BusinessUnitCommonData

Generated Java class: com.sap.ppengine.client.dto.BusinessUnitCommonData

BusinessUnitCommonData extends string. This entity contains the business unit identifier, for example, the identifier of a business unit can be defined in the ARTSCommonHeaderType entity as follows:

<BusinessUnit TypeCode="RetailStore">0001</BusinessUnit>

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
TypeCode	BusinessUnitTypeCode	Attribute		No	1.0	For business unit type, the following values are supported: • RetailStore • DistributionCenter • Factory • Vendor • Customer The default value is **RetailStore**. For more information, see chapter BusinessUnitTypeCode.
value	string				1.0	Business unit identifier In case of an invalid value, for example an empty string in the request, error ID *SAP-0017* is sent back. The identifier must not exceed 60 characters, otherwise the request cannot be processed and error ID SAP-*0022* is sent back.

BusinessUnitTypeCode

Generated Java enum: com.sap.ppengine.client.dto.BusinessUnitTypeCodeEnumeration

This enum consists of the values listed below. The values that are supported by the promotion pricing service are marked in bold:

- **RetailStore**
- **DistributionCenter**
- AdministrationCenter
- CallCenter
- WebSite
- Distributor
- Filler
- TransitCellar
- Producer
- Grower
- **Factory**
- Building
- Dormitory
- **Vendor**
- **Customer**

PriceCalculateBase

Generated Java class: com.sap.ppengine.client.dto.PriceCalculateBase

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks

TransactionType	TransactionType	Attribute		No	1.0	Type of the transaction This field is currently not evaluated. For more information, see chapter TransactionType.
NetPriceFlag	boolean	Attribute		Yes	1.0	Decides whether net or gross prices are to be determined.
CalculationMode	CalculationModeTypeCode	Attribute		No	2.0	Calculation mode for the price calculation. For more information, see chapter CalculationModeTypeCode. The default is *Basket*.
TransactionID	IDCommonData (string)	Element	[0..1]	No	1.0	Identifier of the transaction If the identifier is not provided in the request, it is generated automatically.
DateTime	DateTimeCommonData (dateTime)	Element	[0..1] **Restricted to 1.**	Yes	1.0	Timestamp relevant for any calculation. It is always interpreted as local time and the format is as follows: **2015-01-13T04:48:30.427** | Field	Value
---	---
Year	2015
Month	01
Day	13
Time	T
Hours	04
Minutes	48
Seconds	30
Milliseconds	427	 If this element is missing in the request, error ID *SAP-0014* is sent back.
Loyalty	LoyaltyAccountCommonData	Element	[0..*]	No	1.0	Loyalty information of the customer For more information, see chapter Loyalty AccountCommonData.
ShoppingBasket	ShoppingBasketBase	Element	[0..1] **Restricted to 1.**	Yes	1.0	Shopping cart of the price calculation request and response. If this element is missing in the request, error ID *SAP-0015* is sent back. For more information, see chapter Shoppi ngBasketBase.
RegularSalesUnitPrice RoundingRule	RoundingRuleType	Element	[0..1]	No	1.0	Rounding rule for regular prices (element RegularSalesUnitPrice) For more information, see chapter RoundingRuleType.
any		Element	[0..*]	No	1.0	Extensibility element

TransactionType

Generated Java enum: com.sap.ppengine.client.dto.TransactionTypeEnumeration

This enum consists of the following values:

- SaleTransaction
- ReturnTransaction
- ExchangeTransaction

CalculationModeTypeCode

Generated Java enum: com.sap.ppengine.client.dto.CalculationModeEnumeration

This enum was introduced with version 2.0 and consists of the following values:

- Basket
- LineItem

RoundingRuleType

Generated Java class: com.sap.ppengine.client.dto.RoundingRuleType

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
RoundingMethod	RoundingMethodTypeCode	Attribute		No	1.0	Describes the rounding method The default value is set to *Commercial*.
Multiple	DecimalCommonData (decimal)	Attribute		No	1.0	Contains the number of decimals and the round destination value. The multiple is *0.1* for nearest 1/10ths, *0.01* for nearest 1/100ths, *0.001* for nearest 1/1000ths, and so on. Likewise for whole numbers *1* is to the nearest unit, *10* is to nearest 10's, *100* is to nearest 100's and *1000* is to nearest 1000's. Accordingly, the multiple is *0.05* for nearest 5/100ths. This is used for rounding of cash amounts in countries where smaller coins do not exist. The default value is set to *0.01*.
any		Element	[0..*]	No	1.0	Extensibility element

RoundingMethodTypeCode

Generated Java enum: com.sap.ppengine.client.dto.TransactionTypeEnumeration

This enum consists of the following values:

- Up
- Down
- Commercial

LoyaltyAccountCommonData

Generated Java class: com.sap.ppengine.client.dto.LoyaltyAccountCommonData

Name	Type	Attribute/Element	Cardinality	Required	Available as of Client API Version	Description/Remarks

CustomerID	string	Element	[0..1]	Yes (in case of an existing LoyaltyProgram)	1.0	Identifier of the customer The length of the identifier element in the request must not exceed 40 characters, otherwise error ID *GKR-100501* is sent back. If the request does not contain an identifier, but only a LoyaltyProgramID, error ID *GKR-100506* is sent back.
LoyaltyProgram	LoyaltyAccountType	Element	[0..*]	No	1.0	Loyalty account information. For more information, see chapterLoyaltyAccountType
CustomerIsEmployeeFlag	boolean	Element	[0..1]	No	1.0	Indicates if this customer is an employee. Currently, this information is not needed as the only way for granting employee discounts in this context is to handle employees as customers. There are no employee discount groups available.

LoyaltyAccountType

Generated Java class: com.sap.ppengine.client.dto.LoyaltyAccountType

Name	Type	Attribute/Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
LoyaltyProgramID	LoyaltyProgramIDType (string)	Element	[0..*]	No	1.0	Identifier of the loyalty program The length of the LoyaltyProgramID element in the request must not exceed 40 characters, otherwise error ID *GKR-100501* is sent back.
any		Element	[0..*]	No	1.0	Extensibility element

ShoppingBasketBase

Generated Java class: com.sap.ppengine.client.dto.ShoppingBasketBase

Name	Type	Attribute/Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
LineItem	LineItemDomainSpecific	Element	[1..*]	Yes	1.0	Line items of the shopping cart If there are no line items in the request, error ID *SAP-0016* is sent back. If there are too many line items in the request, error ID *SAP-0019* is returned. This is defined via property *sap.client-impl.max numberoflineitems*, for more information see the *OPP Development & Extension Guide*. For more information, see chapter LineItemDomainSpecific.
any		Element	[0..*]	No	1.0	Extensibility element

LineItemDomainSpecific

Generated Java class: com.sap.ppengine.client.dto.LineItemDomainSpecific

LineItemDomainSpecific extends LineItemBase. Currently, no elements are added in entity LineItemDomainSpecific.

LineItemBase

Generated Java class: com.sap.ppengine.client.dto.LineItemBase

LineItemBase extends LineItemChoiceDomainSpecific.

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
SequenceNumber	SequenceNumberType (unsignedLong)	Element	[1]	Yes	1.0	Sequence number of this line item The first sequence number is always 0 and there must not be any gaps. It must also fall in the smallint/short range, otherwise error ID *GKR-100501* is sent back.
MerchandiseHierarchy	MerchandiseHierarchy CommonData	Element	[0..*]	No	1.0	Merchandise hierarchy information (group ID) At this place, the merchandise hierarchy groups are listed, to which the line item is assigned, directly or indirectly. For more information, see chapter MerchandiseHierarchy CommonData.

LineItemChoiceDomainSpecific

Generated Java class: com.sap.ppengine.client.dto.LineItemChoiceDomainSpecific

LineItemChoiceDomainSpecific extends LineItemChoiceBase. LineItemChoiceDomainSpecific can contain none or one of the entities mentioned in the following table (choice[0..1]). It also must not be mixed up with an element from LineItemChoiceBase.

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
PromotionManualTrigger	PromotionManual TriggerType	Element	[0..1]	No	1.0	Manual triggers created by the client in order to make the transaction eligible for promotions that contain eligibilities of type *manual trigger*. For more information, see chapter PromotionManual TriggerType.
PromotionExternalTrigger	PromotionExternal TriggerType	Element	[0..1]	No	1.0	External trigger External triggers are values which are requested via webservices in order to check whether the transaction is eligible for promotions that contain eligibilities of type *external trigger*. For more information, see chapter PromotionExternal TriggerType. External triggers are currently not supported.
any		Element	[0..1]	No	1.0	Extensibility element

LineItemChoiceBasee

Generated Java class: com.sap.ppengine.client.dto.LineItemChoiceBase

LineItemChoiceBase can contain none or one (choice[0..1]) of the entities mentioned in the following table. Although the cardinality can be 0, a ShoppingBasket should contain at least one real line item (Sale, SaleForDelivery, SaleForPickup, Return, ReturnForDelivery, ReturnForPickup, CustomerOrderForDelivery or CustomerOrderForPickup). It also must not be mixed up with an element from LineItemChoiceDomainSpecific.

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks

Sale	SaleBase	Element	[0..1]	No	1.0	A flavor of a line item whereby customers purchase an item and take it out directly. For more information, see chapter SaleBase.
SaleForDelivery	SaleForDeliveryBase	Element	[0..1]	No	1.0	A flavor of a line item whereby customers purchase an item that will be delivered to a location on a future date and time. For more information, see chapter SaleForDeliveryBase. SaleForDelivery is currently not supported.
SaleForPickup	SaleForPickupBase	Element	[0..1]	No	1.0	A flavor of a line item whereby customers purchase an item and pick it up from a location on a future date and time. For more information, see chapter SaleForPickupBase. SaleForPickup is currently not supported.
Return	ReturnBase	Element	[0..1]	No	1.0	A flavor of a line item whereby customers return an item that they brought at the same location. For more information, see chapter ReturnBase. Return is currently not supported.
ReturnForDelivery	ReturnForDeliveryBase	Element	[0..1]	No	1.0	A flavor of a line item whereby customers return an item that is to be delivered to a location on a future date and time. For more information, see chapter ReturnForDeliveryBase. ReturnForDelivery is currently not supported.
ReturnForPickup	ReturnForPickupBase	Element	[0..1]	No	1.0	A flavor of a line item whereby customers return an item and the store will pick it up from a location on a future date and time. For more information, see chapter ReturnForPickupBase. ReturnForPickup is currently not supported.
CustomerOrder ForDelivery	CustomerOrderFor DeliveryBase	Element	[0..1]	No	1.0	A flavor of a line item whereby customers purchase an unavailable item. The store places a special order on behalf of this purchase, and the item is to be delivered as soon as available. The customer may, or may not pay for the item at the time of the order placement. For more information, see chapter CustomerOrderFor DeliveryBase.
CustomerOrder ForPickup	CustomerOrderFor PickupBase	Element	[0..1]	No	1.0	A flavor of a line item whereby customers purchase an unavailable item. The store places a special order on behalf of this purchase, and the customers pick up the item when available. The customer may, or may not pay for the item at the time of the order placement. For more information, see chapter CustomerOrderFor PickupBase. CustomerOrderForPickup is currently not supported.
Discount	DiscountBase	Element	[0..1]	No	1.0	Discount on transaction level For more information, see chapter DiscountBase.
LoyaltyReward	LoyaltyRewardBase	Element	[0..1]	No	1.0	Loyalty reward on transaction level for the customer The crediting of a customer loyalty account with points is the only supported reward type. For more information, see chapter LoyaltyRewardBase.
Coupon	TenderCouponBase	Element	[0..1]	No	1.0	Allows the entry of coupons. Unused coupons are to be returned to the customer respectively the customer has to be notified about that fact. For more information, see chapter TenderCouponBase.

MerchandiseHierarchyCommonData

Generated Java class: com.sap.ppengine.client.dto.MerchandiseHierarchyCommonData

MerchandiseHierarchyCommonData extends string.

This entity contains the merchandise hierarchy group identifier, for example the identifier of a merchandise hierarchy group is given in the LineItemBase entity as follows:

<MerchandiseHierarchy ID="1">12345</ MerchandiseHierarchy>

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
ID	string	Attribute		No	1.0	Merchandise hierarchy group identifier qualifier The length must not exceed 4 characters, otherwise error ID *GKR-100501* is sent back. The value '1' is to be used in case of merchandise groups, otherwise the article hierarchy ID is to be used.
value	string				1.0	Merchandise hierarchy group identifier The length must not exceed 30 characters, otherwise error ID *GKR-100501* is sent back.

PromotionManualTriggerType

Generated Java class: com.sap.ppengine.client.dto.PromotionManualTriggerType

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
ManualTrigger SequenceNumber	integer	Element	[1]	Yes	1.0	Sequence number of the manual trigger allowing more than one trigger to be assigned to a line item respectively the transaction. It must fall into the smallint/short range, otherwise error ID GK R-100501 is sent back. It also must be unique in the context of the current line (for line-item related manual triggers respectively) the transaction (for transaction-related manual triggers), otherwise error ID *GK R-100505* is sent back.
ManualTriggerType	string	Element	[1]	Yes	1.0	Type of the manual trigger The value must match the eligibility master data so that the cor responding promotion can be applied. The length of this value must not exceed 2 characters in the request (e.g. *CO*), otherwise error ID *GKR-100501* is sent back.
ManualTriggerValue	string	Element	[1]	Yes	1.0	Value of the manual trigger This value must match the eligibility master data so that the cor responding promotion can be applied. The length of this field must not exceed 255 chars in the request, otherwise error ID *GKR-100501* is sent back.
PrivilegeType	string	Element	[1]	Yes	1.0	Privilege type of the manual trigger. Possible values are: • *PS* - The new price amount for line item-related triggers *RS* - The reduction amount for line item-related triggers • *RP* - The reduction percentage • *AM* - The reduction value resulting from price derivation rule master data If there is another value in the request, error ID *GKR-100500* s ent back.

PrivilegeValue	AmountCommonData	Element	[1]	Yes	1.0	Privilege value of the manual trigger that is defined by the *PrivilegeType*. For more information, see chapter AmountCommonData.
ManualTrigger SequenceAddend	unsignedLong	Element	[1]	Yes	1.0	A value that is to be added to the sequence of the promotion price derivation rule This allows to apply multiple manual discounts with the same price derivation rule.
any		Element	[0..*]	No	1.0	Extensibility element

PromotionExternalTriggerType

Generated Java class: com.sap.ppengine.client.dto.PromotionExternalTriggerType

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
ExternalTriggerType	string	Element	[1]	Yes	1.0	Type of the external trigger The following values are possible: • *00* - Turnover of the (current) year • *01* - Discount amount that was granted during the (current) year
ExternalTriggerAmount	AmountCommonData	Element	[1]	Yes	1.0	Amount of the external trigger The meaning of this field is defined by ExternalTriggerType. For more information, see chapter AmountCommonData.
any		Element	[0..*]	No	1.0	Extensibility element

SaleBase

Generated Java class: com.sap.ppengine.client.dto.SaleBase

SaleBase extends ItemDomainSpecific. Currently there is no attribute, or element added in entity SaleBase.

SaleForDeliveryBase

Generated Java class: com.sap.ppengine.client.dto.SaleForDeliveryBase

SaleForDeliveryBase extends ItemDomainSpecific.Currently there is no attribute, or element added in entity SaleForDeliveryBase.

SaleForPickupBase

Generated Java class: com.sap.ppengine.client.dto.SaleForPickupBase

SaleForPickupBase extends ItemDomainSpecific.Currently no attribute, or element is added in entity SaleForPickupBase.

ReturnBase

Generated Java class: com.sap.ppengine.client.dto.ReturnBase

ReturnBase extends ItemDomainSpecific.Currently no attribute, or element is added in entity ReturnBase.

ReturnForDeliveryBase

Generated Java class: com.sap.ppengine.client.dto.ReturnForDeliveryBase

ReturnForDeliveryBase extends ItemDomainSpecific. Currently no attribute, or element is added in entity ReturnForDeliveryBase.

ReturnForPickupBase

Generated Java class: com.sap.ppengine.client.dto.ReturnForPickupBase

ReturnForPickupBase extends ItemDomainSpecific. Currently no attribute or element is added in entity ReturnForPickupBase.

CustomerOrderForDeliveryBase

Generated Java class: com.sap.ppengine.client.dto.CustomerOrderForDeliveryBase

CustomerOrderForDeliveryBase extends ItemDomainSpecific. Currently no attribute, or element is added in entity CustomerOrderForDeliveryBase.

CustomerOrderForPickupBase

Generated Java class: com.sap.ppengine.client.dto.CustomerOrderForPickupBase

CustomerOrderForPickupBase extends ItemDomainSpecific. Currently no attribute, or element is added in entity CustomerOrderForPickupBase.

DiscountBase

Generated Java class: com.sap.ppengine.client.dto.DiscountBase

DiscountBase extends RetailPriceModifierDomainSpecific. For more information about this element, see chapter RetailPriceModifierDomainSpecific.

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
ProratedFlag	boolean	Attribute		No	1.0	Determines whether the discount amount applies to the whole transaction, or is prorated to the discountable line items of the transaction. Only the value *true* is supported, otherwise error ID *GKR-100500* is sent back.

LoyaltyRewardBase

Generated Java class: com.sap.ppengine.client.dto.LoyaltyRewardBase

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
TypeCode	LoyaltyRewardTypeCode	Attribute		No	1.0	Type code of the loyalty reward. If a request contains a value other than *Award*, error ID *GKR-100500* is sent back. For more information, see LoyaltyRewardTypeCode.
PromotionID	string	Element	[0..1] **Restricted to 1.**	Yes	1.0	The identifier of the promotion that triggered the loyalty reward. If this identifier is missing in a request, error ID *GKR-100500* is sent back.

PointsAwarded	PointsAwardedType	Element	[1..*]	No	1.0	The number of points awarded by the line item The length of 11 inlcuding 3 decimal places must not be exceeded in the request, otherwise error ID *GKR-1 00502* is sent back. For more information, see PointsAwardedType.
ManualTriggerSequence Number	integer	Element	[0..1]	No	1.0	The sequence number for the trigger to be assigned to a single LoyaltyReward. It references the ManualTriggerSequenceNumber of PromotionManualTriggerType (see corresponding chapter) that triggered this reward. There can be more than one trigger assigned. If the value in the request does not fall into the smallint/short range, error ID *GKR-100501* is sent back.
PointsAwardedAmount	AmountCommonData	Eleent	[0..1]	No	1.0	The monetary equivalent that is expressed in the local currency for the number of frequent shopper points awarded (PointsAwarded). For more information, see AmountCommonData.
ComputationBaseAmount	AmountCommonData	Element	[0..1]	No	1.0	Base amount for the computation For more information, see AmountCommonData.
ExternalSystem OriginatorFlag	boolean	Element	[0..1]	No	1.0	Determines if this LoyaltyReward was created by an external system. If yes, it must not be changed, but its own modifications with higher sequence may be applied. The value '*true*' is currently not supported.
PriceDerivationRule	PriceDerivationRule Base	Element	[0..1]	No	1.0	The price derivation rule that belongs to this loyalty reward. For more information, see PriceDerivationRule Base.
any		Element	[0..*]	No	1.0	Extensibility element

TenderCouponBase

Generated Java class: com.sap.ppengine.client.dto.TenderCouponBase

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
Quantity	QuantityCommonData	Element	[0..1]	No	1.0	Quantity of the coupon The maximum length of 3 must not be exceeded in the request, otherwise error ID *GKR-100501* is sent back. See above.
PrimaryLabel	string	Element	[0..1] **Restricted to 1.**	Yes	1.0	The coupon number It must be unique in the message, otherwise error ID *GKR-1 00505* is sent back. The length must not exceed 40 characters in the request, otherwise error ID *GKR-100501* is sent back.
RewardValue	DecimalCommonData (decimal)	Element	[0..1]	No	1.0	Reduction amount, reduction percentage or new price amount, depending on the given RewardType. If RewardValue exists in the request but RewardType is missing, error ID *GKR-100506* is sent back. If RewardValue does not exist in the request but RewardType exists and is valid, also error ID *GKR-100506* i s sent back.
any		Element	[0..*]	No	1.0	Extensibility element
AppliedQuantity	DecimalCommonData (decimal)	Element	[0..1]	No	1.0	The subset of registered coupons that was finally used, for example, to trigger price derivation rules. The maximum length of 3 must not be exceeded in the request, otherwise error ID *GKR-100501* is sent back.

RewardType	string	Element	[0..1]	No	1.0	Determines how the new effective sales price is to be calculated if the discount information is provided through RewardValue. Possible values are: • *RP* - reduction percentage • *RS* - reduction amount • *PS* - new price amount In case of a different value in the request, error ID *GKR-100 500* is sent back.

RetailPriceModifierDomainSpecific

Generated Java class: com.sap.ppengine.client.dto.RetailPriceModifierDomainSpecific

RetailPriceModifierDomainSpecific extends RetailPriceModifierBase.

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
PriceDerivationRule	PriceDerivationRuleBase	Element	[0..*] **Restricted to 1.**	Yes	1.0	The price derivation rule that belongs to this price modifier If there is more than one PriceDerivationRule within one price modifier, error ID *GKR-100504* is sent back. For more information, see chapter PriceDerivationRuleBase.
any		Element	[0..*]	No	1.0	Extensibility element
ManualTriggerSequenceNumber	integer	Element	[0..1]	No	1.0	The sequence number for the trigger that allows more than one trigger to be assigned to a single RetailPriceModifier. It references the ManualTriggerSequenceNumber of PromotionManualTriggerType (see corresponding chapter) that triggered this price modifier. If the value of this field in the request does not fall into the smallint/short range, error ID *GKR-100501* is sent back.
ExtraAmount	AmountCommonData	Element	[0..1]	No	1.0	A monetary amount that results from applying a price modifier but does not affect the line item respectively transaction total. If the value is negative in the request, error ID *GKR-100503* is sent back. For more information, see chapter AmountCommonData.
ExternalSystem OriginatorFlag	boolean	Element	[0..1]	No	1.0	Determines whether this discount was created by an external system. If yes, it must not be changed, but its own modifications with higher sequence may be applied. If not set in the request, the default value is set to *false*. The value '*true*' is currently not supported.

RetailPriceModifierBase

Generated Java class: com.sap.ppengine.client.dto.RetailPriceModifierBase

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
SequenceNumber	SequenceNumberType (unsignedLong)	Element	[1]	Yes	1.0	Sequence number of the price modifier If the value does not fall into the smallint/short range, error ID *GKR-100501* is sent back. If it is not unique to all retail price modifiers of the current line item in the request, error ID *GKR-100505* is sent back.
Amount	AmountType (AmountCommonData)	Element	[0..1]	No	1.0	Amount of the price modification For more information, see chapter AmountCommonData.
Percent	PercentType	Element	[0..1]	No	1.0	Percentage of the price modification For more information, see chapter PercentType.
PreviousPrice	PreviousPriceType (AmountCommonData)	Element	[0..1]	No	1.0	Regular price without modification For more information, see chapter AmountCommonData.
NewPrice	NewPriceType (AmountCommonData)	Element	[0..1]	No	1.0	Effective sales price with modification For more information, see chapter AmountCommonData.
PromotionID	PromotionIDType (string)	Element	[0..1]	No	1.0	Identifier of the OPP promotion for which this price modifier has been created.
ItemLink	SequenceNumberType (unsignedLong)	Element	[0..*] **Restricted to 1.**	No/Yes	1.0	The link to the discount line item that forced the creation of this RetailPriceModifier in order to keep the prorated transaction-related discount for the current line item. Is not used in the context of the modification of the price of a single line item (item-related discount). If it does not fall into the smallint/short range in the request, error ID *GKR-100501* is sent back.
Quantity	QuantityCommonData	Element	[0..1] **Restricted to 1.**	Yes	1.0	Quantity information The maximum length must not exceed 11 including 3 decimal places in the request, otherwise error ID *GKR-100502* is sent back. For more information, see chapter QuantityCommonData.
Rounding	RoundingCommonData	Element	[0..1]	No	1.0	Rounding information of the discount If this field contains a negative value in the request, error ID *GKR-100503* is sent back. For more information, see chapter RoundingCommonData.

RetailPriceModifierAmountAction

Generated Java enum: com.sap.ppengine.client.dto.RetailPriceModifierAmountActionEnumeration

This enum consists of the following values (supported values in **bold**):

- **Add**
- **Subtract**
- Replace
- For

RetailPriceModifierPercentAction

Generated Java enum: com.sap.ppengine.client.dto.RetailPriceModifierAmountActionEnumeration

This enum consists of the following values (supported values in **bold**):

- **Add**
- **Subtract**

- For

PriceDerivationRuleBase

Generated Java class: com.sap.ppengine.client.dto.PriceDerivationRuleBase

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
ApplicationType	PriceDerivation ApplicationTypeCode	Attribute		No	1.0	The discount type code of the PriceDerivationRule, for example, *DiscountTotal*. Restricted to - Manual - FixedPrice - BuyOneGetOne (BOGO) - None - DiscountSingle - DiscountPercent - DiscountTotal - FixPriceTotal - DiscountPercentTotal - DiscountPercentTotal2 - ExternalAction - SetPriceTotal If there is a different value used in the request, error ID *GKR-100 500* is sent back. For more information, see chapter PriceDerivationApplicationTyp eCode.
PriceDerivationRuleID	string	Element	[1]	Yes	1.0	A unique identifier of the price derivation rule
Eligibility	PriceDerivationRule Eligibility	Element	[0..*]	No	1.0	Price derivation rule eligibilities This element is only used if one or more coupons triggered the modifier. If more than one coupon is needed as trigger, each coupon results in a separate eligibility element. For more information, see chapter PriceDerivationRuleEligibility.
any		Element	[0..*]	No	1.0	Extensibility element
PromotionDescription	string	Element	[0..1]	No	1.0	Description of the OPP promotion (**deprecated**:use PromotionDescriptionMultiLanguage instead)
PromotionDescriptionMultiLanguage	DescriptionCommonData	Element	[0..*]	No	2.0	Descriptions of the OPP promotion in different languages
PromotionPriceDerivation RuleSequence	unsignedLong	Element	[0..1]	No	1.0	Sequence of the price derivation rule, which is used for the collision handling. Promotions with different sequence numbers are applied according to ascending sequence numbers. In case of identical sequence numbers, only the promotion with the highest resolution (see below) is applied. Line-item related promotions and basket promotions are treated independently. If this element is not in the request, the default is set to *0*.
PromotionPriceDerivation RuleResolution	unsignedLong	Element	[0..1]	No	1.0	Resolution of the price derivation rule. It is used for collision handling. In case of multiple promotions with an identical sequence number (see above) and identical highest resolution, a best-price calculation is executed. Line-item-related promotions and transaction-related promotions are treated independently. If this element is not in the request, the default is set to *0*.
PromotionPriceDerivation RuleTypeCode	string	Element	[0..1]	No	1.0	(SAP) Condition type code of the promotion price derivation rule. If the text exceeds 4 characters, it is truncated.

TransactionControlBreakCode	string	Element	[0..1]	No	1.0	Determines if the price derivation rule is to be applied during the registration of the transaction. Possible values are: • *PO* - line item-related price derivation rule, calculated after each line item • *SU* - transaction-related price derivation rule, calculated after subtotal • PC - line item-related price derivation rule, calculated after subtotal • SP - transaction-related price derivation rule, calculated after each line item If there is another than the above mentioned supported values in the request, error ID *GKR-100500* is sent back. If this value is missing in the request, the default value is set to *SU.*
PriceDerivationRuleDescription	string	Element	[0..1]	No	1.0	Description of the price derivation rule This field is currently not supported.
PromotionOriginatorTypeCode	string	Element	[0..1]	No	1.0	Type code of the originator of the promotion. It is determined from the promotion master data to be anaylzed by downstream systems.
TriggerQuantity	DecimalCommonData (decimal)	Element	[0..1]	No	1.0	The total quantity that needs to be purchased in order to trigger the price derivation rule. The maximum length in the request must not exceed 11 including 3 decimal places, otherwise error ID *GKR-100502* is sent back.
DiscountMethodCode	string	Element	[0..1]	No	1.0	Determines how the discount impacts the calculation of the transaction. Possible values are: • *00* - The discount reduces the transaction total • *01* - The discount does not influence the transaction total or the amount the customer has to pay. However, the customer gets a gift certificate for the discount amount that he can use to pay for the next purchase. • 02 - The discount is used as a tender for the current transaction, for example it reduces the remaining amount that the customer has to pay. • 03 - The discount reduces the transaction total but is counterbalanced by some gift certificate sale. • 04 - A coupon is given to the customer instead of a discount. Transaction total is not reduced. If there is a different value in the request, error ID *GKR-100500* is sent back. If this value is missing in the request, the defaultvalue is set to *00.*
FrequentShopperPointsFlag	boolean	Element	[0..1]	No	1.0	Determines whether a discount (*false*) or frequent shopper points (*true*) are granted by the price derivation rule. If this element is missing in the request, the default value is set to *false.*
CustomerGroupLoyaltyPoints DefaultQuantity	DecimalCommonData (decimal)	Element	[0..1]	No	1.0	The count of default loyalty points assigned to the customer group This value is needed to calculate the percental frequent shopper points, since different point agreements might exist for different customer groups. The maximum length of the value must not exceed 11 including 3 decimal places, otherwise error ID *GKR-100502* is sent back. This field is not supported with version 2.0.
ProhibitPrintFlag	boolean	Element	[0..1]	No	1.0	Determines if the result of the applied price derivation rule is to be suppressed on displays and accordingly not printed on the receipt. If this element is missing in the request, the default value is set to *false.*
TenderTypeCode	string	Element	[0..1]	No	1.0	Type code of the tender This value is needed only for DiscountMethodCode = *02.* The length of the value must not exceed 4 characters, otherwise error ID *GKR-100501* is sent back.
PointsConversionAmount	AmountCommonData	Element	[0..1]	No	1.0	The exchange rate for the conversion of points into the local currency of the business unit. For more information, see chapter AmountCommonData.

NoEffectOnSubsequent PriceDerivationRulesFlag	boolean	Element	[0..1]	No	1.0	Determines whether applying this price derivation rule influences the calculation base of subsequent price derivation rules (*false*) or not (*true*). This is only relevant for line-item-related monetary price derivation rules. If this element is missing in the request, the default value is set to *false*.
ProhibitTransactionRelated PriceDerivationRulesFlag	boolean	Element	[0..1]	No	1.0	Determines whether applying this price derivation rule influences the calculation base of subsequent transaction-related price derivation rules (*false*) or not (*true*). This is only relevant for line-item-related monetary price derivation rules. If this element is missing in the request, the default value is set to *false.*
ExclusiveFlag	boolean	Element	[0..1]	No	1.0	Determines whether this price derivation rule is an exclusive one. This impacts the application of other price derivation rules by the promotion calculation engine. If this element is missing in the request, 'false' is taken as default.
ConcurrenceControlVector	string	Element	[0..1]	No	1.0	Determines how this price derivation rule behaves related to other applicable price derivation rules. The length must not exceed 20 characters in the request, otherwise error ID *GKR-100501* is sent back. The ConcurrenceControlVector is currently not supported.
AppliedCount	DecimalCommonData (decimal)	Element	[0..1]	No	1.0	Describes how often the current price derivation rule was applied.
ReceiptLine	string	Element	[0..1]	No	1.0	The text to be printed on the receipt (**deprecated:**use ReceiptLineMultiLanguage instead) The length must not exceed 40 characters in the request, otherwise the text is truncated.
ReceiptLineMultiLanguage	DescriptionCommonData	Element	[0..*]	No	2.0	The texts to be printed on the receipt in different languages
ExternalPromotionID	string	Element	[0..1]	No	1.0	The offer ID from the DDF offer (SAP CAR system)
ExternalPriceDerivationRuleID	string	Element	[0..1]	No	1.0	The price derivation rule ID from the OPP promotion (SAP CAR system) The length must not exceed 255 characters in the request, otherwise the content is truncated. This field is currently not supported.
CouponPrintoutID	string	Element	[0..1]	No	1.0	The coupon number of the printout coupon. This is only needed for DiscountMethodCode = *04.* The length must not exceed 40 characters in the request, otherwise it is truncated.
CouponPrintoutRule	string	Element	[0..1]	No	1.0	Describes how the printout of the coupon is to be done This is only needed for DiscountMethodCode = *04*. Possible values are: • *00* - A separate receipt is to be printed • *01* - The coupon is to be printed at the end of the receipt of the current transaction In case of another value in the request, error ID GKR-*100501* is sent back. If this value is not part of the request, the default value is set to *0 0.*
CouponPrintoutText	string	Element	[0..1]	No	1.0	The (formatted) text to be printed Is needed for DiscountMethodCode = "04" only.
PrintoutValidityPeriod	integer	Element	[0..1]	No	1.0	Describes for how many days the coupon will be valid. Is only needed for DiscountMethodCode = *04*.
GiftCertificateExpirationDate	date	Element	[0..1]	No	1.0	The end of the date range in which the gift certificate is valid This value is only needed for DiscountMethodCode = *03*.
ExternalAction	ExternalActionType	Element	[0..1]	No	1.0	Contains an external action,for example, *Shake hands with customer*. For more information, see chapter ExternalActionType.
OperatorDisplayText	DescriptionCommonData	Element	[0..*]	No	2.0	Texts in different languages shown to the operator.
CustomerDisplayText	DescriptionCommonData	Element	[0..*]	No	2.0	Texts in different languages shown to the customer.
PromotionType	string	Element	[0..1]	No	2.0	The PromotionType is used to classify promotions. Note: The content of this element is passed to the requestor.

CalculationBaseSequence	string	Element	[0..1]	No	2.0	The CalculationBaseSequence is used to define the basis for applying a promotion.
						The type of this element is a string although its content has a numeric value. It could also contain a negative value. In that case the corresponding sign is reflected as a postfix. For example value "-1" is reflected in this element by type string as follows: "1-". The content of this element is passed to the requestor.

PriceDerivationApplicationTypeCode

Generated Java enum: com.sap.ppengine.client.dto.PriceDerivationApplicationTypeCodeEnumeration

This enum consists of the following values (supported values in **bold**):

- **Manual**
- Item
- **MixMatch**
- **FixedPrice**
- PromotionalAward
- **BuyOneGetOne (BOGO)**
- **None**
- **DiscountSingle**
- **DiscountPercent**
- **DiscountTotale**
- **FixPriceTotal**
- **DiscountPercentTotal**
- **DiscountPercentTotal2**
- DiscountTotalInterval
- **ExternalAction**
- **SetPriceTotal (was introduced with version 2.0)**

ExternalActionTextType

Generated Java enum: com.sap.ppengine.client.dto.ExternalActionTextType

ExternalActionTextType extends DescriptionCommonData and only has an additional attribute.

Name	Type	Attribute/Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
ID	string	Attribute		Yes	1.0	Identifier of the external action text The maximum length of this value must not exceed 60 characters,otherwise error ID *GKR-1005 01* is sent back.
value	DescriptionCommonData				1.0 (changed in a compatible way in version 2.0)	Text content.

ExternalActionParameterType

Generated Java enum: com.sap.ppengine.client.dto.ExternalActionParameterType

Name	Type	Attribute/Element	Cardinality	Required	Available as of Client API Version	Description/Remarks

ID	string	Attribute		Yes	1.0	Identifier of the external action value The maximum length of this value must not exceed 60 characters, otherwise, error ID *GKR-100501* is sent back.
value	string				1.0	Parameter content The maximum length of this value must not exceed 255 characters, otherwise, error ID *GKR-100501* is sent back.

ExternalActionType

Generated Java enum: com.sap.ppengine.client.dto.ExternalActionType

Name	Type	Attribute/Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
ID	string	Attribute		Yes	1.0	Identifier of the external action The maximum length of this value must not exceed 60 characters, otherwise, error ID *GKR-1 00501* is sent back.
Text	ExternalActionTextType	Element	[0..*]	No	1.0	Texts of the external action in different languages. See above.
Parameter	ExternalActionParameterType	Element	[0..*]	No	1.0	Parameters of the external action. See above.
any		Element	[0..*]	No	1.0	Extensibility element.

PriceDerivationRuleEligibility

Generated Java class: com.sap.ppengine.client.dto.PriceDerivationRuleEligibility

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
Type	DerivationRuleEligibility Type	Attribute		Yes	1.0	Type of the price derivation rule eligibility. Restricted to *StoreCoupon* For more information, see chapter DerivationRuleEligibility Type.
ReferenceID	string	Element	[0..1] **Restricted to 1 in a coupon context.**	No/Yes	1.0	The coupon number that was used to trigger the modifier. The maximum length of this value must not exceed 40 characters, otherwise, error ID *GKR-100501* is sent back
any		Element	[0..*]	No	1.0	Extensibility element.
ReferenceSequence Number	integer	Element	[0..1] **Restricted to 1 in a coupon context**	No/Yes	1.0	The sequence number for the coupon. If the value in the request does not fall into the smallint/short range, error ID *GKR-100501* is sent back. If the element is missing in the request, error ID *GKR-100506* is sent back.

DerivationRuleEligibilityType

Generated Java enum: com.sap.ppengine.client.dto.DerivationRuleEligibilityTypeEnumeration

This enum consists of the following values (supported values in **bold**):

- Item
- MerchandiseClass

- Customer
- CustomerGroup
- CustomerAccount
- Employee
- CalendarPeriod
- Brand
- PriceLine
- TotalBasket
- **StoreCoupon**
- Combination
- ExternalTrigger
- ManualTrigger
- PositionType

PointsAwardedType

PointsAwardedType extends PointsCommonData.

PointsCommonData

Generated Java class: com.sap.ppengine.client.dto.PointsCommonData

PointsCommonData extends BalanceCommonData.

This entity contains the number of points received, for example, the number of points given in the LoyaltyRewardBase entity:

<PointsAwardedAmount Type="PointsEarned">5.00</ PointsAwardedAmount >

Name	Type	Attribute/Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
Type	PointsTypeCode	Attribute		No	1.0	Type code of the points, for example, *PointsEarned* The default value is set to *Credited* because of the underlying ARTS data model. Currently only the value *PointsEarned* is supported. Any other value provided in the request is also treated as *PointsEarned*.
value	decimal				1.0	Number of received points

PointsTypeCode

Generated Java enum: com.sap.ppengine.client.dto.PointsTypeCodeEnumeration

This enum consists of the following values (supported values in **bold**):

- Credited
- Debited
- Balance
- Assigned
- **PointsEarned**
- Redeemed
- TotalRedeemed
- Reversal
- PointsAdjustment

ItemDomainSpecific

Generated Java class: com.sap.ppengine.client.dto.ItemDomainSpecific

ItemDomainSpecific extends ItemBase.

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
TaxIncludedInPriceFlag	boolean		[0..1]	No	1.0	Indicates the inclusion of all applicable taxes in the effective sales price. This field is currently not supported. All prices are currently without appicable taxes.
any		Element	[0..*]	No	1.0	Extensibility element
NonPieceGoodFlag	boolean	Element	[0..1]	No	1.0	Indicates if the item is a piece goods item. If not provided in the request, the value is set to *false*.
FrequentShopperPoints EligibilityFlag	boolean	Element	[0..1]	No	1.0	Determines whether the line item is eligible for frequent shopper points. If not provided in the request, the value is set to *false*.
DiscountTypeCode	string	Element	[0..1]	No	1.0	This code controls whether the item is eligible for discount respectively frequent shopper points. This is controlled in more detail than with the indicators *NonDiscountableFlag* and *FrequentShopperPointsEligibleFlag,* for example on price derivation rule level. The value range is from 0 to 9. Error ID *GKR-100500* or *GKR-100501* is returned in case of an invalid value. This field is currently not supported.
PriceTypeCode	string	Element	[0..1]	No	1.0	Type code of the price Restricted to *00* and *01*, otherwise error ID *GKR-100500* is sent back.
NotConsideredByPrice EngineFlag	boolean	Element	[0..1]	No	1.0	Determines whether the Calculation Engine should care about the line item as a trigger; this information is needed because it may happen that another process (e.g. a return regarding to an existing transaction) applies rules for the line item which the Calculation Engine must not change. Assuming that the line item is discountable in general, it is controlled by setting the NotConsideredByPriceEngineFlag to true that the line item cannot act as trigger for and be granted a discount or bonus points from a line item-related price derivation rule. However, it can do so for a transaction-related price derivation rule. If not provided in the request, the value is set to *false*.
FrequentShopper PointsModifier	FrequentShopper PointsModifierType	Element	[0..*]	No	1.0	Reflects a modification of the frequent shopper points of the line item. For more information, see chapter FrequentShopper PointsModifier.

PromotionPrice DerivationRule Reference	PromotionPrice DerivationRule ReferenceType	Element	[0..*]	No	1.0	For each line item involved in triggering the reward, this entry is written There might be a difference between line items that trigger a price dericadion rule and line items that get a reward. For more information, see chapter PromotionPrice DerivationRule ReferenceType.
PromotionManualTrigger	PromotionManualTriggerType	Element	[0..*]	No	1.0	Manual triggers created by the client in in order to make the transaction eligible for promotions that contain eligibilities of type *manual trigger*. For more information, see chapter PromotionManual TriggerType.

ItemBase

Generated Java class: com.sap.ppengine.client.dto.ItemBase

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
ItemType	RetailTransaction ItemType	Attribute		No	1.0	Type of the item, for example, *GiftCertificate* Restricted to *Stock* and *GiftCertificate*. The default value is *Stock*. For other values, error ID *GKR-100500* is send back. For more information, see chapter RetailTransaction ItemType.
NonDiscountableFlag	boolean	Attribute		No	1.0	Indicates if discounts are not allowed for this item If not set in the request, *false* is used as default value.
FixedPriceFlag	boolean	Attribute		No	1.0	Indicates if the regular price needs to be read If set to *true*, the RegularSalesUnitPrice needs to be present in the price calculation request, otherwise error ID *SAP-0005* is sent back. If set to *false*, the regular price (RegularSalesUnitPrice) is read and the corresponding field is set automatically. If not part of the request, *false* is set as default value.
ItemID	ItemIDType (string)	Element	[1..4] **Restricted to 1.**	Yes	1.0	The identifier of the item In case of an invalid identifier (empty string), error ID *SAP-0002* is send back. In case of a missing identifier, error ID *SAP-0001* is send back. The identifier must not exceed 60 characters, otherwise the request cannot be processed and error ID SAP-*0021* is sent back.
MerchandiseHierarchy	MerchandiseHierarchy CommonData	Element	[1..*]	No	1.0	Merchandise hierarchy information This is the main merchandise hierarchy group. For more information, see chapter MerchandiseHierarchy CommonData.
RegularSalesUnitPrice	UnitPriceCommonData (AmountCommonData)	Element	[0..1]	No	1.0	The regular sales unit price of the item If this element is provided in the request and *FixedPrice Flag* is set to *false*, the value is overwitten. If this element is provided in the request and *FixedPrice Flag* is set to *true*, it is used. However, the currency must also be set, otherwise error ID *SAP-0018* is sent back. For more information, see chapter UnitPriceCommonData..

ExtendedAmount	ExtendedAmountType (AmountCommonData)	Element	[0..1]	No	1.0	The amount to be paid for this item. The amount refers to the total quantity of the line item. Therefore, any line item-related retail price modifiers are considered, as well as shares of translation-related discounts for the line item. For more information, see chapter ExtendedAmountType.
ExtendedDiscountAmount	AmountCommonData	Element	[0..1]	No	1.0	The total line-item-related discount amount for this line item. For more information, see chapter AmountCommonData.
Quantity	QuantityCommonData	Element	[0..*] **Restricted to 1.**	Yes	1.0	The quantity of this item If this value contains decimal places, error ID *GKR-100 502* is sent back. In case of no or more than one element, error ID *SAP-0 003* is sent back. For more information, see chapter QuantityCommonData.
RetailPriceModifier	RetailPriceModifier DomainSpecific	Element	[0..*]	No	1.0	Retail price modifiers that influenced the sales price of this item. For more information, see RetailPriceModifier DomainSpecific.
ItemLink	ItemLinkType (unsigned long)	Element	[0..*]	No	1.0	This field is used in case of ItemType *Fee*. It points to the line item for which the fee, for example delivery cost, is relevant. If there are no fees involved, this field is not used. If the value does not fall into the smallint/short range, error ID *GKR-100501* is sent back. Fees are currently not supported with OPP.

RetailTransactionItemType

Generated Java enum: com.sap.ppengine.client.dto.RetailTransactionItemTypeEnumeration

This enum consists of the following values (supported values in **bold**):

- **Stock**
- Grade
- Service
- Alteration
- Fee
- FeeRefund
- Deposit
- DepositRefund
- Tare
- ItemCollection
- Warranty
- **GiftCertificate**

FrequentShopperPointsModifierType

Generated Java class: com.sap.ppengine.client.dto.FrequentShopperPointsModifierType

FrequentShopperPointsModifierType extends LoyaltyRewardBase.

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API version	Description/Remarks
SequenceNumber	unsignedLong	Element	[1]	Yes	1.0	Sequence number of the frequent shopper points modifier. This field allows more than one point modification to occur on the line item. If the value does not fit in the smallint/short value range, error ID *GKR-100501* is sent back. It must be unique in the context of the current line item, otherwise error ID *GKR-100505* is sent back.
AppliedQuantity	DecimalCommonData (decimal)	Element	[1]	Yes	1.0	The quantity the points' modifier applies to. The maximum length for this value must not exceed 11 (including 3 decimal places) in the request, otherwise error ID *GKR-100501* is sent back. If this field is missing in the request in case of non-proration, error ID *GKR-100506* is sent back.
ItemLink	SequenceNumberType (unsignedLong)	Element	[0..1]	No	1.0	Link to the LoyaltyReward line item that forced the creation of this FrequentShopperPointsPriceModifier in order to keep the share of the prorated transaction-related points for the current line item. It is not used in the context of modifying points for a dedicated line item. It must be in the smallint/short value range, otherwise error ID *GKR-100501* is sent back.

PromotionPriceDerivationRuleReferenceType

Generated Java class: com.sap.ppengine.client.dto.PromotionPriceDerivationRuleReferenceType

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
PromotionID	string	Element	[1]	Yes	1.0	The identifier of the promotion to which this line item references to.
PriceDerivationRuleID	string	Element	[1]	Yes	1.0	The identifier of the price derivation rule to which this line item references to.
ReferenceQuantity	DecimalCommonData (decimal)	Element	[1]	Yes	1.0	The quantity share of the line item that was necessary to fulfill the price derivation rule eligibilities. The maximum length of this value must not exceed 11 including 3 decimal places, otherwise error ID *GKR-100 501* is sent back.
any		Element	[0..*]	No	1.0	Extensibility element

DescriptionCommonData

Generated Java class: com.sap.ppengine.client.dto.DescriptionCommonData

DescriptionCommonData extends string.

This entity contains the descriptive text as, for example, the description text of a business error is in the BusinessErrorCommonData entity:

<Description Language="EN">Text of the business error</Description>

The complete list of possible errors is described in chapter *Error Handling*.

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
Language	string	Attribute		No	2.0	Language code in ISO 639-1 format for the text. The default is *EN* (English).

value	string				1.0	Description text

AmountCommonData

Generated Java class: com.sap.ppengine.client.dto.AmountCommonData

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
Currency	CurrencyTypeCode	Attribute		No	1.0	Defines the ISO code for the currency of the amount, for example *USD* or *EUR* The default currency is *USD*. For more information, see chapter CurrencyTypeCode.
value	DecimalCommonData (decimal)				1.0	Amount

CurrencyTypeCode

Generated Java enum: com.sap.ppengine.client.dto.CurrencyTypeCodeEnumeration

This enum consists of the following values:

- ADP
- AED
- AFA
- ALL
- AMD
- ANG
- AOA
- ARS
- ATS
- AUD
- AWG
- AZM
- BAM
- BBD
- BDT
- BEF
- BGL
- BGN
- BHD
- BIF
- BMD
- BND
- BOB
- BOV
- BRL
- BSD
- BTN
- BWP
- BYR
- BZD
- CAD
- CDF
- CHF
- CLF
- CLP
- CNY
- COP
- CRC
- CUP
- CVE
- CYP
- CZK

- DEM
- DJF
- DKK
- DOP
- DZD
- ECS
- ECV
- EEK
- EGP
- ERN
- ESP
- ETB
- EUR
- FIM
- FJD
- FKP
- FRF
- GBP
- GEL
- GHC
- GIP
- GMD
- GNF
- GRD
- GTQ
- GWP
- GYD
- HKD
- HNL
- HRK
- HTG
- HUF
- IDR
- IEP
- ILS
- INR
- IQD
- IRR
- ISK
- ITL
- JMD
- JOD
- JPY
- KES
- KGS
- KHR
- KMF
- KPW
- KRW
- KWD
- KYD
- KZT
- LAK
- LBP
- LKR
- LRD
- LSL
- LTL
- LUF
- LVL
- LYD
- MAD
- MDL
- MGF
- MKD
- MMK
- MNT
- MOP
- MRO
- MTL
- MUR
- MVR

- MWK
- MXN
- MXV
- MYR
- MZM
- NAD
- NGN
- NIO
- NLG
- NOK
- NPR
- NZD
- OMR
- PAB
- PEN
- PGK
- PHP
- PKR
- PLN
- PTE
- PYG
- QAR
- ROL
- RUB
- RUR
- RWF
- SAR
- SBD
- SCR
- SDD
- SEK
- SGD
- SHP
- SIT
- SKK
- SLL
- SOS
- SRG
- STD
- SVC
- SYP
- SZL
- THB
- TJS
- TMM
- TND
- TOP
- TPE
- TRL
- TTD
- TWD
- TZS
- UAH
- UGX
- USD
- USN
- USS
- UYU
- UZS
- VEB
- VND
- VUV
- WST
- XAF
- XAG
- XAU
- XBA
- XBB
- XBC
- XCD
- XDR
- XFO

- XFU
- XOF
- XPD
- XPF
- XPT
- XTS
- YER
- YUM
- ZAR
- ZMK
- ZWD

AmountType

Generated Java class: com.sap.ppengine.client.dto.RetailPriceModifierBase.Amount

AmountType extends AmountCommonData. For more information, see chapter AmountCommonData.

This entity contains the amount as, for example, the amount in the RetailPriceModifierBase entity:

<Amount Action="Subtract" Currency="EUR" >2.99000</Amount>

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
Action	RetailPriceModifierAmountAction	Attribute		Yes	1.0	Defines the action of the price modification amount, for example, the value *Subtract* for price reduction Restricted to *Add* and *Subtract*. In case of other values, error ID *GKR-100500* is sent back. For more information, see chapter RetailPriceModifierAmountAction.
value	decimal				1.0	Amount value

PercentType

Generated Java class: com.sap.ppengine.client.dto.RetailPriceModifierBase.Percent

PercentType extends PercentageCommonData (decimal).

This entity contains the percentage as, for example, the percentage in the RetailPriceModifierBase entity:

<Percent Action="Add">11.23</Percent>

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
Action	RetailPriceModifierPercentAction	Attribute		Yes	1.0	Defines the action of the price modification percentage, for example, the value *Subtract* for price reduction Restricted to *Add* and *Subtract*. In case of other values, error ID *GKR-100500* is sent back. For more information, see chapter RetailPriceModifierPercentAction.
value	decimal				1.0	Percentage If this field contains more than 4 decimal places in the request, error ID *GKR100501* is sent back,

QuantityCommonData

Generated Java class: com.sap.ppengine.client.dto.QuantityCommonData

This entity contains the quantity, the units ,and the unit of measurement (UOM) as, for example, in the SaleBase entity:

<Quantity Units="1" UnitOfMeasureCode="PCE">5</Quantity>

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
Units	decimal	Attribute		No	1.0	Number of units sold If the length exceeds the integer range, error ID *GKR-100501* is sent back. The default is set to *1*.
UnitOfMeasureCode	string	Attribute		No	1.0	The code to specify the units in which a value is being expressed, or manner in which a measurement has been taken. We expect the unit of measurement in ISO code format. If the unit of measurement is missing or invalid (empty string), error ID *SAP-0004* is sent back.
value	decimal				1.0	Quantity value

RoundingCommonData

Generated Java class: com.sap.ppengine.client.dto.RoundingCommonData

This entity contains the rounding information, as in the following example:

<Rounding RoundingDirection="UP">0.12345</Rounding>

Name	Type	Attribute /Element	Cardinality	Required	Available as of Client API Version	Description/Remarks
RoundingDirection	RoundingDirectionCommonDataTypeCodes	Attribute		No	1.0	Defines a rounding up (value *Up*) or a rounding down (value *Down*). Other values result in error ID *GKR-100500*. If there was no rounding at all, the attribute is not set.
value	decimal				1.0	Rounding value

RoundingDirectionCommonDataTypeCodes

Generated Java enum: com.sap.ppengine.client.dto.RoundingDirectionCommonDataTypeCodesEnumeration

This enum consists of the following values:

- Up
- Down

LoyaltyRewardTypeCode

Generated Java enum: com.sap.ppengine.client.dto.LoyaltyRewardTypeCodeEnumeration

This enum consists of the following values (supported values in **bold**):

- **Award**
- Rebate

Understanding the details

Possible Triggers

- Customer: LoyaltyAccountCommonData->CustomerID

- Customer group: LoyaltyAccountCommonData->LoyaltyProgram (LoyaltyAccountType)->LoyaltyProgramID

- Employee group: To support employee discount groups in the current version, you have to handle them as customer groups. (LoyaltyAccountCommonData->CustomerIsEmployeeFlag)

- Merchandise category: LineItemBase->MerchandiseHierarchy (MerchandiseHierarchyCommonData)

- Item: ItemBase->ItemID and ItemBase->Quantity (QuantityCommonData)->UnitOfMeasureCode (ItemBase of all Sale-, Return-, Customer-related line items)

- Manual trigger: LineItemChoiceDomainSpecific->PromotionManualTrigger (PromotionManualTriggerType) (as separate line item), or ItemDomainSpecific->PromotionManualTrigger (PromotionManualTriggerType) (ItemDomainSpecific of all Sale-, Return-, Customer-related line items)

- ExternalTrigger: LineItemChoiceDomainSpecific->PromotionExternalTrigger (PromotionExternalTriggerType) (as separate line item)

- Coupon: TenderCouponsBase->PrimaryLabel (coupon line item)

- Transaction total: Is summed up internally by the promotion calculation engine.

- Position type: ItemBase->ItemType (ItemBase of all Sale-, Return-, Customer-related line items)

- Multiple triggers can be combined

Calculation Control

- ItemBase->NonDiscountableFlag (ItemBase of all Sale-, Return-, Customer-related line items)

- ItemDomainSpecific->NonPieceGoodFlag (ItemDomainSpecific of all Sale-, Return-, Customer-related line items)

- ItemDomainSpecific->FrequentShopperPointsEligibilityFlag (ItemDomainSpecific of all Sale-, Return-, Customer-related line items)

- ItemDomainSpecific->DiscountTypeCode (ItemDomainSpecific of all Sale-, Return-, Customer-related line items)

- ItemDomainSpecific->PriceTypeCode (ItemDomainSpecific of all Sale-, Return-, Customer-related line items)

- ItemDomainSpecific->NotConsideredByPriceEngineFlag (ItemDomainSpecific of all Sale-, Return-, Customer-related line items)

Collision Handling

- PriceDerivationRuleBase->PromotionPriceDerivationRuleSequence

- PriceDerivationRuleBase->PromotionPriceDerivationRuleResolution

- PriceDerivationRuleBase->TransactionControlBreakCode

- PriceDerivationRuleBase->NoEffectOnSubsequentPriceDerivationRulesFlag

- PriceDerivationRuleBase->ProhibitTransactionRelatedPriceDerivationRulesFlag

- PriceDerivationRuleBase->ExclusiveFlag

- PriceDerivationRuleBase->ConcurrenceControlVector

Possible Benefits

- Line item-related discount: ItemBase->RetailPriceModifier (RetailPriceModifierDomainSpecific) without ItemLink (ItemBase of all Sale-, Return-, Customer-related line items)

- Line item-related bonus points: ItemDomainSpecific->FrequentShopperPointsModifier (FrequentShopperPointsModifierType) without ItemLink (ItemDomainSpecific of all Sale-, Return-, Customer-related line items)

- Prorated transaction-related discount: LineItemChoiceBase->Discount (DiscountBase) line item and ItemBase->RetailPriceModifier (RetailPriceModifierDomainSpecific) with ItemLink referring to the DiscountBase line item (ItemBase of all Sale-, Return-, Customer-related line items) but without PriceDerivationRule (PriceDerivationRuleBase)

- Non-prorated transaction-related discount: not supported with the current version

- Prorated transaction-related bonus points: LineItemChoiceBase->LoyaltyReward (LoyaltyRewardBase) line item and ItemDomainSpecific->FrequentShopperPointsModifier (FrequentShopperPointsModifierType) with ItemLink referring to the LoyaltyRewardBase line item (ItemDomainSpecific of all Sale-, Return-, Customer-related line items) but without PriceDerivationRule (PriceDerivationRuleBase)

- Non-prorated transaction-related bonus points: not supported with the current version

- Discounts could be handled as tender or could be granted as coupon or gift certificate: the response contains a Discount (DiscountBase) line item or ItemBase->RetailPriceModifier (RetailPriceModifierDomainSpecific). The client has to perform the required tasks based on the information provided in PriceDerivationRuleBase->DiscountMethodCode, TenderTypeCode, CouponPrintoutID, CouponPrintoutRule, CouponPrintoutText, PrintoutValidityPeriod, GiftCertificateExpirationDate and RetailPriceModifierDomainSpecific->ExtraAmount

- Another possible use case is that the pricing engine itself does not grant a benefit, but provides the client with data it needs to perform an action (PriceDerivationRuleBase->ExternalAction (ExternalActionType))

Information about Applied Price Derivation Rules

- A copy (snapshot) of relevant price derivation rule master data: PriceDerivationRuleBase

- How often the price derivation rule as applied: PriceDerivatinRuleBase->AppliedCount

- Involved line items: ItemDomainSpecific->PromotionPriceDerivationRuleReference (ItemDomainSpecific of all Sale-, Return-, Customer-related line items)

- Number of used coupons: TenderCouponBase->AppliedQuantity

Printout Control

- PriceDerivationRuleBase->ProhibitPrintFlag

- PriceDerivationRuleBase->ReceiptLine

Custom Extensions (any)

- An any element may contain any content

- It is not intended to be processed/generated by the standard promotion calculation engine, but by project-specific extensions to it.

- Please refer to the Development & Extension Guide for Omnichannel Promotion Pricing to get more information about the extensibility of the Client API.

Error Handling

Business error texts are only available in the language English. They are not translated.
Only the Error IDs remain stable. The texts might be subject to change.

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Error ID	Description	Severity
SAP-0001	Invalid number of item IDs have been found in a line item (caused by number of item IDs != 1)	Error
SAP-0002	Invalid item ID has been found in a line item (caused by blank or null item ID)	Error
SAP-0003	Wrong number of quantity elements have been found in a line item (expected is always 1 element)	Error
SAP-0004	Empty or null unit of measure code has been found in a line item	Error
SAP-0005	Occurs when the FixedPriceFlag is set to "true" but the RegularSalesUnitPrice is missing	Error
SAP-0006	Invalid number of base prices read (expected is always 1 element)	Error
SAP-0007	Occurs when the ARTS Header is missing the the PriceCalculate request	Error
SAP-0008	Occurs when the InternalMajorVersion is missing in the PriceCalculate entity	Error
SAP-0009	Occurs in case of an invalid InternalMajorVersion and/or InternalMinorVersion (expected InternalMajorVersion = 1 and InternalMinorVersion = 0)	Error
SAP-0010	Occurs in case of an unsupported action code in the ARTS Header (expected is only "Calculate")	Error
SAP-0011	Occurs when a unsupported message type is in the ARTSHeader (expected is only "Request")	Error
SAP-0012	Wrong number of BusinessUnit elements in the ARTS Header (expected is always 1 element)	Error
SAP-0013	Wrong number of PriceCalculateBody elements in the PriceCalculate request (expected is always 1 element)	Error
SAP-0014	Occurs when the DateTime element is missing in the PriceCalculateBody	Error
SAP-0015	Occurs when the ShoppingBasket element is missing in the PriceCalculateBody	Error
SAP-0016	No line items are present in the PriceCalculate request	Error
SAP-0017	Occurs in case of a invalid BusinessUnit (blank or null)	Error
SAP-0018	Occurs when the provided RegularSalesUnitPrice does not contain a valid currency (not blank or null)	Error
SAP-0019	Too many line items are present in the PriceCalculate request	Error
SAP-0020	RequestedLanguage and RequestedMultiLanguage together in the PriceCalculate request	Error
SAP-0021	Occurs when the item ID is too long (max length is 60 characters)	Error
SAP-0022	Occurs when the business unit is too long (max length is 60 characters)	Error
SAP-0023	Occurs when the COND_SPR_UNIT is < 1	Error
SAP-9999	Occurs in case of an unexpected error	Error
GKR-100500	Value not supported. Element <ELEMENT>. Sent: <INVALID_ENUM_VALUE>	Error
GKR-100501	Value too big. Element <ELEMENT>. Sent: length: <LENGTH>. Expected: max. length: <MAX_LENGTH>.	Error
GKR-100502	Too many decimal places. <LINE_ITEM>. Element <ELEMENT>. Sent: <DEC_PLACES>. Expected: <MAX_DEC_PLACES>.	Error
GKR-100503	Value negativ. <LINE_ITEM>. Element <ELEMENT>. Sent: <VALUE>.	Error
GKR-100504	Structure wrong. <LINE_ITEM>. Element <ELEMENT>. Sent: <VALUE>. Expected: <EXPECTED_VALUE>.	Error

GKR-100505	ID not unique. <LINE_ITEM>. Element <ELEMENT>. Sent: <VALUE>.	Error
GKR-100506	Missing element or attribute. Element <EXPECTED_ELEMENT>. Sent: None. Expected: <ELEMENT_NAME> element	Error

Note:

The <XY> entries in the GK error codes are place holders and they depend on where and how the error occured.

Examples

The now following example requests and responses are all in XML format because it is better readable than JSON.

Example 1: No Promotion

The customer buys a single item 3 times:

Example 1: Request

```
<PriceCalculate xmlns="http://www.sap.com/IXRetail/namespace/" InternalMajorVersion="2" InternalMinorVersion
    <ARTSHeader ActionCode="Calculate" MessageType="Request">
        <MessageID>24006277100103003034034700701395</MessageID>
        <DateTime>2015-09-08T16:53:25.278+02:00</DateTime>
        <BusinessUnit TypeCode="RetailStore">1101</BusinessUnit>
    </ARTSHeader>

  <PriceCalculateBody TransactionType="SaleTransaction" NetPriceFlag="true">
      <TransactionID>9a89f2edfd1e413ea147e334b9c2ed4b</TransactionID>
      <DateTime>2015-09-08T16:53:25.278+02:00</DateTime>
    <ShoppingBasket>
      <LineItem>
        <SequenceNumber>0</SequenceNumber>
        <MerchandiseHierarchy ID="1">RF11111</MerchandiseHierarchy>
        <Sale ItemType="Stock" NonDiscountableFlag="false" FixedPriceFlag="false">
            <NonPieceGoodFlag>false</NonPieceGoodFlag>
            <FrequentShopperPointsEligibilityFlag>true</FrequentShopperPointsEligibilityFlag>
            <NotConsideredByPriceEngineFlag>false</NotConsideredByPriceEngineFlag>
            <ItemID>510110016</ItemID>
            <Quantity Units="1" UnitOfMeasureCode="PCE">3</Quantity>
        </Sale>
      </LineItem>
    </ShoppingBasket>
  </PriceCalculateBody>
</PriceCalculate>
```

As there is no promotion effective for this item, there is the following response:

- The ARTS Header is extended with the Response entity (ResponseType) saying that the request was processed successfully (ResponseCode=OK). It contains the ID and the time stamp of the request (RequestID and ResponseTimestamp).
- The sale line item is extended with the fields ExtendedAmount=30.0 (RegularSalesUnitPrice * Units * Quantity, 10.0 * 1 * 3) and ExtendedDiscountAmount=0.0 (as there was no reduction).

Example 1: Response

```xml
<PriceCalculateResponse xmlns="http://www.sap.com/IXRetail/namespace/" InternalMajorVersion="2" InternalMino
    <ARTSHeader ActionCode="Calculate" MessageType="Response">
        <MessageID>24006277100103003034034700701396</MessageID>
            <DateTime>2015-09-08T16:53:26.278+02:00</DateTime>
            <Response ResponseCode="OK">
                <RequestID>24006277100103003034034700701395</RequestID>
                <ResponseTimestamp>2015-09-08T16:53:26.281+02:00</ResponseTimestamp>
            </Response>
            <BusinessUnit TypeCode="RetailStore">1101</BusinessUnit>
    </ARTSHeader>

    <PriceCalculateBody TransactionType="SaleTransaction" NetPriceFlag="true">
        <TransactionID>9a89f2edfd1e413ea147e334b9c2ed4c</TransactionID>
        <DateTime>2015-09-08T16:53:25.278+02:00</DateTime>
        <ShoppingBasket>
            <LineItem>
                <SequenceNumber>0</SequenceNumber>
                <MerchandiseHierarchy ID="1">RF11111</MerchandiseHierarchy>
                <Sale ItemType="Stock" NonDiscountableFlag="false" FixedPriceFlag="false">
                    <ItemID>510110016</ItemID>
                    <RegularSalesUnitPrice Currency="EUR">10.0</RegularSalesUnitPrice>
                    <ExtendedAmount Currency="EUR">30.0</ExtendedAmount>
                    <ExtendedDiscountAmount Currency="EUR">0.0</ExtendedDiscountAmount>
                    <Quantity Units="1.0" UnitOfMeasureCode="PCE">3</Quantity>
                    <NonPieceGoodFlag>false</NonPieceGoodFlag>
                    <FrequentShopperPointsEligibilityFlag>true</FrequentShopperPointsEligibilityFlag>
                    <PriceTypeCode>00</PriceTypeCode>
                    <NotConsideredByPriceEngineFlag>false</NotConsideredByPriceEngineFlag>
                </Sale>
            </LineItem>
        </ShoppingBasket>
    </PriceCalculateBody>
</PriceCalculateResponse>
```

Example 2: Promotion on Transaction Level

The customer buys 2 items (each one only once). This example shows that it is possible that the regular price is already included in the incoming request (2nd line item).
In this case, it is not retrieved by the promotion pricing service.

Example 2: Request

```xml
<PriceCalculate xmlns="http://www.sap.com/IXRetail/namespace/" InternalMajorVersion="2" InternalMinorVersion
  <ARTSHeader ActionCode="Calculate" MessageType="Request">
   <MessageID>24006277100103003034034700701395</MessageID>
   <DateTime>2015-09-08T16:53:25.278+02:00</DateTime>
   <BusinessUnit TypeCode="RetailStore">1101</BusinessUnit>
  </ARTSHeader>

    <PriceCalculateBody TransactionType="SaleTransaction" NetPriceFlag="true">
     <TransactionID>9a89f2edfd1e413ea147e334b9c2ed4b</TransactionID>
     <DateTime>2015-09-08T16:53:25.278+02:00</DateTime>
      <ShoppingBasket>
        <LineItem>
          <SequenceNumber>0</SequenceNumber>
          <MerchandiseHierarchy ID="1">RF11111</MerchandiseHierarchy>
          <Sale ItemType="Stock" NonDiscountableFlag="false" FixedPriceFlag="false">
              <NonPieceGoodFlag>false</NonPieceGoodFlag>
              <FrequentShopperPointsEligibilityFlag>true</FrequentShopperPointsEligibilityFlag>
              <NotConsideredByPriceEngineFlag>false</NotConsideredByPriceEngineFlag>
              <ItemID>510110016</ItemID>
              <Quantity Units="1" UnitOfMeasureCode="PCE">1</Quantity>
          </Sale>
        </LineItem>
        <LineItem>
          <SequenceNumber>1</SequenceNumber>
          <MerchandiseHierarchy ID="1">RF11111</MerchandiseHierarchy>
          <Sale ItemType="Stock" NonDiscountableFlag="false" FixedPriceFlag="true">
              <NonPieceGoodFlag>false</NonPieceGoodFlag>
              <FrequentShopperPointsEligibilityFlag>true</FrequentShopperPointsEligibilityFlag>
              <NotConsideredByPriceEngineFlag>false</NotConsideredByPriceEngineFlag>
              <ItemID>510110017</ItemID>
              <Quantity Units="1" UnitOfMeasureCode="PCE">1</Quantity>
              <RegularSalesUnitPrice Currency="EUR">15.00000</RegularSalesUnitPrice>
          </Sale>
        </LineItem>
      </ShoppingBasket>
    </PriceCalculateBody>
</PriceCalculate>
```

There is an active promotion with the following rule: "Buy at least for 25 Euro and get a discount of 5€"
With the 2nd line items the limit is reached and the customer receives a transational discount. This discount is prorated to both line items with the price modifier element.
The response also contains a 3rd line item. This line item is a discount that shows the total transational discount inlcuding the price derivation rule.

Example 2: Response

```xml
<PriceCalculateResponse xmlns="http://www.sap.com/IXRetail/namespace/" InternalMajorVersion="2" InternalMino
     <ARTSHeader ActionCode="Calculate" MessageType="Response">
         <MessageID>24006277100103003034034700701396</MessageID>
             <DateTime>2015-09-08T16:53:26.278+02:00</DateTime>
             <Response ResponseCode="OK">
                 <RequestID>24006277100103003034034700701395</RequestID>
                 <ResponseTimestamp>2015-09-08T16:53:26.281+02:00</ResponseTimestamp>
             </Response>
             <BusinessUnit TypeCode="RetailStore">1101</BusinessUnit>
     </ARTSHeader>

    <PriceCalculateBody TransactionType="SaleTransaction" NetPriceFlag="true">
         <TransactionID>9a89f2edfd1e413ea147e334b9c2ed4c</TransactionID>
         <DateTime>2015-09-08T16:53:25.278+02:00</DateTime>
         <ShoppingBasket>
             <LineItem>
                 <SequenceNumber>0</SequenceNumber>
                 <MerchandiseHierarchy ID="1">RF11111</MerchandiseHierarchy>
                 <Sale ItemType="Stock" NonDiscountableFlag="false" FixedPriceFlag="false">
                     <ItemID>510110016</ItemID>
                     <RegularSalesUnitPrice Currency="EUR">15.00000</RegularSalesUnitPrice>
                     <ExtendedAmount Currency="EUR">12.50000</ExtendedAmount>
                     <ExtendedDiscountAmount Currency="EUR">0.00000</ExtendedDiscountAmount>
                     <Quantity Units="1.0" UnitOfMeasureCode="PCE">1</Quantity>
```

```xml
            <NonPieceGoodFlag>false</NonPieceGoodFlag>
            <FrequentShopperPointsEligibilityFlag>true</FrequentShopperPointsEligibilityFlag>
            <PriceTypeCode>00</PriceTypeCode>
            <NotConsideredByPriceEngineFlag>false</NotConsideredByPriceEngineFlag>
            <RetailPriceModifier>
                <SequenceNumber>0</SequenceNumber>
                <Amount Currency="EUR" Action="Subtract">2.50000</Amount>
                <Percent Action="Subtract">16.67</Percent>
                <PreviousPrice Currency="EUR">15.00000</PreviousPrice>
                <NewPrice Currency="EUR">12.50000</NewPrice>
                <PromotionID>1082</PromotionID>
                <ItemLink>2</ItemLink>
                <Quantity>1.0</Quantity>
                <Rounding>0.0</Rounding>
                <ExtraAmount Currency="EUR">0.00000</ExtraAmount>
                <ExternalSystemOriginatorFlag>false</ExternalSystemOriginatorFlag>
            </RetailPriceModifier>
        </LineItem>
    </LineItem>
    <LineItem>
        <SequenceNumber>1</SequenceNumber>
        <MerchandiseHierarchy ID="1">RF11111</MerchandiseHierarchy>
        <Sale ItemType="Stock" NonDiscountableFlag="false" FixedPriceFlag="true">
            <ItemID>510110017</ItemID>
            <RegularSalesUnitPrice Currency="EUR">15.00000</RegularSalesUnitPrice>
            <ExtendedAmount Currency="EUR">12.50000</ExtendedAmount>
            <ExtendedDiscountAmount Currency="EUR">0.00000</ExtendedDiscountAmount>
            <Quantity Units="1.0" UnitOfMeasureCode="PCE">1</Quantity>
            <NonPieceGoodFlag>false</NonPieceGoodFlag>
            <FrequentShopperPointsEligibilityFlag>true</FrequentShopperPointsEligibilityFlag>
            <PriceTypeCode>00</PriceTypeCode>
            <NotConsideredByPriceEngineFlag>false</NotConsideredByPriceEngineFlag>
            <RetailPriceModifier>
                <SequenceNumber>0</SequenceNumber>
                <Amount Currency="EUR" Action="Subtract">2.50000</Amount>
                <Percent Action="Subtract">16.67</Percent>
                <PreviousPrice Currency="EUR">15.00000</PreviousPrice>
                <NewPrice Currency="EUR">12.50000</NewPrice>
                <PromotionID>1082</PromotionID>
                <ItemLink>2</ItemLink>
                <Quantity>1.0</Quantity>
                <Rounding>0.0</Rounding>
                <ExtraAmount Currency="EUR">0.00000</ExtraAmount>
                <ExternalSystemOriginatorFlag>false</ExternalSystemOriginatorFlag>
            </RetailPriceModifier>
        </Sale>
    </LineItem>
    <LineItem>
        <SequenceNumber>2</SequenceNumber>
        <ExtraAmount>0.00000</ExtraAmount>
        <ExternalSystemOriginatorFlag>false</ExternalSystemOriginatorFlag>
        <Discount ProratedFlag="true">
            <SequenceNumber>0</SequenceNumber>
            <Amount Currency="EUR" Action="Subtract">10.00000</Amount>
            <Percent Action="Subtract">33.33</Percent>
            <PreviousPrice Currency="EUR">30.00000</PreviousPrice>
            <NewPrice Currency="EUR">20.00000</NewPrice>
            <PromotionID>1082</PromotionID>
            <ItemLink>0</ItemLink>
            <ItemLink>1</ItemLink>
            <Quantity>1.0</Quantity>
            <Rounding>0.0</Rounding>
            <PriceDerivationRule ApplicationType="DiscountTotal">
                <PriceDerivationRuleID>3314</PriceDerivationRuleID>
                <PromotionDescription>Buy for at least 25 Euro and you get a discount of 5 Euro</Pro
                <PromotionPriceDerivationRuleSequence>3314</PromotionPriceDerivationRuleSequence>
                <PromotionPriceDerivationRuleResolution>0</PromotionPriceDerivationRuleResolution>
                <PromotionPriceDerivationRuleTypeCode/>
                <TransactionControlBreakCode>SU</TransactionControlBreakCode>
                <PromotionOriginatorTypeCode>01</PromotionOriginatorTypeCode>
                <TriggerQuantity>0.0</TriggerQuantity>
                <FrequentShopperPointsFlag>false</FrequentShopperPointsFlag>
                <CustomerGroupLoyaltyPointsDefaultQuantity>0.0</CustomerGroupLoyaltyPointsDefaultQua
```

```xml
            <ProhibitPrintFlag>false</ProhibitPrintFlag>
            <PointsConversionAmount>0.01</PointsConversionAmount>
            <NoEffectOnSubsequentPriceDerivationRulesFlag>false</NoEffectOnSubsequentPriceDeriva
            <ProhibitTransactionRelatedPriceDerivationRulesFlag>false</ProhibitTransactionRelate
            <ExclusiveFlag>false</ExclusiveFlag>
            <AppliedCount>1.0</AppliedCount>
            <ExternalPromotionID>000000000000000000000000000000002651</ExternalPromotionID>
            <PrintoutValidityPeriod>-1</PrintoutValidityPeriod>
          </PriceDerivationRule>
        </LineItem>
      </ShoppingBasket>
    </PriceCalculateBody>
</PriceCalculateResponse>
```

Example 3: Promotion on Item Level

The request of this example is identical with the request in example 2.

Example 3: Request

```xml
<PriceCalculate xmlns="http://www.sap.com/IXRetail/namespace/" InternalMajorVersion="2" InternalMinorVersion
    <ARTSHeader ActionCode="Calculate" MessageType="Request">
        <MessageID>240062771001030030340347007001395</MessageID>
        <DateTime>2015-09-08T16:53:25.278+02:00</DateTime>
        <BusinessUnit TypeCode="RetailStore">1101</BusinessUnit>
    </ARTSHeader>

  <PriceCalculateBody TransactionType="SaleTransaction" NetPriceFlag="true">
      <TransactionID>9a89f2edfd1e413ea147e334b9c2ed4b</TransactionID>
      <DateTime>2015-09-08T16:53:25.278+02:00</DateTime>
    <ShoppingBasket>
      <LineItem>
        <SequenceNumber>0</SequenceNumber>
        <MerchandiseHierarchy ID="1">RF11111</MerchandiseHierarchy>
        <Sale ItemType="Stock" NonDiscountableFlag="false" FixedPriceFlag="false">
            <NonPieceGoodFlag>false</NonPieceGoodFlag>
            <FrequentShopperPointsEligibilityFlag>true</FrequentShopperPointsEligibilityFlag>
            <NotConsideredByPriceEngineFlag>false</NotConsideredByPriceEngineFlag>
            <ItemID>510110016</ItemID>
            <Quantity Units="1" UnitOfMeasureCode="PCE">1</Quantity>
        </Sale>
      </LineItem>
      <LineItem>
        <SequenceNumber>1</SequenceNumber>
        <MerchandiseHierarchy ID="1">RF11111</MerchandiseHierarchy>
        <Sale ItemType="Stock" NonDiscountableFlag="false" FixedPriceFlag="true">
            <NonPieceGoodFlag>false</NonPieceGoodFlag>
            <FrequentShopperPointsEligibilityFlag>true</FrequentShopperPointsEligibilityFlag>
            <NotConsideredByPriceEngineFlag>false</NotConsideredByPriceEngineFlag>
            <ItemID>510110017</ItemID>
            <Quantity Units="1" UnitOfMeasureCode="PCE">1</Quantity>
            <RegularSalesUnitPrice Currency="EUR">15.00000</RegularSalesUnitPrice>
        </Sale>
      </LineItem>
    </ShoppingBasket>
  </PriceCalculateBody>
</PriceCalculate>
```

There is an active promotion with the following rule:"Buy item 510110016 (1st line item) and get a discount of 5 Euro".
The response shows that the 1st line item contains a price modifier with a price derivation rule. For the 2nd line item there was no promotion effective, as in example 1.
There is also no discount line item, because there is no transactional discount.

Example 3: Response

```xml
<PriceCalculateResponse xmlns="http://www.sap.com/IXRetail/namespace/" InternalMajorVersion="2" InternalMino
    <ARTSHeader ActionCode="Calculate" MessageType="Response">
        <MessageID>240062771001030030334034700701396</MessageID>
            <DateTime>2015-09-08T16:53:26.278+02:00</DateTime>
            <Response ResponseCode="OK">
                <RequestID>240062771001030030334034700701395</RequestID>
                <ResponseTimestamp>2015-09-08T16:53:26.281+02:00</ResponseTimestamp>
            </Response>
            <BusinessUnit TypeCode="RetailStore">1101</BusinessUnit>
    </ARTSHeader>

    <PriceCalculateBody TransactionType="SaleTransaction" NetPriceFlag="true">
        <TransactionID>9a89f2edfd1e413ea147e334b9c2ed4c</TransactionID>
        <DateTime>2015-09-08T16:53:25.278+02:00</DateTime>
        <ShoppingBasket>
            <LineItem>
                <SequenceNumber>0</SequenceNumber>
                <MerchandiseHierarchy ID="1">RF11111</MerchandiseHierarchy>
                <Sale ItemType="Stock" NonDiscountableFlag="false" FixedPriceFlag="false">
                    <ItemID>510110016</ItemID>
                    <RegularSalesUnitPrice Currency="EUR">10.00000</RegularSalesUnitPrice>
                    <ExtendedAmount Currency="EUR">5.00000</ExtendedAmount>
                    <ExtendedDiscountAmount Currency="EUR">5.00000</ExtendedDiscountAmount>
                    <Quantity Units="1.0" UnitOfMeasureCode="PCE">1</Quantity>
                    <NonPieceGoodFlag>false</NonPieceGoodFlag>
                    <FrequentShopperPointsEligibilityFlag>true</FrequentShopperPointsEligibilityFlag>
                    <PriceTypeCode>00</PriceTypeCode>
                    <NotConsideredByPriceEngineFlag>false</NotConsideredByPriceEngineFlag>
                    <RetailPriceModifier>
                        <SequenceNumber>0</SequenceNumber>
                        <Amount Currency="EUR" Action="Subtract">5.00000</Amount>
                        <Percent Action="Subtract">50.00</Percent>
                        <PreviousPrice Currency="EUR">10.00000</PreviousPrice>
                        <NewPrice Currency="EUR">5.00000</NewPrice>
                        <PromotionID>1082</PromotionID>
                        <Quantity>1.0</Quantity>
                        <Rounding>0.0</Rounding>
                        <PriceDerivationRule ApplicationType="DiscountSingle">
                            <PriceDerivationRuleID>3314</PriceDerivationRuleID>
                            <PromotionDescription>Buy item 510110016 and you get it with a discount of 5 Eur
                            <PromotionPriceDerivationRuleSequence>3314</PromotionPriceDerivationRuleSequence
                            <PromotionPriceDerivationRuleResolution>0</PromotionPriceDerivationRuleResolutic
                            <PromotionPriceDerivationRuleTypeCode/>
                            <TransactionControlBreakCode>SU</TransactionControlBreakCode>
                            <PromotionOriginatorTypeCode>01</PromotionOriginatorTypeCode>
                            <TriggerQuantity>0.0</TriggerQuantity>
                            <FrequentShopperPointsFlag>false</FrequentShopperPointsFlag>
                            <CustomerGroupLoyaltyPointsDefaultQuantity>0.0</CustomerGroupLoyaltyPointsDefaul
                            <ProhibitPrintFlag>false</ProhibitPrintFlag>
                            <PointsConversionAmount>0.01</PointsConversionAmount>
                            <NoEffectOnSubsequentPriceDerivationRulesFlag>false</NoEffectOnSubsequentPriceDe
                            <ProhibitTransactionRelatedPriceDerivationRulesFlag>false</ProhibitTransactionRe
                            <ExclusiveFlag>false</ExclusiveFlag>
                            <AppliedCount>1.0</AppliedCount>
                            <ExternalPromotionID>000000000000000000000000000000002651</ExternalPromotionID>
                            <PrintoutValidityPeriod>-1</PrintoutValidityPeriod>
                        </PriceDerivationRule>
                        <ExtraAmount Currency="EUR">0.00000</ExtraAmount>
                        <ExternalSystemOriginatorFlag>false</ExternalSystemOriginatorFlag>
                    </RetailPriceModifier>
                </Sale>
            </LineItem>
            <LineItem>
                <SequenceNumber>1</SequenceNumber>
                <MerchandiseHierarchy ID="1">RF11111</MerchandiseHierarchy>
                <Sale ItemType="Stock" NonDiscountableFlag="false" FixedPriceFlag="true">
                    <ItemID>510110017</ItemID>
                    <RegularSalesUnitPrice Currency="EUR">15.00000</RegularSalesUnitPrice>
                    <ExtendedAmount Currency="EUR">15.00000</ExtendedAmount>
                    <ExtendedDiscountAmount Currency="EUR">0.00000</ExtendedDiscountAmount>
                    <Quantity Units="1.0" UnitOfMeasureCode="PCE">1</Quantity>
```

```xml
                        <NonPieceGoodFlag>false</NonPieceGoodFlag>
                        <FrequentShopperPointsEligibilityFlag>true</FrequentShopperPointsEligibilityFlag>
                        <PriceTypeCode>00</PriceTypeCode>
                        <NotConsideredByPriceEngineFlag>false</NotConsideredByPriceEngineFlag>
                    </Sale>
                </LineItem>
            </ShoppingBasket>
        </PriceCalculateBody>
</PriceCalculateResponse>
```

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Material Number: