



CHARTER
VERSION 1.0

Charter - REST Services - NPC ProductOrderItems - SDD

Services Design Document

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Table of Contents

1	Overview	1
1.1	Related Documentation	1
1.2	Assumptions	1
2	Service Definition	1
2.1	Service Name	1
2.2	Service Endpoints	1
2.3	Required Projects	1
2.4	Service WSDL	1
3	Operation Definition	2
3.1	getProductOrderItems	2
3.1.1	Request Parameters	2
3.1.2	Request Sample	2
3.1.3	Response	2
3.1.4	Response Sample	9
3.1.5	Sequence Diagram	9
3.1.6	Operation Synchronicity	9
3.1.7	Operation Type	9
3.1.8	Related Services	9
3.1.9	Operation Specific Header Information	9
3.1.10	Operation Specific Logging	10
3.1.11	Operation Specific Error Handling	10
4	Open Issues	12
	Appendix A. Fields derived from MEC	13
	Document Release Information to Charter	14
	Document Internal Release Notes	Error! Bookmark not defined.

1 Overview

The purpose of this Service Design Document (SDD) is to provide service implementation design details for product order items REST.

The Product Order Items REST service retrieves high level information of products and associated Order Actions which are included in the current order based on the OE Order ID provided as input. This information will be used later for retrieving the configuration per product.

1.1 Related Documentation

Charter - COP Order Flow - HLS: 2424229:

1.2 Assumptions

#	Assumption
1	As a result of MEC and BPT Data Gathering Valid Values may be refined.
2	As a result of Detail Design, Additional Error Message(s) may be added (section 3.1. 4.3.11.4)

2 Service Definition

2.1 Service Name

~~Name~~getProductOrderItems

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2.2 Service Endpoints

Environment	Endpoint
Dev	Not available
QA	Not available
UAT	Not available
Prod	Not available

2.3 Required Projects

The URL for this REST will be: GET /commerce/customer/{customer-id}/product-order/{product-order-id}/product-order-items

2.4 Service WSDL

N/A

3 Operation Definition

Name	Request Parameters	Response	Status
getProductOrderItems	ImplGetProductOrderItemsRequest	ImplProductOrderItemsResponse	

3.1 getProductOrderItems

3.1.1 Request Parameters

The REST input is described in section 3.1-~~8~~[9.1](#)

The input includes Header parameters and Query parameters only.

3.1.2 Request Sample

TBD

3.1.3 Response

ImplProductOrderItemsResponse

Field Name	Data Type	Valid Values	Mandatory/Optional	Description
implProductOrderItemHeaders	ImplProductOrderItemHeaders	N/A	Optional	Main output
implBaseResponse	ImplBaseResponse	N/A	Mandatory	Additional generic information.

3.1.3.1 ImplProductOrderItemHeaders

Field Name	Data Type	Valid Values	Mandatory/Optional	Description
Links	Link[]	N/A	Not in use	Not in use
p PProductOrderItemHeaders	OrderItemHeader[]	N/A	Mandatory	Main attributes of an Order item. An Order item is a request from a customer for an action on a specific product on specific date. An Order item is included in an order.

3.1.3.2 OrderItemHeader

Field Name	Data Type	Valid Values	Mandatory/Optional	Description
p PProductOfferingInstanceID	String	N/A	Mandatory	Assigned Product ID
p PProductOfferingName	String	N/A	Mandatory	The productOfferingName (catalog Name) of the product, which is related to the OrderItem

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Field Name	Data Type	Valid Values	Mandatory/Optional	Description
Links	Link[]	N/A	Not in use	Not in use
RecurringPrice	RecurringPriceForOrder	N/A	Not in use	Monthly charge
OneTimePrice	OneTimePriceForOrder	N/A	Not in use	One-time charge
CreationDate	Date	N/A	Not in use	The date on which the Order item was considered to have been received by the CSP.
<u>impl</u> CalculatedPrices	<u>Impl</u> CalculatedPrices[]	N/A	Optional	<u>Pricing object.</u>
<u>r</u> eferenceNumber	String	N/A	Mandatory	A unique string that identifies the Order item and is typically displayed to human users on screens and in reports.
<u>p</u> roductID	String	N/A	Mandatory	Product ID
OriginatingSalesChannel	String	N/A	Not in use	The originating sales channel
<u>s</u> erviceRequiredDate	Date	N/A	Mandatory	The date on which the customer wished to receive service for the product in the Order item.
<u>p</u> roductServiceID	String	N/A	Mandatory	Product Subscription number
<u>p</u> roductName	String	N/A	Optional	Product Catalog name
Lob	String	N/A	Not in use	The Line Of Business code of the product in the Order action
<u>a</u> llowedActions	AvailableAction[]	N/A	Mandatory	Available Actions Valid Values list
<u>c</u> reatedBy	String	N/A	Mandatory	The User ID that initiated the request
BusinessOrderItem	BusinessOrderItemHeader	N/A	Not in use	Not in use

Field Name	Data Type	Valid Values	Mandatory/Optional	Description
ActionSubType	String	N/A	Not in use	The Order Action sub type to be performed on a Product. For example: Add TV Channels - add a TV channel to a Product Change Device - change the device a customer has Update STB - update the STB a customer has Update Service - update a service on a Product Add Service - add a service to a Product The types are defined by implementation
<u>a</u> ActionType	BusinessAction	N/A	Mandatory	The action to be performed on the associated product in the context of this Order item}. For example Cease.
<u>p</u> ProductCatalogID	String	N/A	Mandatory	Product Catalog ID
<u>l</u> LineOfBusiness	String	BPT Values defined by MECN/ATBD	Mandatory	Line of business
<u>i</u> sPartOfBundle	Boolean	N/A	Mandatory	This parameter indicates, if the product is part of Bundle offer
<u>p</u> ProductLevel	String	BPT Values defined by MECN/ATBD	Optional	The billing level at which pricing can be applied. For example Group or Subscription
<u>i</u> Id	String	N/A	Mandatory	Order action ID.
Description	String	N/A	Not in use	Free format short textual description
<u>s</u> Status	OrderItemStatus	N/A	Mandatory	The Lifecycle status of the Order item.

3.1.3.3 RecurringPriceForOrder – not in use.

Field Name	Data Type	Valid Values	Mandatory/ Optional	Description
Links	Link[]	N/A	Not in use	Not in use
OriginalAmount	BigDecimal	N/A	Optional	The original amount of the price - before any discounts.
ProratedAmount	BigDecimal	N/A	Optional	The amount of the quoted recurring price proportionate to the required period of the first bill.
ProratedDiscountAmount	BigDecimal	N/A	Optional	The discount amount of the quoted recurring price calculated proportionately to the required period
ProratedTaxAmount	BigDecimal	N/A	Optional	The Tax amount of the quoted recurring price calculated proportionately to the required period of the first bill.
DiscountPercentage	BigDecimal	N/A	Optional	Discount percentage.
Frequency	String	N/A	Optional	The price frequency, for example: monthly, weekly, bi-weekly.
FinalAmount	BigDecimal	N/A	Optional	The final amount of the price after any discounts and override/waive
FinalAmountWithTax	BigDecimal	N/A	Optional	The finalAmount + finalTaxAmount
FinalTaxAmount	BigDecimal	N/A	Optional	The final Tax amount of the price after any discounts.
OriginalTaxAmount	BigDecimal	N/A	Optional	The original Tax amount of the price - before any discounts.
Currency	String	N/A	Optional	The currency of the price

3.1.3.4 OneTimePriceForOrder – not in use

Field Name	Data Type	Valid Values	Mandatory/Optional	Description
Links	Link[]	N/A	Not in use	Not in use
OriginalAmount	BigDecimal	N/A	Optional	The original amount of the price - before any discounts.
DiscountPercentage	BigDecimal	N/A	Optional	
FinalAmount	BigDecimal	N/A	Optional	The final amount of the price after any discounts and override/waive.
FinalAmountWithTax	BigDecimal	N/A	Optional	The finalAmount + finalTaxAmount
FinalTaxAmount	BigDecimal	N/A	Optional	The final Tax amount of the price after any discounts
OriginalTaxAmount	BigDecimal	N/A	Optional	The original Tax amount of the price - before any discounts.
Description	String	N/A	Optional	One Time Price description such as activation fee, termination fee, installation fee
Currency	String	N/A	Optional	The currency of the price.

3.1.3.5 AvailableAction

Field Name	Data Type	Valid Values	Mandatory/Optional	Description
value	String	AMEND,CANCEL,CANCEL_OFFER,CANCEL_PARTIAL,CANCEL_REPLACE_OFFER,CREATE,DISCONTINUE,EDIT,RESUME_NEGOTIATION,TAKEOVER,WITHDRAW_AMEND,WITHDRAW_CANCEL	Mandatory	Available action, only values from the Valid Values list will be returned.

3.1.3.6 BusinessOrderItemHeader – not in use

Field Name	Data Type	Valid Values	Mandatory/Optional	Description
Links	Link[]	N/A	Not in use	Not relevant for Charter.
GroupName	String	N/A	Optional	The Group ID
FrameworkAgreementName	String	N/A	Optional	Framework Agreement Name
LevelInAgreement	OrderLevelInAgreement	N/A	Optional	Level in agreement.

Field Name	Data Type	Valid Values	Mandatory/Optional	Description
BusinessOfferTemplateID	String	N/A	Optional	The BOT ID of the subscription.
BusinessOfferTemplateName	String	N/A	Optional	The BOT name of the subscription.

3.1.3.7 BusinessAction

Field Name	Data Type	Valid Values	Mandatory/Optional	Description
value	String	ADD_ACCESSORY,ADD_PRICE_PACKAGE,ADD_PRODUCT,ADD_SERVICE,ALIGN_PRODUCT_BOT,CEASE_MOVE,CHANGE_BOT,CHANGE_OWNERSHIP,CHANGE_PLAN_DEVICE,CHANGE_PRODUCT,MOVE_PRODUCT,NEW_BOT_PRODUCT,NOTIFY_DISCOUNTS,PROVIDE_FWA,PROVIDE_MOVE,REESTABLISH_PRODUCT,REMOVE_PRODUCT,RESUME_PRODUCT,SUSPEND_PRODUCT,UPDATE_CONTACT	Mandatory	Business action will be used from the Valid Values list.

3.1.3.8 OrderItemStatus

Field Name	Data Type	Valid Values	Mandatory/Optional	Description
value	String	CANCELED,COMPLETION,DELIVERY,DONE,FUTURE,INITIAL,NEGOTIATION,REJECT,TO_BE_CANCELED	Mandatory	Order item status will be used from the Valid Values list.

3.1.3.9 OrderLevelInAgreement – not in use.

Field Name	Data Type	Valid Values	Mandatory/Optional	Description
value	String	AGREEMENT,BUSINESS_OFFER_TEMPLATE,SHARED_SERVICE_PLAN,SUBSCRIPTION_IN_AGREEMENT	Mandatory	Order level agreement will be used from the Valid Values list.

3.1.3.10 ImplCalculatedPrices

Field Name	Data Type	Valid Values	Mandatory /Optional	Description
ppCid	String	N/A	Mandatory	The Price Plan Catalog ID (PP CID) automatically generated in MEC.
ppType	String	RP – retail price (regular price). Each Price Plan is associated to a Retail price (the record with this PP TYPE is mandatory) DP – Percentage Discount (the record with this PP TYPE is optional) DF – Flat Discount (this amount overrides the regular price) (the record with this PP TYPE is optional) DD – Dollar Off Discount (the record with this PP TYPE is optional)	Mandatory	The Price Plan type
tierFrom	String	N/A	Optional	The discount tiers start (in month), for example 1, meaning from the 1 month, or 13, meaning from the second year
tierTo	String	N/A	Optional	The discount tiers end (in months), for example 12, meaning until the 12-th month (discount is applied for one year only). The value 999 will mean that discount is not limited in time.
quantityAtt	String	N/A	Optional	The ID of the Quantity attribute on the component. This code, which is defined in MEC for each attribute, will help the target application to find the Quantity value set during the Product configuration
quantityFrom	Integer	N/A	Optional	The number of the service instances from which the discount is applied.
quantityTo	Integer	N/A	Optional	The number of the service instances to which the discount is applied. The value 999 will mean that discount is not limited in number of instances.
amountType	String	OC – One-Time price RC – Recurring price DC – Discount	Mandatory	Type of the amount price in the next column.
amount	BigDecimal	N/A	Mandatory	The value of the dollar amount for the retail price, flat discount or dollar off discount, or percentage in case of percentage discount.

Field Name	Data Type	Valid Values	Mandatory /Optional	Description
quantity	Integer	N/A	Optional	Number of related price plans
provisioningDate	Date	N/A	Optional	Date of the provisioning

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~~3.1.3.103~~ 3.1.3.11 ImplBaseResponse

Field Name	Data Type	Valid Values	Mandatory/Optional	Description
transactionId	N/A	String	Optional	A Unique ID for a certain REST call
timeStamp	N/A	Date	Optional	The time of the response
implErrorInfo	N/A	ImplErrorInfo[]	Optional	Used for business errors (for technical/unexpected error – HTTP error codes will be returned). See section 3.1.10.1

3.1.4 Response Sample

TBD

3.1.5 Sequence Diagram

N/A

3.1.6 Operation Synchronicity

Synchronous

3.1.7 Operation Type

Proxy

3.1.8 Related Services

N/A

3.1.9 Operation Specific Header Information

3.1.9.1 Request Header

Field Name	Valid Values	Data Type	Type	Mandatory/Optional	Description
username	N/A	String	Header	Mandatory	User name
password	N/A	String	Header	Mandatory	Password

Field Name	Valid Values	Data Type	Type	Mandatory/ Optional	Description
applicationId	N/A	String	Header	Mandatory	For example, Charter Gateway
transactionId	N/A	String	Header	Mandatory	A Unique ID for a certain REST call.
timeStamp	N/A	Date	Header	Mandatory	The time the REST was called.
sc (sales channel)	CC	String	Query	Mandatory	Sales channel
lo(locale)	en	String	Query	Mandatory	Locale
customer-id	N/A	String	path	MandatoryOptional	The customer identification, in case of anonymous send 0
product-order-id	N/A	String	Path	Mandatory	Product Order ID related to order actions.

3.1.10 Operation Specific Logging

N/A

3.1.11 Operation Specific Error Handling

#	Exception	Error Code	Description/Scenario
1	Unauthorized	401	Security issue
2	Forbidden	403	Security issue
3	BadRequest	400	The request could not be understood by the server
4	RequestTimeout	408	Request timed out.
5	PreconditionFailed	412	Re-Authentication Failed
6	NotFound	404	Resource Not Found
7	InternalServerError	500	Server encountered problem
8	EntityNotFound	404	Error for Entity Not Found

3.1.11.1 Error Code Structure

3.1.11.2 ImplErrorInfo

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Field Name	Data Type	Mandatory/ Optional	Description
errorCode	String	Mandatory	Error code, single string.
Description	String	Mandatory	A description of the error.
errorMessage	String	Mandatory	Error message.
errorUUID	String	Mandatory	Unique number to identify the error.

3.1.11.33.1.11.3 Sample Error Code (401)

```
{
  "implErrorInfo": {
    "errorCode": "AuthorizationFailed",
    "description": "You are not Authorized",
    "errorMessage": "login of user {FAKE_USER} has failed: {status:4} {userStatus:0} {error:User account is unknown or password is wrong}",
    "errorUUID": "1a719fd5-01eb-4b78-ad9d-b80296bc548a"
  }
}
```

3.1.11.33.1.11.4 Possible Error Messages

#	Exception	Scenario	Error message
1	BadRequest	Mandatory parameter is missing	BadRequest
2	BadRequest	Inconsistent parameters	InvalidUsage

4 Open Issues

N/A

Appendix A. Fields derived from MEC

The valid values for the following fields are BPT values, defined in MEC.

Field Name	Data Type	section
lineOfBusiness	OrderItemHeader	3.1.3.2
productLevel	OrderItemHeader	3.1.3.2

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Document Release Information

Every change made to the document following the initial delivery **MUST** be shown in detail in this table

Software Version	Editor/Author	Application	Edit Date[MM-dd-yyyy]	Section	Changes	Sent to site	Approving Manager	DC Ver.
	Vicki Nathan	TC	June 15 2015	All	Initial Version converted to Development template, aligned with Service SDD skeleton, and reviewed.			0.5
	Orit Sarfaty-Preisler	All	June 15 2015	All	Finalized	Y		1.0
	Tammy Shalev	REST	Jul-07-2015	3.1.3.2	Updated valid values to - BPT Values defined by MEC for this fields: - lineOfBusiness - productLevel	Y N		1.9
	Malki Sabag	REST	Jul-13-2015	3.1.3.10 3.1.3.2	Added new implCalculatedPrices object (following performance improvements)	Y Y N		1.10