

# Resource Order Management

## Business Service Specification

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## RESOURCE ORDER MANAGEMENT

The following document is the specification of the REST API for Resource Order Management. It includes the model definition as well as all available operations. Possible actions are creating, updating and retrieving Resource Orders.

The Resource Ordering API provides a standardized mechanism for placing a resource order with all of the necessary order parameters. The API consists of a simple set of operations that interact with CRM/Order Negotiation systems in a consistent manner. A resource order is created based on a resource candidate that is defined in a catalog. The resource candidate identifies the resource or set of resources that are available, and includes characteristics such as size, weight, color, etc.

The resource order references the resource candidate and identifies any specific requests made by the engaged party.

Resource Ordering API manages resource order resource:

A Resource Order is a type of order which can be used to place an order between a service provider and a partner and vice versa.

Main Resource Order attributes are its identifier, state, priority category, related dates (start, completion, etc.), related billing account, related parties and order items.

Main Order Items (aka order lines) attributes are the ordered resource candidate and resource characteristics with the related action to be performed (e.g. add or delete the resources), state, location information for delivery.

Resource ordering API performs the following operations on Resource Order:

Retrieval of a resource order or a collection of resource orders depending on filter criteria

Partial update of a resource order (including updating rules)

Creation of a resource order (including default values and creation rules)

Deletion of resource order (for administration purposes)

Notification of events on resource order:

- o Order creation
- o Order removal
- o Order state change
- o Order value change used to notify that any data in an order has just changed
- o Order information required used to notify that some data in the order need to be filled / are missing

The following Assumptions were considered in the development of this document :

- The Order Management system has access to the commercial catalog system

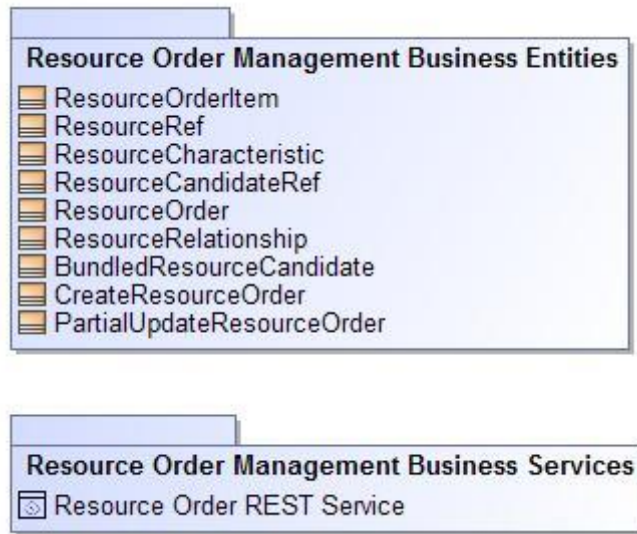


Figure 1. Resource Order Management



## BUSINESS ENTITY – CREATERESOURCEORDER

A type of order which can be used to place an order between a service provider and a partner and vice versa.

### Attributes

Name	Type	Multiplicity	Description
category	String	1	Used to categorize the order from a business perspective that can be useful for the OM system (e.g. enterprise, residential, ...).
description	String	1	Description of the resource order.
expectedCompletionDate	DateTime	1	Expected delivery date amended by the provider.
externalId	String	1	ID given by the consumer and only understandable by him (to facilitate his searches afterwards).
note	Note	0..*	Extra-information about the order (e.g. useful to add extra delivery information that could be useful for a human process : a digicode access to a building, ...).
notificationContact	String	1	Contact attached to the order to send back information regarding this order.
orderDate	DateTime	1	Date when the order was created.
orderItem	ResourceOrderItem	0..*	List of order items that have to be treated.
priority	String	1	A way that can be used by consumers to prioritize orders in OM system (from 0 to 4 : 0 is the highest priority, and 4 the lowest).
relatedParty	RelatedPartyRef	0..*	Parties which are involved in this order and the role they are playing.
requestedCompletionDate	DateTime	1	Requested delivery date from the requester perspective.
requestedStartDate	DateTime	1	Order start date wished by the requester.

### Business Rules

Name	Severity	Specification	Message
mandatory attributes		[billingAccount.id and/or billingAccount.href note.text relatedParty.id and/or relatedParty.href and/or relatedParty.name relatedParty.role orderItem.place.role orderItem.place.id and/or orderItem.place.href orderItem.id, orderItem.action orderItem.resource orderItem.resource.resourceCharacteristic if orderItem.action = 'add' orderItem.resource.id and/or orderItem.resource.href if orderItem.action = 'modify' orderItem.resource.id orderItem.resource.href if orderItem.action = 'delete' orderItem.resourceCandidate (The resourceCandidate may not	



		be useful when doing a “modify” or “delete” on an owned resource)]	
--	--	--	--

## BUSINESS ENTITY – PARTIALUPDATERESOURCEORDER

A type of order which can be used to place an order between a service provider and a partner and vice versa.

### Attributes

Name	Type	Multiplicity	Description
category	String	1	Used to categorize the order from a business perspective that can be useful for the OM system (e.g. enterprise, residential, ...).
completionDate	DateTime	1	Date when the order was completed.
description	String	1	Description of the resource order.
expectedCompletionDate	DateTime	1	Expected delivery date amended by the provider.
externalId	String	1	ID given by the consumer and only understandable by him (to facilitate his searches afterwards).
note	Note	0..*	Extra-information about the order (e.g. useful to add extra delivery information that could be useful for a human process : a digicode access to a building, ...).
notificationContact	String	1	Contact attached to the order to send back information regarding this order.
orderDate	DateTime	1	Date when the order was created.
orderItem	ResourceOrderItem	0..*	List of order items that have to be treated.
priority	String	1	A way that can be used by consumers to prioritize orders in OM system (from 0 to 4 : 0 is the highest priority, and 4 the lowest).
relatedParty	RelatedPartyRef	0..*	Parties which are involved in this order and the role they are playing.
requestedCompletionDate	DateTime	1	Requested delivery date from the requester perspective.
requestedStartDate	DateTime	1	Order start date wished by the requester.
status	String	1	State of the order - submitted, rejected, acknowledged, in progress (held), in progress (pending), completed, cancelled.
subStatus	String	1	SubState of the order - held, pending.

### Business Rules

Name	Severity	Specification	Message
can be updated		[status & subStatus - to manage the order delivery process - submitted, rejected, acknowledged, in progress held, in progress pending, completed, cancelled priority category requestedStartDate - only when order is in “Acknowledged” state (delivery process not started) requestedCompletionDate - only when order is in “Acknowledged” state (delivery process not	

	<p>started)                  expectedCompletionDate                  notificationContact                  note                  billingAccount - only when order is in "Acknowledged" state (delivery process not started)                  relatedParty - only when order is in "Acknowledged" state (delivery process not started)                  orderItem.state - to manage the order item delivery process : InProgress (start sub process), Held / Pending (suspend sub process), Influence the order states                  orderItem.resourceCandidate - only when order is in "Acknowledged" state (delivery process not started)                  orderItem.resource - only when order item is in "Acknowledged" or "Pending" state (delivery process not started or suspended)                  orderItem.place - only when order item is in "Acknowledged" or "Pending" state (delivery process not started or suspended)                  orderItem.appointment - only when order item is in "Acknowledged" or "Pending" state (delivery process not started or suspended)]</p>	
<p>state patches</p>	<p>[When patching an order state to :                  - "Pending" / "Held" : all "InProgress" order items SHOULD be set to "Pending" / "Held"                  - "InProgress" :                    o all "Acknowledged" order items MUST be set to "InProgress"                    o all "Pending"/"Held" order items MAY be set to "InProgress"                    When patching an order item state to :                  - "Pending" / "Held" : the order state itself SHOULD be set to "Pending" / "Held"]</p>	

## BUSINESS ENTITY – RESOURCECANDIDATEREF

An entity that makes a ResourceSpecification available to a catalog. A ResourceCandidate and its associated ResourceSpecification may be published - made visible - in any number of ResourceCatalogs, or in none. One ResourceSpecification can be composed of other ResourceSpecifications. The ResourceCandidate consists of a subset of ResourceSpecification characteristics to fulfill a product offering. These ResourceSpecifications may also be published.

## Attributes

Name	Type	Multiplicity	Description
bundledResourceCandidate	BundledResourceCandidate	0..*	
href	String	1	Reference of the resource candidate.

## BUSINESS ENTITY – RESOURCECHARACTERISTIC

Characteristics of the resource to instantiate or to modify.

### Attributes

Name	Type	Multiplicity	Description
name	String	1	
value	String	1	

## BUSINESS ENTITY – RESOURCEORDER

A type of order which can be used to place an order between a service provider and a partner and vice versa.

### Attributes

Name	Type	Multiplicity	Description
category	String	1	Used to categorize the order from a business perspective that can be useful for the OM system (e.g. enterprise, residential, ...).
completionDate	DateTime	1	Date when the order was completed.
description	String	1	Description of the resource order.
expectedCompletionDate	DateTime	1	Expected delivery date amended by the provider.
externalId	String	1	ID given by the consumer and only understandable by him (to facilitate his searches afterwards).
href	String	1	Hyperlink to access the order.
id	String	1	ID created on repository side (OM system).
note	Note	0..*	Extra-information about the order (e.g. useful to add extra delivery information that could be useful for a human process : a digicode access to a building, ...).
notificationContact	String	1	Contact attached to the order to send back information regarding this order.
orderDate	DateTime	1	Date when the order was created.
orderItem	ResourceOrderItem	0..*	List of order items that have to be treated.
priority	String	1	A way that can be used by consumers to prioritize orders in OM system (from 0 to 4 : 0 is the highest priority, and 4 the lowest).
relatedParty	RelatedPartyRef	0..*	Parties which are involved in this order and the role they are playing.
requestedCompletionDate	DateTime	1	Requested delivery date from the requester perspective.
requestedStartDate	DateTime	1	Order start date wished by the requester.
status	String	1	State of the order - submitted, rejected, acknowledged, in progress (held), in progress (pending), completed, cancelled.
subStatus	String	1	SubState of the order - held, pending.

## BUSINESS ENTITY – RESOURCEORDERITEM

List of order items that have to be treated

### Attributes

Name	Type	Multiplicity	Description
action	String	1	Can be: add, modify, no_change, delete
appointment	String	0..1	Used to precise that an appointment was set up with a related party for this order item.
billingAccount	BillingAccountRef	1..*	BillingAccount to use to bill the ordered products
id	String	1	Identifier of the line item (generally it is a sequence number 01, 02, 03, ...)
resource	ResourceRef	1	Configure the resource characteristics (only configurable characteristics and necessary only if a non default value is selected) and/or identify the resource that needs to be modified/deleted. May be a bundle resource instantiation, in this case, it will contain the list of bundled resources to instantiate. Note : Each resource to instantiate corresponds to an ordered resourceCandidate. In case of bundles, the order of the list in the resourceCandidate bundle must match the order of the list in the resource instance bundle to deliver.
resourceCandidate	ResourceCandidateRef	0..1	An entity that makes a ResourceSpecification available to a catalog. A ResourceCandidate and its associated ResourceSpecification may be published - made visible - in any number of ResourceCatalogs, or in none. One ResourceSpecification can be composed of other ResourceSpecifications. The ResourceCandidate consists of a subset of ResourceSpecification characteristics to fulfill a product offering. These ResourceSpecifications may also be published.
state	String	1	State of the order item : described in the state machine diagram

## BUSINESS ENTITY – RESOURCEREF

Configure the resource characteristics (only configurable characteristics and necessary only if a non default value is selected) and/or identify the resource that needs to be modified/deleted. May be a bundle resource instantiation, in this case, it will contain the list of bundled resources to instantiate. Note : Each resource to instantiate corresponds to an ordered resourceCandidate. In case of bundles, the order of the list in the resourceCandidate bundle must match the order of the list in the resource instance bundle to deliver.

### Attributes

Name	Type	Multiplicity	Description
href	String	0..1	Reference to the owned resource (useful for delete or modify command).
place	PlaceRef	0..1	Used to defined a place useful for the order item (for example a delivery geographical place).

relatedParty	RelatedPartyRef	0..*	Party linked at the resource level (it may be a technician or installer for example).
resourceCharacteristic	ResourceCharacteristic	0..*	Characteristics of the resource to instantiate or to modify.
resourceRelationship	ResourceRelationship	0..*	Linked resources to the one instantiated : it can be bundled ones if the resource is a bundle, or supportedBy ones if the resource needs another already owned resource to rely on.
status	String	0..1	Resource status may be present, mainly in notification messages to inform about the delivery of each bundle component resource.

## BUSINESS ENTITY – RESOURCERELATIONSHIP

Linked resources to the one instantiated : it can be bundled ones if the resource is a bundle, or supportedBy ones if the resource needs another already owned resource to rely on.

### Attributes

Name	Type	Multiplicity	Description
resource	ResourceRef	0..1	Configure the resource characteristics (only configurable characteristics and necessary only if a non default value is selected) and/or identify the resource that needs to be modified/deleted. May be a bundle resource instantiation, in this case, it will contain the list of bundled resources to instantiate. Note : Each resource to instantiate corresponds to an ordered resourceCandidate. In case of bundles, the order of the list in the resourceCandidate bundle must match the order of the list in the resource instance bundle to deliver.
type	String	1	Type of the resource relationship. It can be: 1) bundled - if the resource is a bundle and you want to describe the bundled resources inside this bundle. 2) reliesOn - if the resource needs another already owned resource to rely on (e.g. an option on an already owned mobile access resource). 3) targets or isTargeted - (depending on the way of expressing the link) for any other kind of links that may be useful.

## COMMON BUSINESS ENTITIES

### BUSINESS ENTITY – ALIAS

#### Attributes

Name	Type	Multiplicity	Description
type	String		
value	String		

### BUSINESS ENTITY – ARRAYUPDATE

Used to partially update an array

#### Attributes

Name	Type	Multiplicity	Description
op	String		Operation to be performed on the array - test, remove, add, replace, move, copy
path	String		The reference to the array to be modified
value	String		

### BUSINESS ENTITY – BILLINGACCOUNTREF

BillingAccount to use to bill the ordered products.

#### Attributes

Name	Type	Multiplicity	Description
href	String	1	Reference of the billing account.

### BUSINESS ENTITY – CHARACTERISTIC

Describes the characteristics of the individual or the organization such as individual hobbies, center of interests.

#### Attributes

Name	Type	Multiplicity	Description
name	String	1	Name of the characteristic.
value	String	0..1	Value of the characteristic.

### BUSINESS ENTITY – CONTACTMEDIUM

Describes the contact mediums that could be used to contact the customer (Email, TelephoneNumber, PostalAddress).

#### Attributes

Name	Type	Multiplicity	Description
isPreferred	Boolean	0..1	If true, indicates that is the preferred contact medium.
medium	Medium	0..1	Describes the contact medium that can be

			used to contact the customer.
type	String	1	Email address, telephone number, postal address, etc.
validFor	TimePeriod	0..1	The time period that the contact medium is valid for.

## BUSINESS ENTITY – CREATELISTENER

### Attributes

Name	Type	Multiplicity	Description
callback	String		Callback address of the listener
query	String		

## BUSINESS ENTITY – CREDENTIAL

### Attributes

Name	Type	Multiplicity	Description
login	String		
password	String		
updateType	String		

## BUSINESS ENTITY – HEADER

### Attributes

Name	Type	Multiplicity	Description
key	String		URL Parameter Key e.g., Content-Type
value	String		Value e.g., application/json, application/xml

## BUSINESS ENTITY – LISTENER

### Attributes

Name	Type	Multiplicity	Description
callback	String		Callback address of the listener
href	String	1	Reference to the listener
id	String	1	
query	String		

## BUSINESS ENTITY – MEDIUM

Describes the contact medium that can be used to contact the customer.

### Attributes

Name	Type	Multiplicity	Description
city	String	0..1	
country	String	0..1	
emailAddress	String	0..1	Full e-mail address in standard format (e.g., fred.bloggs@thing.com)

number	String	0..1	Phone number
postcode	String	0..1	Postcode
stateOrProvince	String	0..1	State or province
street1	String	0..1	Describes the street
street2	String	0..1	Complementary street description
type	String	0..1	Type of medium (fax, mobile phone...)

## BUSINESS ENTITY – MONEY

A base / value business entity used to represent money

### Attributes

Name	Type	Multiplicity	Description
amount	Float	1	A positive floating point number.
currencyCode	String	1	Currency. Notes: refer to [ISO 4217]
digits	Integer	0..1	Number of digits to the right of the decimal point

## BUSINESS ENTITY – NOTE

Extra-information about an entity (e.g. useful to add extra delivery information that could be useful for a human process : a digicode access to a building, ...).

### Attributes

Name	Type	Multiplicity	Description
author	String	0..1	Author of the note
date	DateTime	0..1	Date of the note
text	String	1	Text of the note

## BUSINESS ENTITY – PAYMENTMEANREF

### Attributes

Name	Type	Multiplicity	Description
href	String	1	Reference of the payment means
name	String	0..1	Name of the payment means

## BUSINESS ENTITY – PERIOD

defines the period of a recurring charge

### Attributes

Name	Type	Multiplicity	Description
endPeriod	DateTime	0..1	End date of the period
startPeriod	DateTime	1	Start date of the period

### Business Rules

Name	Severity	Specification	Message
StartPeriod Before EndPeriod	error	[startPeriod.before(endPeriod) or startPeriod = endPeriod]	The start period must be on or before the end period.



## BUSINESS ENTITY – PLACEREF

Used to defined a place useful for the entity (for example a delivery geographical place).

### Attributes

Name	Type	Multiplicity	Description
href	String	1	Reference of a place (for instance in Google map).
role	String	1	Role of the place (for instance delivery geographical place).

## BUSINESS ENTITY – RELATEDPARTYREF

Defines party or partyRole linked to a specific entity. Used to represent an association between a resource and a party or role object playing a role regarding that object.

### Attributes

Name	Type	Multiplicity	Description
alias	Alias	0..*	
href	String	1	Reference to the related party.
name	String	0..1	Name of the related party.
role	String	1	Role of the related party.
status	String	0..1	The status of the relationship between the party and the related entity.
validFor	TimePeriod	0..1	The period for which the related party is valid.

## BUSINESS ENTITY – TIMEPERIOD

### Attributes

Name	Type	Multiplicity	Description
endTime	DateTime	0..1	
startTime	DateTime	1	

### Business Rules

Name	Severity	Specification	Message
Start DateTime Before End DateTime	error	[startTime.before(endDateTi me) or startTime = endTime]	The start period must be on or before the end period.

## NOTIFICATION EVENT

Refer to Common Management Spec for details on how to Register and Unregister a Listener.

The notification events supported by Resource Order Management are:

- o Order creation
- o Order removal
- o Order state change
- o Order value change used to notify that any data in an order has just changed
- o Order information required used to notify that some data in the order need to be filled / are missing

The Event is published to the registered listener

REST Example:

POST client/listener

**RESOURCEORDER**

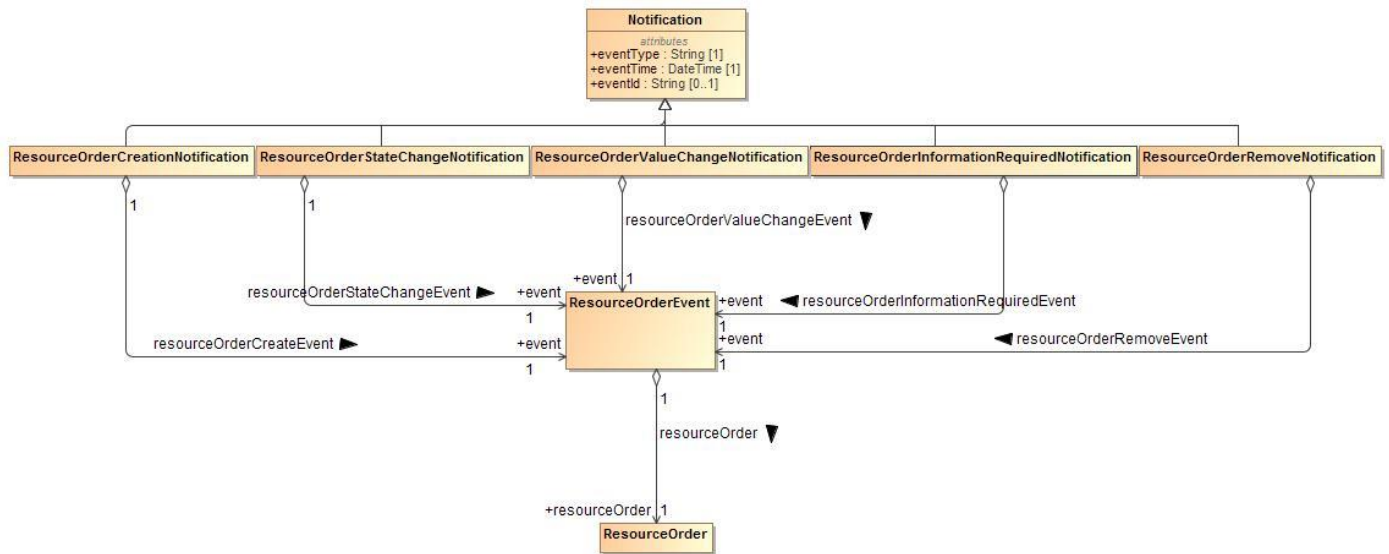


Figure 3. ResourceOrder Notification

**BUSINESS ENTITY – RESOURCEORDERCREATIONNOTIFICATION**

Attributes

Name	Type	Multiplicity	Description
event	ResourceOrderEvent	1	
eventId	String	0..1	Unique identifier of the event
eventTime	DateTime	1	
eventType	String	1	

**BUSINESS ENTITY – RESOURCEORDEREVENT**

Attributes

Name	Type	Multiplicity	Description
resourceOrder	ResourceOrder	1	

**BUSINESS ENTITY – RESOURCEORDERINFORMATIONREQUIREDNOTIFICATION**

Attributes

Name	Type	Multiplicity	Description
event	ResourceOrderEvent	1	
eventId	String	0..1	Unique identifier of the event
eventTime	DateTime	1	
eventType	String	1	

**BUSINESS ENTITY – RESOURCEORDERREMOVENOTIFICATION**

## Attributes

Name	Type	Multiplicity	Description
event	ResourceOrderEvent	1	
eventId	String	0..1	Unique identifier of the event
eventTime	DateTime	1	
eventType	String	1	

## BUSINESS ENTITY – RESOURCEORDERSTATECHANGENOTIFICATION

## Attributes

Name	Type	Multiplicity	Description
event	ResourceOrderEvent	1	
eventId	String	0..1	Unique identifier of the event
eventTime	DateTime	1	
eventType	String	1	

## BUSINESS ENTITY – RESOURCEORDERVALUECHANGENOTIFICATION

## Attributes

Name	Type	Multiplicity	Description
event	ResourceOrderEvent	1	
eventId	String	0..1	Unique identifier of the event
eventTime	DateTime	1	
eventType	String	1	

**NOTIFICATION COMMON****BUSINESS ENTITY – NOTIFICATION**

## Attributes

<b>Name</b>	<b>Type</b>	<b>Multiplicity</b>	<b>Description</b>
eventId	String	0..1	Unique identifier of the event
eventTime	DateTime	1	
eventType	String	1	

STATE MACHINE

resourceOrderSM

A type of order which can be used to place an order between a service provider and a partner and vice versa.

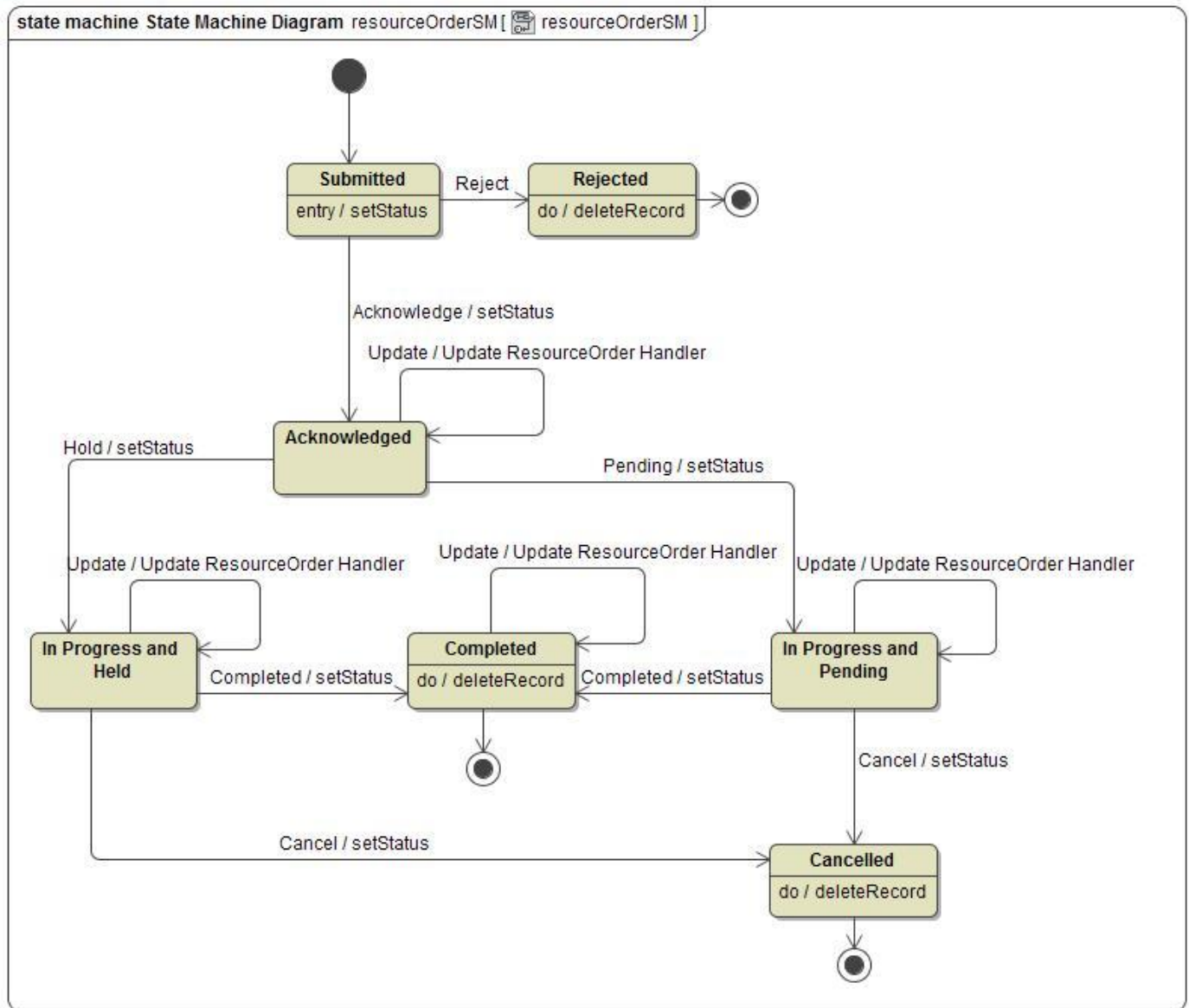


Figure 4. resourceOrderSM

Name	Description
<b>Acknowledged</b>	The Acknowledged state is where an order has been received and has passed message and basic business validations.
<b>Cancelled</b>	The Cancelled state is where an In-Flight Order has been successfully cancelled.
<b>Completed</b>	The newly created order has been submitted for processing.
<b>In Progress and Held</b>	The In Progress state is where an order has passed the Order Feasibility check successfully and service delivery has started.  The Held state is used when an order cannot be progressed due to an issue. SP has

	temporarily delayed completing an order to resolve an infrastructure shortfall to facilitate supply of order. Upon resolution of the issue, the order will continue to progress.
<b>In Progress and Pending</b>	<p>The In Progress state is where an order has passed the Order Feasibility check successfully and service delivery has started.</p> <p>The Pending state is used when an order is currently in a waiting stage for an action/activity to be completed before the order can progress further, pending order amend or cancel assessment. In situations where Access Seeker action is required, an "information required" notification will be issued on transition into this state.</p> <p>A pending stage can lead into auto cancellation of an order, if no action is taken within the defined timeframes to be described under the Agreement.</p>
<b>Rejected</b>	<p>The Rejected state is where:</p> <ul style="list-style-type: none"> <li>- An order failed the Order Feasibility check</li> <li>- Invalid information is provided through the order request</li> <li>- The order request fails to meet business rules for ordering</li> </ul>
<b>Submitted</b>	

**RESOURCE ORDER MANAGEMENT BUSINESS SERVICES**

**BUSINESS SERVICE – RESOURCE ORDER REST SERVICE**

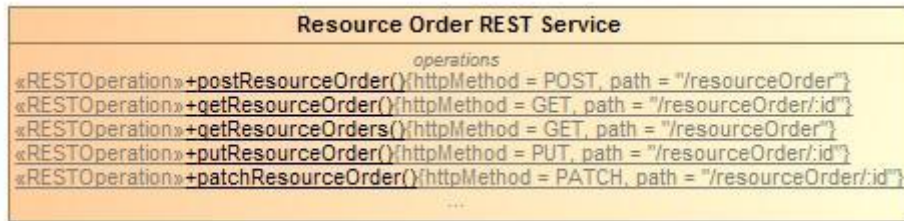


Figure 5. Resource Order Business Service

**OPERATION – POSTRESOURCEORDER**

**Description**

This operation is used to create a resourceOrder.

**Business Rules**

Name	Severity	Specification	Message
mandatory attributes		[billingAccount.id and/or billingAccount.href note.text relatedParty.id and/or relatedParty.href and/or relatedParty.name relatedParty.role orderItem.place.role orderItem.place.id and/or orderItem.place.href orderItem.id, orderItem.action orderItem.resource orderItem.resource.resourceCharacteristic if orderItem.action = 'add' orderItem.resource.id and/or orderItem.resource.href if orderItem.action = 'modify' orderItem.resource.id orderItem.resource.href if orderItem.action = 'delete' orderItem.resourceCandidate (The resourceCandidate may not be useful when doing a “modify” or “delete” on an owned resource)]	

**OPERATION – GETRESOURCEORDER**

**Description**

This operation retrieves a resourceOrder.

**Business Rules**

Name	Severity	Specification	Message
mandatory attributes		[id]	



**OPERATION – GETRESOURCEORDERS****Description**

Retrieve a collection of resourceOrders depending on filter criteria.

**OPERATION – PUTRESOURCEORDER****Description**

This operation is used to completely update the representation of a resourceOrder.

**Business Rules**

Name	Severity	Specification	Message
mandatory attributes		[id]	

**OPERATION – PATCHRESOURCEORDER****Description**

This operation is used to partially update the representation of a resourceOrder.

**Business Rules**

Name	Severity	Specification	Message
can be updated		[state - to manage the order delivery process - submitted, rejected, acknowledged, in progress held, in progress pending, completed, cancelled priority category requestedStartDate - only when order is in "Acknowledged" state (delivery process not started) requestedCompletionDate - only when order is in "Acknowledged" state (delivery process not started) expectedCompletionDate notificationContact note billingAccount - only when order is in "Acknowledged" state (delivery process not started) relatedParty - only when order is in "Acknowledged" state (delivery process not started) orderItem.state - to manage the order item delivery process : InProgress (start sub process), Held / Pending (suspend sub process), Influence the order states orderItem.resourceCandidate - only when order is in "Acknowledged" state (delivery process not started) orderItem.resource - only when order item is in "Acknowledged" or "Pending" state (delivery process not started or suspended) orderItem.place - only when order item is in "Acknowledged" or "Pending" state (delivery process not started or suspended) orderItem.appointment - only when order item is in "Acknowledged" or "Pending" state (delivery process not started or suspended)]	
mandatory attributes		[id]	

state patches	<p>[When patching an order state to :</p> <ul style="list-style-type: none"> <li>- "Pending" / "Held" : all "InProgress" order items SHOULD be set to "Pending" / "Held"</li> <li>- "InProgress" :             <ul style="list-style-type: none"> <li>o all "Acknowledged" order items MUST be set to "InProgress"</li> <li>o all "Pending"/"Held" order items MAY be set to "InProgress"</li> </ul> </li> </ul> <p>When patching an order item state to :</p> <ul style="list-style-type: none"> <li>- "Pending" / "Held" : the order state itself SHOULD be set to "Pending" / "Held"]</li> </ul>	
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## HUB BUSINESS SERVICE

The notification events supported by Resource Order Management are:

- o Order creation
- o Order removal
- o Order state change
- o Order value change used to notify that any data in an order has just changed
- o Order information required used to notify that some data in the order need to be filled / are missing

The Event is published to the registered listener

REST Example:

POST client/listener

## BUSINESS SERVICE – RESOURCEORDER HUB REST SERVICE

### OPERATION – REGISTERRESOURCEORDERLISTENER

#### Description

This operation is used to register a ResourceOrder listener to be notified of the following events: ResourceOrder create, ResourceOrder update, ResourceOrder delete.

#### Business Rules

Name	Severity	Specification	Message
mandatory attributes		[description severity type]	

### OPERATION – UNREGISTERRESOURCEORDERLISTENER

#### Description

This operation is used to unregister a ResourceOrder listener.

#### Business Rules

Name	Severity	Specification	Message
mandatory attributes		[description severity type]	