

Service Order Management

Business Service Specification

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SERVICE ORDER MANAGEMENT

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

The Service Ordering API provides a standardized mechanism for placing a service order with all of the necessary order parameters. The API consists of a simple set of operations that interact with Service Order Negotiation systems in a consistent manner. A service order is created based on a service candidate that is defined in a catalog. The service candidate identifies the service or set of services that are available to a engaged party, and includes characteristics such as service options.

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

Service Ordering API manages service order resource:

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

Service ordering API performs the following operations on service order:

- Retrieval of a service order or a collection of service orders depending on filter criteria
- Partial update of a service order (including updating rules)
- Creation of a service order (including default values and creation rules)
- Deletion of service order (for administration purposes)

Notification of events on service 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



Figure 1. Service Order Management

SERVICE ORDER MANAGEMENT BUSINESS ENTITIES

Service Ordering API manages service order resource:

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

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

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

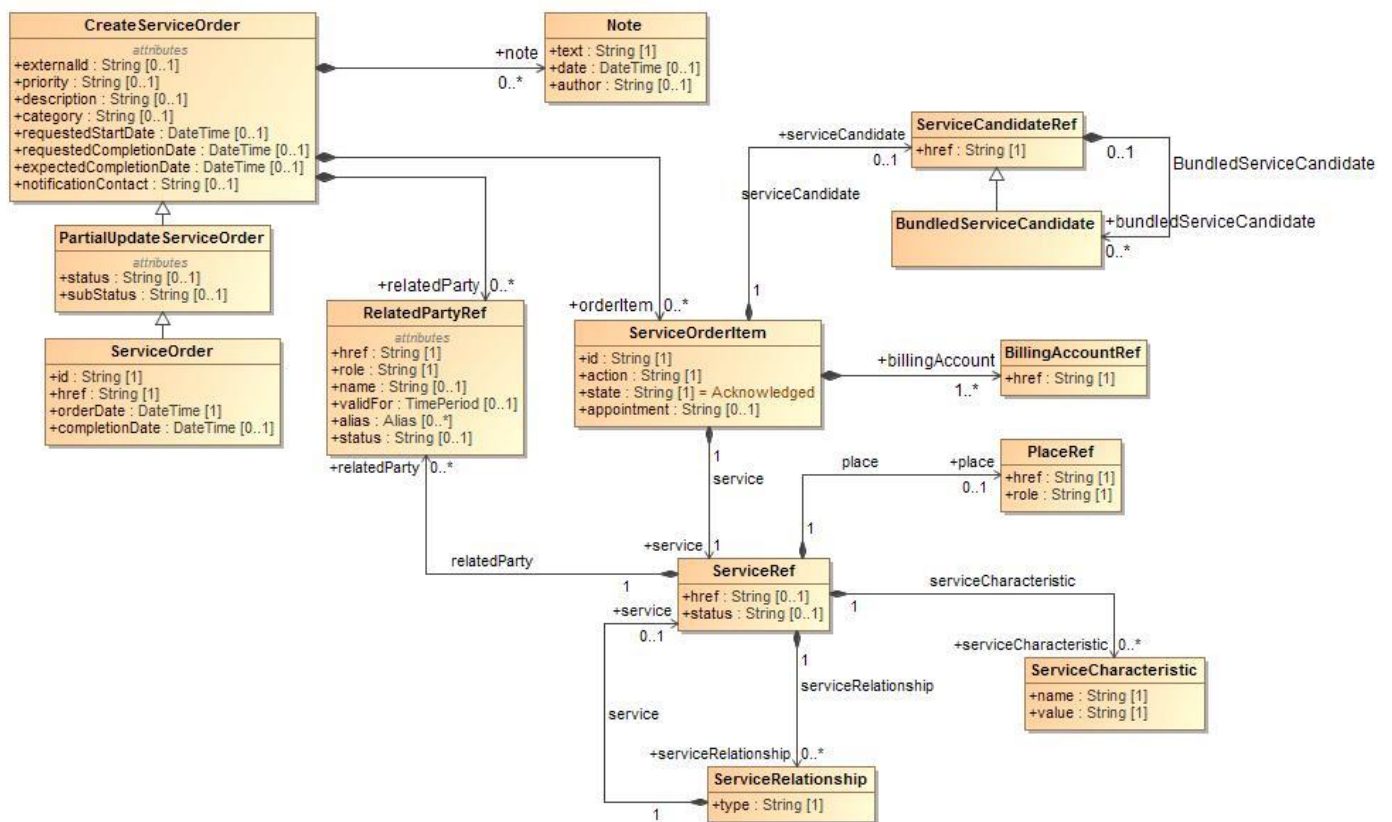


Figure 2. Service Order

BUSINESS ENTITY – BUNDLEDSERVICECANDIDATE

Attributes

Name	Type	Multiplicity	Description
bundledServiceCandidate	BundledServiceCandi date	0..*	
href	String	1	Reference of the service candidate.

BUSINESS ENTITY – CREATESERVICEORDER

Service orders may be required to satisfy pertinent customer order information received, may arise as a result of requests for service provisioning to satisfy service problem recovery activities, may arise to alleviate service performance issues, or may arise as a result of information received from suppliers/partners in relations to specific services.

Attributes

Name	Type	Multiplicity	Description
category	String	0..1	Used to categorize the order from a business perspective that can be useful for the OM system (e.g. enterprise, residential, ...).
description	String	0..1	Description of the service.
expectedCompletionDate	DateTime	0..1	Expected delivery date amended by the provider.
externalId	String	0..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	0..1	Contact attached to the order to send back information regarding this order.
orderItem	ServiceOrderItem	0..*	List of order items that have to be treated.
priority	String	0..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	0..1	Requested delivery date from the requester perspective.
requestedStartDate	DateTime	0..1	Order start date wished by the requester.

Business Rules

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

BUSINESS ENTITY – PARTIALUPDATESERVICEORDER

Service orders may be required to satisfy pertinent customer order information received, may arise as a result of requests for service provisioning to satisfy service problem recovery activities, may arise to alleviate service performance issues, or may arise as a result of information received from suppliers/partners in relations to specific services.

Attributes

Name	Type	Multiplicity	Description
category	String	0..1	Used to categorize the order from a business perspective that can be useful for the OM system (e.g. enterprise, residential, ...).
description	String	0..1	Description of the service.
expectedCompletionDate	DateTime	0..1	Expected delivery date amended by the provider.
externalId	String	0..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	0..1	Contact attached to the order to send back information regarding this order.
orderItem	ServiceOrderItem	0..*	List of order items that have to be treated.
priority	String	0..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	0..1	Requested delivery date from the requester perspective.
requestedStartDate	DateTime	0..1	Order start date wished by the requester.
status	String	0..1	Status of the order in its end-end lifecycle - submitted, rejected, acknowledged, in progress (pending), in progress (held), completed, cancelled.
subStatus	String	0..1	subStatus of the order in its end-end lifecycle - pending, held.

Business Rules

Name	Severity	Specification	Message
can be updated		[status - submitted, rejected, acknowledged, in progress (pending), in progress (held), completed, cancelled subStatus - pending, held 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	

		<p>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.serviceCandidate - only when order is in "Acknowledged" state (delivery process not started) orderItem.service - 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) orderItem.service.place - only when order item is in "Acknowledged" or "Pending" state (delivery process not started or suspended)]</p>	
state patches		<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"</p> <p>When patching an order item state to : - "Pending" / "Held" : the order state itself SHOULD be set to "Pending" / "Held"]</p>	

BUSINESS ENTITY – SERVICECANDIDATEREF

An entity that makes a ServiceSpecification available to a catalog. A ServiceCandidate and its associated ServiceSpecification may be published - made visible - in any number of ServiceCatalogs, or in none. One ServiceSpecification can be composed of other ServiceSpecifications. The Service Candidate consists of a subset of ServiceSpecification characteristics to fulfill a product offering. These ServiceSpecifications may also be published.

Attributes

Name	Type	Multiplicity	Description
bundledServiceCandidate	BundledServiceCandidate	0..*	

href	String	1	Reference of the service candidate.
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BUSINESS ENTITY – SERVICECHARACTERISTIC

Characteristics of the service to instantiate or to modify.

Attributes

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

BUSINESS ENTITY – SERVICEORDER

Service orders may be required to satisfy pertinent customer order information received, may arise as a result of requests for service provisioning to satisfy service problem recovery activities, may arise to alleviate service performance issues, or may arise as a result of information received from suppliers/partners in relations to specific services.

Attributes

Name	Type	Multiplicity	Description
category	String	0..1	Used to categorize the order from a business perspective that can be useful for the OM system (e.g. enterprise, residential, ...).
completionDate	DateTime	0..1	Date when the order was completed.
description	String	0..1	Description of the service.
expectedCompletionDate	DateTime	0..1	Expected delivery date amended by the provider.
externalId	String	0..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	0..1	Contact attached to the order to send back information regarding this order.
orderDate	DateTime	1	Date when the order was created.
orderItem	ServiceOrderItem	0..*	List of order items that have to be treated.
priority	String	0..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	0..1	Requested delivery date from the requester perspective.
requestedStartDate	DateTime	0..1	Order start date wished by the requester.
status	String	0..1	Status of the order in its end-end lifecycle - submitted, rejected, acknowledged, in progress (pending), in progress (held), completed, cancelled.
subStatus	String	0..1	subStatus of the order in its end-end lifecycle - pending, held.

BUSINESS ENTITY – SERVICEORDERITEM

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, ...).
service	ServiceRef	1	Configure the service characteristics (only configurable characteristics and necessary only if a non default value is selected) and/or identify the service that needs to be modified/deleted. May be a bundle service instantiation, in this case, it will contain the list of bundled services to instantiate. Note : Each service to instantiate corresponds to an ordered serviceCandidate. In case of bundles, the order of the list in the serviceCandidate bundle must match the order of the list in the service instance bundle to deliver.
serviceCandidate	ServiceCandidateRef	0..1	An entity that makes a ServiceSpecification available to a catalog. A ServiceCandidate and its associated ServiceSpecification may be published - made visible - in any number of ServiceCatalogs, or in none. One ServiceSpecification can be composed of other ServiceSpecifications. The Service Candidate consists of a subset of ServiceSpecification characteristics to fulfill a product offering. These ServiceSpecifications may also be published.
state	String	1	State of the order item : described in the state machine diagram.

BUSINESS ENTITY – SERVICEREF

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

Attributes

Name	Type	Multiplicity	Description
href	String	0..1	Reference to the owned service (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 service level (it may be a

			User for example).
serviceCharacteristic	ServiceCharacteristic	0..*	Characteristics of the service to instantiate or to modify.
serviceRelationship	ServiceRelationship	0..*	Linked services to the one instantiated : it can be bundled ones if the service is a bundle, or supportedBy ones if the service needs another already owned service to rely on.
status	String	0..1	Service status may be present, mainly in notification messages to inform about the delivery of each bundle component service.

BUSINESS ENTITY – SERVICERELATIONSHIP

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

Attributes

Name	Type	Multiplicity	Description
service	ServiceRef	0..1	Configure the service characteristics (only configurable characteristics and necessary only if a non default value is selected) and/or identify the service that needs to be modified/deleted. May be a bundle service instantiation, in this case, it will contain the list of bundled services to instantiate. Note : Each service to instantiate corresponds to an ordered serviceCandidate. In case of bundles, the order of the list in the serviceCandidate bundle must match the order of the list in the service instance bundle to deliver.
type	String	1	Can be bundled if the service is a bundle, or supportedBy if the service needs another already owned service to rely on.

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 Service Order Management are:

- o Service Order create
 - o Service Order state change
 - o Service Order value change
 - o Service Order delete
- Service Order information required

The Event is published to the registered listener

REST Example:
POST client/listener

SERVICEORDER

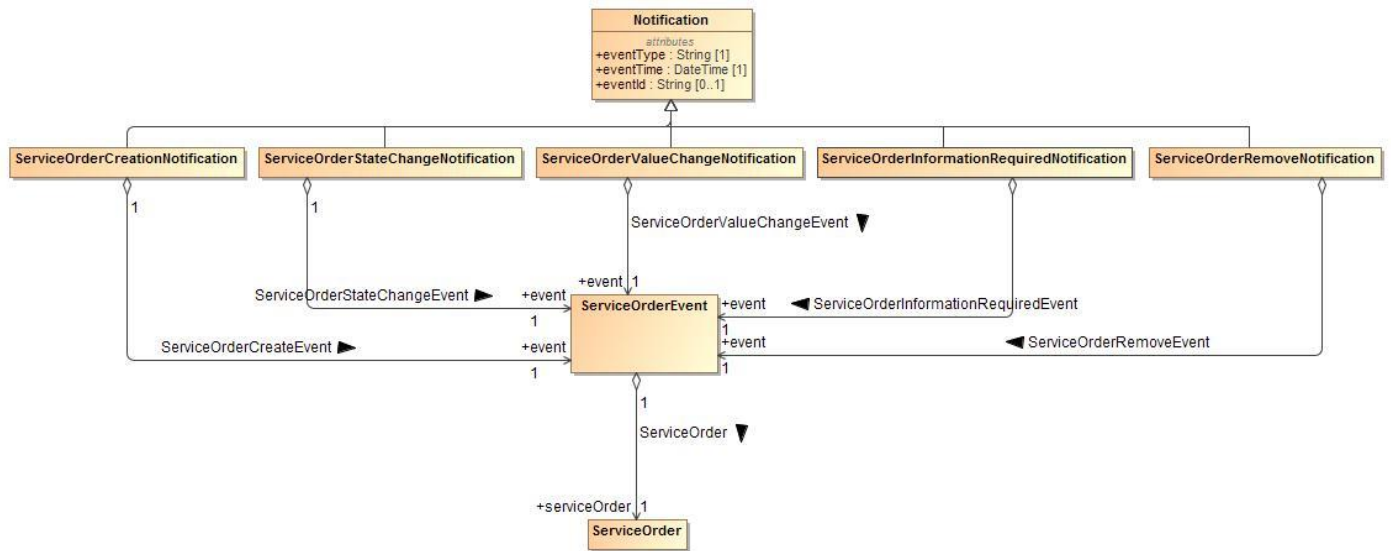


Figure 3. ServiceOrder Notification

BUSINESS ENTITY – SERVICEORDERCREATIONNOTIFICATION

Attributes

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

BUSINESS ENTITY – SERVICEORDEREVENT

Attributes

Name	Type	Multiplicity	Description
serviceOrder	ServiceOrder	1	

BUSINESS ENTITY – SERVICEORDERINFORMATIONREQUIREDNOTIFICATION

Attributes

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

BUSINESS ENTITY – SERVICEORDERREMOVENOTIFICATION

Attributes

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

BUSINESS ENTITY – SERVICEORDERSTATECHANGENOTIFICATION

Attributes

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

BUSINESS ENTITY – SERVICEORDERVALUECHANGENOTIFICATION

Attributes

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

NOTIFICATION COMMON**BUSINESS ENTITY – NOTIFICATION**

Attributes

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

STATE MACHINE

ServiceOrderSM

Service orders may be required to satisfy pertinent customer order information received, may arise as a result of requests for service provisioning to satisfy service problem recovery activities, may arise to alleviate service performance issues, or may arise as a result of information received from suppliers/partners in relations to specific services.

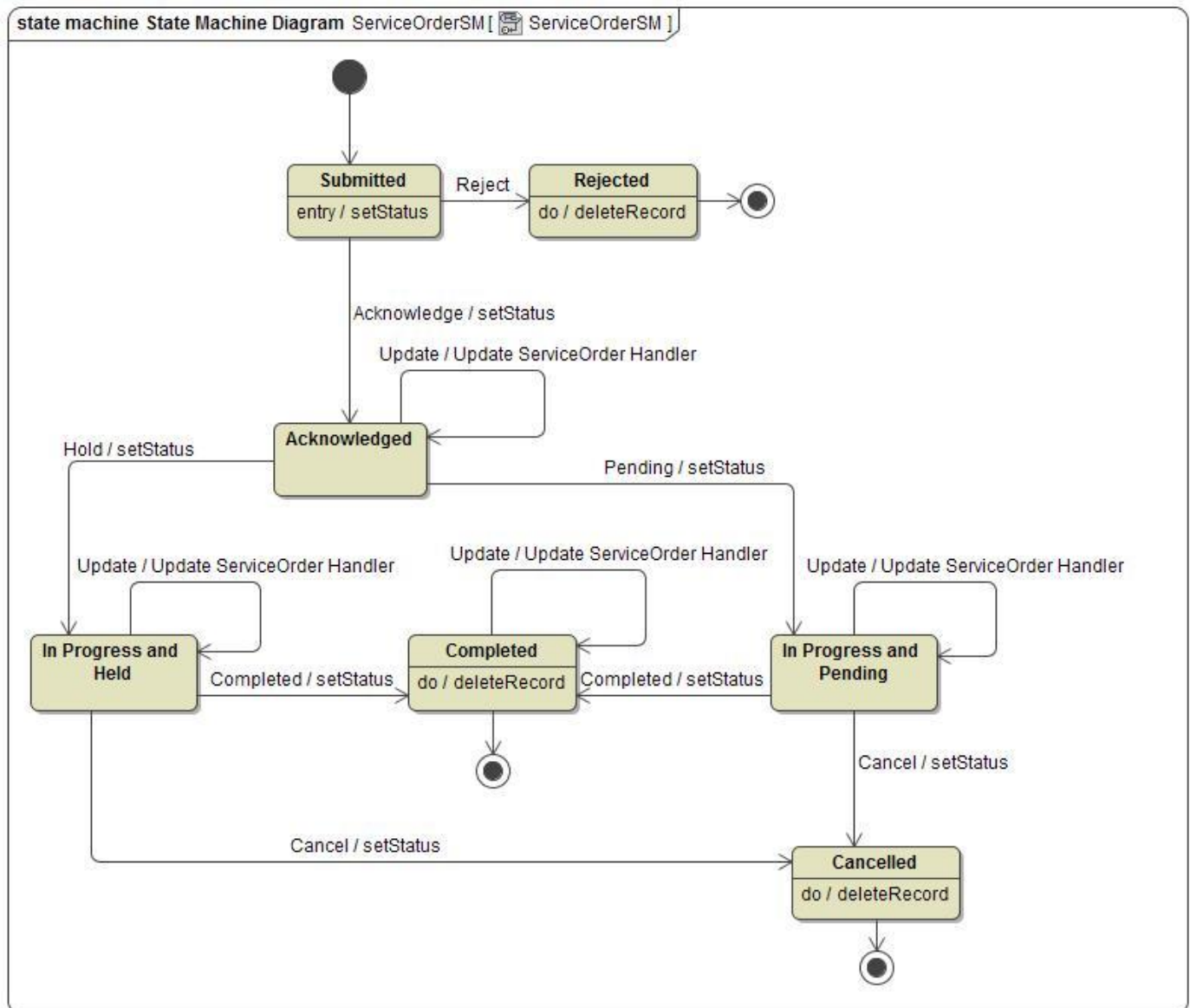


Figure 4. ServiceOrderSM

Name	Description
Acknowledged	The Acknowledged state is where an order has been received and has passed message and basic business validations.
Cancelled	The Cancelled state is where an In-Flight Order has been successfully cancelled.
Completed	
In Progress and	The In Progress state is where an order has passed the Order Feasibility check successfully

Held	<p>and service delivery has started.</p> <p>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.</p>
In Progress and Pending	<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>
Rejected	<p>The Rejected state is where:</p> <ul style="list-style-type: none"> - An order failed the Order Feasibility check - Invalid information is provided through the order request - The order request fails to meet business rules for ordering
Submitted	<p>The newly created order has been submitted for processing.</p>

SERVICE ORDER MANAGEMENT BUSINESS SERVICES

BUSINESS SERVICE – SERVICE ORDER REST SERVICE



Figure 5. Service Order Business Service

OPERATION – POSTSERVICEORDER

Description

This operation is used to create a serviceOrder.

Business Rules

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

OPERATION – GETSERVICEORDER

Description

This operation retrieves a serviceOrder.

Business Rules

Name	Severity	Specification	Message
mandatory attributes		[id]	

OPERATION – GETSERVICEORDERS

Description

This operation is used to retrieve a collection of serviceOrders.

OPERATION – PUTSERVICEORDER**Description**

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

Business Rules

Name	Severity	Specification	Message
mandatory attributes		[id]	

OPERATION – PATCHSERVICEORDER**Description**

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

Business Rules

Name	Severity	Specification	Message
can be updated		[status - submitted, rejected, acknowledged, in progress (pending), in progress (held), completed, cancelled subStatus - pending, held 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.serviceCandidate - only when order is in "Acknowledged" state (delivery process not started) orderItem.service - 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) orderItem.service.place - only when order item is in "Acknowledged" or "Pending" state (delivery process not started or suspended)]	
mandatory attributes		[id]	
state patches		[When patching an order state to :	

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

The notification events supported by Service Order Management are:

- o Service Order create
 - o Service Order state change
 - o Service Order value change
 - o Service Order delete
- Service Order information required

The Event is published to the registered listener

REST Example:
POST client/listener

BUSINESS SERVICE – SERVICEORDER HUB REST SERVICE

OPERATION – REGISTERSERVICEORDERLISTENER

Description

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

Business Rules

Name	Severity	Specification	Message
mandatory attributes		[description severity type]	

OPERATION – UNREGISTERSERVICEORDERLISTENER

Description

This operation is used to unregister a ServiceOrder listener.

Business Rules

Name	Severity	Specification	Message
mandatory attributes		[description severity type]	