



# APIs for Availability Checks

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# Product Allocation Sequence

Technical name: API\_PRODUCT\_ALLOC\_SEQUENCE\_SRV

You can use Product Allocation (PAL) to determine the availability of requested products by checking against sales data as well as data for restricted resources consumed along the value chain of the requested product. Restricted resources and sales rules are organized in time series: these packages of supply are referred to as *product allocations*. Critical situations in demand and (internal and external) procurement processes can therefore be avoided by factoring sales and supply restrictions into the product availability check. The data used in product allocations is usually defined in separate planning systems. This can result in a large volume of data to be maintained in the product allocation object and a high number of products/materials for assignment in the product allocation sequence to which the product allocation object is linked.

This service enables you to read the header data for a specific product allocation sequence (including its description) as well as any assigned product and product-location assignments. In addition, you can use the service to create new assignments or edit existing assignments for a product allocation sequence from external planning systems such as:

- SAP Merchandise and Assortment Planning (AMR)
- SAP Assortment Planning for Retail (APR)
- SAP Integrated Business Planning (IBP)
- Any other planning systems

This service is published on the SAP Business Accelerator Hub. For more information about APIs, see [APIs on SAP Business Accelerator Hub](#).

## Service Structure

### Entities

The entities contain the service's business data.

Entity	Description	Necessity	Link to Details
Product Allocation Sequence (A_ProdAllocationSequence)	Selects existing data for a given product allocation sequence	Mandatory	<a href="#">Product Allocation Sequence</a>
Product Allocation Sequence Description (A_ProdAllocSequenceT)	Selects existing descriptions for a given product allocation sequence in all available languages	Optional	<a href="#">Product Allocation Sequence Description</a>
Product Allocation Sequence Assignment (A_ProdAllocSqnAssgmt)	Reads, updates, and inserts product-location assignments for a given product allocation sequence and a given product allocation sequence	Mandatory	<a href="#">Product Allocation Sequence Assignment</a>

## Service Response

Entity	Description
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Entity	Description
Product Allocation Sequence (A_ProdAllocationSequence)	Returns the name and description of the product allocation sequence as well as information about the product allocation sequence UUID (which is required for the entity <a href="#">Product Allocation Sequence Assignment</a> (A_ProdAllocSqncAssgmtType)), the product allocation consumption unit as well as when the corresponding product allocation sequence was created and changed.
Product Allocation Sequence Description (A_ProdAllocSequenceT)	Returns the descriptions for a given product allocation sequence in all required languages.
Product Allocation Sequence Assignment (A_ProdAllocSqncAssgmt)	Returns data of product-location assignments for a given product allocation sequence and a given product allocation sequence UUID.

Related Events

- [Product Allocation Sequence Events](#)

Additional Information

[Product Allocation Sequence](#)

i Note

For more information about the API, choose the [API Reference](#) tab or [Schema View](#) tab on the SAP Business Accelerator Hub.

Query String Options

Each of the following service nodes allows standard OData query string parsing with system query options such as \$orderby, \$skip, \$filter, \$top, \$select, \$format, &expand and \$inlinecount.

Product Allocation Sequence

Technical name: A\_ProdAllocationSequence

This entity selects existing data for a given product allocation sequence.

In addition to the name of the product allocation sequence, this service node selects information about the product allocation sequence UUID (which is required for the entity [Product Allocation Sequence Assignment](#) (A\_ProdAllocSqncAssgmt)), the product allocation consumption unit as well as when the corresponding product allocation sequence was created and changed.

Normally, this entity is used to get the header data for exactly one product allocation sequence, including the description in the corresponding system language.

CRUD

Create	Read	Update	Delete
	X		

# Properties

Property	Description	Necessity
CreatedByUser	Name of the user who created the product allocation sequence	Optional
CreationDateTime	Time at which the product allocation sequence was created	
LastChangeDateTime	Time at which the product allocation sequence was changed	
LastChangedByUser	Name of the user who changed the product allocation sequence	
ProdAllocSqncConsumptionUnit	Consumption unit for the product allocation sequence	
ProductAllocationSequence	Technical name for the product allocation sequence	
ProductAllocationSequence_Text	Description for the product allocation sequence in the corresponding system language	
ProductAllocationSequenceUUID	UUID for the selected product allocation sequence	

## i Note

To display more information about the properties on the SAP Business Accelerator Hub, open one of the entity's operations and select **Model**.

## Supported Operations

The following operations are supported (see also [Operations for Product Allocation Sequence](#)):

- Read all product allocation sequences
- Read a specific product allocation sequence
- Read the product allocation sequence description
- Read product-location assignments
- [Create Product-Location Assignment](#)
- Read a product allocation sequence in a specific language
- Read the product allocation sequence of a specific product-location assignment

## Product Allocation Sequence Description

Technical name: A\_ProdAllocSequenceT

This entity selects the descriptions for a given product allocation sequence, in all required languages. Normally, it is used to get the descriptions for a single product allocation sequence in all required and available languages. For this reason, entity [Product](#)

[Allocation Sequence](#) (A\_ProdAllocationSequence) must be called with the name of the product allocation sequence to get the Product Allocation Sequence UUID.

Note that entity **Product Allocation Sequence** contains the product allocation sequence description for the corresponding system language key, meaning that you only require this service if you want to have the descriptions in all supported languages.

CRUD

Create	Read	Update	Delete
	X		

Properties

Property	Description	Necessity
Language	Language key	Optional
ProductAllocationSequenceDesc	Description for the product allocation sequence	
ProductAllocationSequenceUUID	UUID for the selected product allocation sequence	

i Note

To display more information about the properties on the SAP Business Accelerator Hub, open one of the entity's operations and select **Model**.

Supported Operations

The following operations are supported (see also [Operations for Product Allocation Sequence](#)):

- Read the description of a specific product allocation sequence
- Read all sequence descriptions
- Read the sequence description in a specific language
- Read product-location assignments
- Read a specific product allocation sequence in a specific language

Product Allocation Sequence Assignment

Technical name: A\_ProdAllocSqncAssgmt

This entity enables you to read, update, and insert product-location assignments for a given product allocation sequence and a given product allocation sequence UUID.

i Note

Deletion of product-location assignments for a product allocation sequence and a product allocation sequence UUID is only possible via service action DeleteSequenceAssignment. For more information, see [Delete Product-Location Assignment](#).

## Prerequisites

- The product allocation sequence must exist and the service node must know the ProductAllocationSequenceUUID. Use entity [Product Allocation Sequence](#) (A\_ProdAllocationSequence) to get information about the corresponding product allocation sequence.
- If an existing product-location assignment is to be changed, the UUID for the corresponding assignment (ProdAllocSqncAssignmentUUID) must be inserted into the service node.
- You cannot insert the same product-location assignment into a product allocation sequence if the time range intervals overlap.

## CRUD

Create	Read	Update	Delete
X	X	X	

## Properties

Property	Description	Necessity
Material	Material/product	Mandatory
Plant	Plant/location	Optional
ProdAllocSqncAssignmentUUID	UUID for the material-plant assignment	Optional for <i>Insert</i> Mandatory for <i>Update</i>
ProductAllocationSequence	Technical name for the product allocation sequence	Mandatory
ProductAllocationSequenceUUID	UUID for the selected product allocation sequence	
ValidityEndTimeZone	Time zone for the validity end time	
ValidityEndUTCDateTime	Validity end time	
ValidityStartTimeZone	Time zone for the validity start time	
ValidityStartUTCDateTime	Validity start time	

### i Note

To display more information about the properties on the SAP Business Accelerator Hub, open one of the entity's operations and select **Model**.

## Supported Operations

The following operations are supported (see also [Operations for Product Allocation Sequence](#)):

- Read product-location assignments of a specific sequence
- [Create Product-Location Assignment](#) for a sequence
- Read all product-location assignments of all product allocation sequences

- Read a specific product-location assignment of a specific sequence
- [Update Product-Location Assignment](#)
- Reads the product allocation sequence of a specific product-location assignment.
- [Delete Product-Location Assignment](#)

Related Information

[Create Product-Location Assignment](#)  
[Update Product-Location Assignment](#)

Operations for Product Allocation Sequence

The Product Allocation Sequence API offers the following operations:

Operation	HTTP Method	Sample URL
Read Product Allocation Sequence	GET	GET <host>/sap/opu/odata/SAP/API_PRODUCT_ALLOC_SEQUENCE_SRV/A_ProdAllocationSequence(
Query Product Allocation Sequence	GET	GET <host>/sap/opu/odata/SAP/API_PRODUCT_ALLOC_SEQUENCE_SRV/A_ProdAllocationSequence?
Read Product Allocation Sequence and Product Location Assignments	GET	GET <host>/sap/opu/odata/SAP/API_PRODUCT_ALLOC_SEQUENCE_SRV/A_ProdAllocationSequence?
<a href="#">Create Product-Location Assignment</a>	POST	POST <host>/sap/opu/odata/SAP/API_PRODUCT_ALLOC_SEQUENCE_SRV/A_ProdAllocationSequence
<a href="#">Update Product-Location Assignment</a>	PATCH	PATCH <host>/sap/opu/odata/SAP/API_PRODUCT_ALLOC_SEQUENCE_SRV/A_ProdAllocSqnAssgmt(g
<a href="#">Delete Product-Location Assignment</a>	POST	POST <host>/sap/opu/odata/SAP/API_PRODUCT_ALLOC_SEQUENCE_SRV/DeleteSequenceAssignment

i Note

When entering a URL containing a UUID, the UUID value needs to be enclosed in single quotes and prefixed with guid, for example:

```
guid '<ProdAllocSequenceUUID>'
```

## ETags

The service uses entity tags (ETags) for optimistic concurrency control. That is, if a client requests a modification of a resource on the back-end server, the ETags of the resource on the client and on the back-end server are compared to determine whether any changes have been made to the resource on the back-end server. For this service, the If-Match header must be set for all change operations.

Only the header entity type has ETags assigned to it.

For more information about ETags, see

<http://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/a004b815-e3bd-3210-f787-8c0b3c7c6d4c?QuickLink=index&overridelayout=true&60125247183608> 