

API for Objects

Overview

This XML based API is used to read and write to object instances in direct sales channel.

API General Info

Response Content Type

The API only supports the `xml` response type.

Successful Responses

Response Codes

- **200** - The request was executed successfully and the server returned some data. The return content type is specified inside a response header called `content-type`. Example content types are `application/xml`, `application/json`, `application/zip` and `text/plain`.
- **204** - The request was executed successfully and the server returned no data. If the `Location` header was present then the server responded with a redirect.

Error Responses

If the API call resulted in an error then the error code will be returned along with the error object in the response body. The error object contains the attributes listed below:

- **type** - type of the error
- **cause** - the root cause of the error
- **message** - message containing details of the related error
- **uuid** - a unique identifier of the error which also may appear in the exception logs
- **timestamp** - the time of the error

Note: For chunked responses, the socket will be closed prematurely if an error occurs after the initial chunk containing the status code has been sent.

Response Codes

- **400** - The request contains invalid parameters or there are invalid settings. Consult the error message and/or check Administration for invalid settings.
- **401** - The user is not authenticated.
- **403** - The user is not authorized access to the specified endpoint.
- **404** - The specified endpoint does not exist or a request parameter is invalid. Consult the error message.
- **405** - The specified endpoint does not support the requested operation. Consult the error message.
- **409** - The specified endpoint is in a state incompatible with the requested operation. Consult the error message.
- **500** - Unknown error occurred while processing the request. Consult the CPQ logs for more information.
- **504** - The specified concurrent calls limit was exceeded and the server was not able to serve the response in a specified timeout limit. That error is always served with the xml body containing the description.

API Versions

This API is versioned using format `/api-v2.2/`. If the version is omitted it will by default use the first version.

Version	Changes
/api-v2.2/	List APIs use HTTP chunking and do not include the <code>count</code> attribute in the list element. This generally improves the performance of the system and is strongly recommended.
/api-v2.1/	Attributes with null value are returned without a value (instead of returning default value).
/api-v2/	Reference-type attributes are validated on create and update. The default sort is changed to <code>#id</code> (internal id) instead of the attribute in index 1 to improve performance.
/api/	Original version of the API.

Supported Authentication

Authentication	Version	Description
Basic	Any	Basic authentication headers are sent.
OAuth Token	Any	Bearer authentication headers are sent.
User Session JWT	From v2	Bearer authentication headers are sent.

User organization

The `X-User-Organization` request header should be used to specify which organization the user is acting on behalf of. If the header is not present in the request, then the user is assigned the organization based on the first profile from the 'Profiles' setting on the user instance.

Describe

The "describe" API allows integrators to read the system object model. It is intended to be used by System Integrators systems and humans.

Describe Objects

To get a list of the objects in the system.

```
GET /api-v2.2/describe
```

☰ Example Response ▼

```
<resources applicationVersion="9106.9755532">
<resource name="Contact" describe-url="https://.../api-v2.2/contact/describe" 1:
<attributes>
<attribute name="_usedcurrency" type="StrongReference" referencedType="Currency"
<attribute name="_usedcurrencyenabled" type="Boolean"/>
<attribute name="account" type="Reference" referencedType="Account" mandatory="t
<attribute name="department" type="String"/>
<attribute name="email" type="Email" searchable="true"/>
<attribute name="languages" type="PickList">
<options>
<option name="en"/>
<option name="de"/>
</options>
</attribute>
<attribute name="mobile" type="String"/>
<attribute name="name" type="String" searchable="true" mandatory="true"/>
<attribute name="phone" type="String"/>
<attribute name="title" type="String"/>
</attributes>
<lifecycle>
<states>
<state id="0" name="Design"/>
<state id="9999" name="Deleted" deleted="true"/>
<state id="-9999" name="Master Data Deleted" deleted="true"/>
</states>
<transitions>
<transition id="1" name="Delete" from="0" to="9999"/>
<transition id="2" name="undelete" from="9999" to="0"/>
</transitions>
</lifecycle>
</resource>
...
</resources>
```

Describe Specific Object

To get a description of one of the objects in the system. The type is defined in the request url with the type parameter.

```
GET /api-v2.2/[type]/describe
```

☰ Example Response ▼

```
<resource name="BusinessApproval" describe-url="http://.../api-v2.2/businessappi
<attributes>
<attribute name="name" type="String" searchable="true"/>
<attribute name="description" type="String"/>
<attribute name="reporter" type="Reference" referencedType="User"/>
<attribute name="assignee" type="Reference" referencedType="User"/>
<attribute name="reply" type="TextArea"/>
<attribute name="received" type="Date" searchable="true"/>
<attribute name="deadline" type="Date" searchable="true"/>
<attribute name="subject" type="Reference" referencedType="Solution"/>
<attribute name="subjectRevision" type="StrongReference" referencedType="Solutio
<attribute name="resolutionRevision" type="StrongReference" referencedType="Solu
<attribute name="revisedItems" type="ReferenceList" referencedType="ConfiguredPi
</attributes>
<lifecycle>
<states>
<state id="0" name="Design"/>
<state id="1" name="Requested"/>
<state id="2" name="Work Started"/>
<state id="3" name="Approved"/>
<state id="4" name="Rejected"/>
<state id="6" name="Deleted"/>
</states>
<transitions>
<transition id="1" name="Start Work" from="1" to="2"/>
<transition id="2" name="Stop Work" from="2" to="1"/>
<transition id="3" name="Approve" from="2" to="3"/>
<transition id="4" name="Reject" from="2" to="4"/>
<transition id="5" name="Delete" from="4" to="6"/>
<transition id="6" name="Request" from="0" to="1"/>
</transitions>
</lifecycle>
</resource>
```

List

List object instances of a specific type (in XML). The returned list is by default limited to 10 results (see the limit parameter).

```
GET /api-v2.2/[type]/list
```

Example Response

```

<list limit="10" type="contact" url="https://.../api-v2.2/Contact/list" describe
<resource id="m95390355ce343da987656ad475b0bf7" url="https://.../api-v2.2/Conta
<attributes>
<attribute name="account" value="meec9e0cc446449fbdd3123be0a86df2"/>
<attribute name="department" value="Purchasing"/>
<attribute name="email" value="mark.smith@acme.com"/>
<attribute name="languages" value="en"/>
<attribute name="mobile" value="+1 555 444 333"/>
<attribute name="name" value="Vanilla Contact"/>
<attribute name="phone" value="+1 555 444 333"/>
<attribute name="title" value="Head of Purchasing"/>
</attributes>
</resource>
</list>

```

 **Note**

API v2.2 and higher will not have the `count` list attribute present.

Optional Parameters

Name	Usage	Default
includeDeleted	'true' will include instances that are in 'deleted' or invalid state.	Not include deleted
excludeAttribute	Attribute to exclude from the result. You can include this parameter multiple times to exclude additional attributes from the result.	
order	Can be <code>asc</code> or <code>desc</code> . <code>desc</code> would sort the list in the descending order.	Ascending order
sort	An attribute to sort on. Results can also be sorted by <code>#id</code> or <code>#modifiedTime</code> .	<code>#id</code>
where	A filter for which records you want to list. For example <code>?where=name=abc</code> would include only records with the attribute name set to <code>abc</code> . You can include multiple where parameters in the same query, all of the filters will then be applied. All attributes that you want to filter on must be marked as indexed in the application configuration.	
related	A variant of the where parameter. Related works based on references to other records instead of on attribute values. For example <code>/api-v2.2/configuredproduct/list?related=solution=x</code> would return only the configured products that are part of the solution with id <code>x</code> . The list related and list with where parameters are mutually exclusive	

Name	Usage	Default
	and can not be both specified. If both a "where" and "related" parameter is specified, the related parameter "wins".	
limit	The maximum number of results that you want to receive. From April 23 2018 may at most be 1000.	10
offset	The offset to the first result that you want to receive.	0
from	The time to retrieve results from in ISO format such as <code>2007-12-03T10:15:30.00Z</code> .	The beginning of time.
to	The time to retrieve results to in ISO format such as <code>2007-12-03T10:15:30.00Z</code> .	The current time.
no-currency-formatting	If set to "true" then currency formatting for monetary values will be skipped.	false
include-actual-value	If set to "true", include the parameter <code>actualValue</code> in the <code>parameter</code> elements inside <code>required-parameters</code> . That parameter contains the name of the value, which can be different from the description of the value, which is reported in the <code>value</code> parameter. Supported starting with API v2.	false
include-reference-name	If set to "true", include referenced object name for attributes of type <code>Reference/StrongReference/ReferenceList/StrongReferenceList</code> . Supported starting with API v2.	false
enable-chunked-response	If set to "true", enables API v2.2 list behaviors. If set to "false", disables it. Support for the parameter ends with API v2.1.	Environment specific

List headers

List object headers for a specific type (in XML). The returned list is by default limited to 10 results (see the limit parameter).

For the instances it will return:

- id
- revisionId
- state
- stated
- modifiedBy
- modifiedTime

```
GET /api-v2.2/[type]/headers
```

☰ Example Response ▼

```

<?xml version="1.0"?>
<headers count="3" type="solution" url="http://.../api-v2.2/solution/headers">
<header id="611997c9d15f4d70a66163d16e563623" revisionId="c3ca056af8334267930bd:
<header id="d416d56f3b224a1b8781c79db65340ea" revisionId="7d54051d54e948c5b310d:
<header id="639ad1d31b264ae68c98606dc71c9202" revisionId="e7d6836d184b411db979b
</headers>

```

Optional Parameters



Name	Usage	Default
includeDeleted	'true' will include instances that are in state 'deleted'.	Not include deleted
order	Can be asc or desc . desc would sort the list in the descending order.	Ascending order.
sort	An attribute to sort on.	
where	A filter for which records you want to list. For example ?where=name=abc would include only records with the attribute name set to abc. You can include multiple where parameters in the same query, all of the filters will then be applied. All attributes that you want to filter on must be marked as indexed in the application configuration.	
related	A variant of the where parameter. Related works based on references to other records instead of on attribute values. For example /api-v2.2/configuredproduct/list?related=solution=x would return only the configured products that are part of the solution with id x . The list related and list with where parameters are mutually exclusive and can not be both specified. If both a "where" and "related" parameter is specified, the related parameter "wins".	
limit	The maximum number of results that you want to receive. From April 23 2018 may at most be 1000.	10
offset	The offset to the first result that you want to receive.	0
from	The time to retrieve results from in ISO format such as 2007-12-03T10:15:30.00Z .	The beginning of time.
to	The time to retrieve results to in ISO format such as 2007-12-03T10:15:30.00Z .	The current time.

Create Object

Creates a new instance of an object type. Attributes can be either be sent as an XML body or as multipart form-data.

Organization and owner can be specified in the XML. If not specified the API user will be the owner and the API user's organization will be used.

```
POST /api-v2.2/[type]
```

 Sample 

Request

```
POST /api-v2.2/contact
```

POST Body:

```
<resource organization="Global Sales" owner="817b551f16fa445e932be5059705bba1">
<attributes>
<attribute name="name" value=" Mr. Tacton"/>
<attribute name="account" value="916dd62574474b0081390c87b2a9ac14"/>
<attribute name="title" value="Manager"/>
</attributes>
</resource>
```

Response headers

Location: /api-v2.2/contact/dc91add910d74aed8b9e2c4bf09c6757

X-state: 1

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Update

Update Object

Update attribute or attributes of an object instance latest revision from parameters sent as query parameters, multipart/form-data or application/x-www-form-urlencoded.

Binaries can only be updated using multipart/form-data.

```
PUT /api-v2.2/[type]/[id]-[revision]
```

Example setting 'name' attribute value

Request

```
PUT /api-v2.2/contact/adc0fd5ac73144e793e53afcd977c418-9c2f798086214928864b844b6
```

Example setting 'contacts' attribute (reference list) with multiple values

Request (`contacts` parameter is provided multiple times)

```
PUT /api-v2.2/opportunity/21db3ca028c64f77a556b976aa5881bf-0b08ed589ab542278b9d:
```

Example changing organization

Request

```
PUT /api-v2.2/account/b8f660d61e5542ebb112510e50fddfefeb-c39194981536473c90edeffd:
```

Body

```
<resource organization="Global Sales">
  <attributes/>
</resource>
```

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Update Object Instance from XML

Update attribute or attributes of an object instance latest revision from XML sent in the body content.

```
PUT /api-v2.2/[type]/[id]-[revision]
```

Sample

Request

```
PUT /api-v2.2/contact/adc0fd5ac73144e793e53afcd977c418-9c2f798086214928864b844b6
```

Body: contact.xml

```
<resource> <attributes> <attribute name="name" value="Mr. Tac Tonic"/> </attribu
```

Note

If the resource updated is a **ConfiguredProduct** and one of the updated attributes is its **bom**, then the prices for that **ConfiguredProduct** are recalculated.

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Update Resource State

Transitions an instance from one state to another state.

```
POST /api-v2.2/[type]/[id]/transition/[id]
```

Sample

Request

```
POST /api-v2.2/configuredproduct/d107c8e04e3c48f3a25a6b3c64480d08/transition/9
```

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false
comment	Comment that will be added when the transition is executed.	

Delete Instance

Performs a delete transition on the given object instance and on all related objects referenced with the "Delete When Parent is Deleted" reference strategy.

```
DELETE /api-v2.2/[type]/[id]
```

Samples ▾

Request

```
DELETE /api-v2.2/solution/d107c8e04e3c48f3a25a6b3c64480d08
```

Status: 400 - Response with error

```
<errors>
<error message="Solution is in state Proposal Sent"/>
</errors>
```

Status: 200 - Success

```
<success>
<deleted-resource type="Solution" latestVersion="4f2593a3300946058de44662ec0516c
<deleted-resource type="ConfiguredProduct" latestVersion="abde747b742c422295c68:
<deleted-resource type="ConfiguredProduct" latestVersion="5d195f2a103943939310e:
<deleted-resource type="BusinessApproval" latestVersion="f70dbdb7081e4003a4d7ec
<deleted-resource type="BusinessApproval" latestVersion="5c3dd3aaa87641c795e478
<deleted-resource type="BusinessApproval" latestVersion="edde268b34f44af3906ca6
<deleted-resource type="BusinessApproval" latestVersion="c3934c4e4bae49028af827!
</success>
```

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Copy Instance

Copies selected attributes of an object instance. Id can be a weak or strong reference.

```
POST /api-v2.2/[type]/[id]/copy
```

Sample

Request:

```
POST /api-v2.2/contact/adc0fd5ac73144e793e53afcd977c418/copy
```

Response

```
Location: /contact/bf2799a19cb24240a102837f78a4bdfc-2d739d7618a0401595048956bd3-
```

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Recalculate Pricing

Recalculates the prices for specific ConfiguredProduct or all ConfiguredProduct in a Solution. Id should be a weak reference.

```
POST /api-v2.2/[type]/[id]/recalculate-pricing
```

Sample

Request:

```
POST /api-v2.2/configuredproduct/e41ed423c6f544698de09ac7e1e9c253/recalculate-pricing
```

```
POST /api-v2.2/solution/adc0fd5ac73144e793e53afcd977c418/recalculate-pricing
```

Optional Parameters

Name	Usage	Default
updateDatatables	If present and true , the data tables are updated to their latest version. This parameter is only relevant if data tables are retained in Pricing Settings.	false

Refresh Currency

Refresh the used currency for the solution and all configured products in a solution. Used for example when the currency conversion factor has changed or when the currency was changed.

```
POST /api-v2.2/solution/[id]/refresh-currency
```

☰ Sample ▼

Request:

```
POST /api-v2.2/solution/adc0fd5ac73144e793e53afcd977c418/refresh-currency
```

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Configure

Starts a batch job for configuring all configurable line items in the solution or specific line item. The job is executed asynchronously and its status can be checked by calling [Check job status](#) on solution or specific configured product.

```
POST /api-v2.2/solution/[id]/configure
```

```
POST /api-v2.2/configuredproduct/[id]/configure
```

☰ Sample ▼

Request:

```
POST /api-v2.2/solution/4511db0b9ce04650b3c9d92143d53f5f/configure
```

Response:

```
<job state="pending"/>
```

 **Note**

If a new batch job is created, the returned `state` is "pending". If another job is already scheduled or running, the returned `state` is "no-run".

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Update Products

Starts a batch job for updating all configurable line items in the solution or specific line item with the latest revisions of the product models or configuration context. The job is executed asynchronously and its status can be checked by calling [Check job status](#) on solution or specific configured product.

```
POST /api-v2.2/solution/[id]/update-products
```

```
POST /api-v2.2/configuredproduct/[id]/update-product
```

 **Sample**

Request:

```
POST /api-v2.2/solution/4511db0b9ce04650b3c9d92143d53f5f/update-products
```

Response:

```
<job state="pending"/>
```

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center	false

Check Job Status

Checks a status of a batch job for configuring or updating all configurable line items in the solution or specific configured product.

```
GET /api-v2.2/solution/[id]/job-status
```

```
GET /api-v2.2/configuredproduct/[id]/job-status
```

☰ Sample
▼

Request:

```
GET /api-v2.2/solution/4511db0b9ce04650b3c9d92143d53f5f/job-status
```

Response:

```
<job state="running"/>
```

Renumber Items

Resets the numbering of line items in a solution.

```
POST /api-v2.2/solution/[id]/renumber-items
```

☰ Sample
▼

Request:

```
POST /api-v2/solution/adc0fd5ac73144e793e53afcd977c418/renumber-items
```

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Read

Read Object

Read a specific instance of type.

```
GET /api-v2.2/[type]/[id]
```

Sample

Request:

```
GET /api-v2.2/contact/adc0fd5ac73144e793e53afcd977c418
```

Response:

```
<resource id="adc0fd5ac73144e793e53afcd977c418" url="http://.../api-v2.2/Contact"
<attributes>
<attribute name="name" value=" Mr. Tac Ton"/>
<attribute name="account" value="916dd62574474b0081390c87b2a9ac14"/>
<attribute name="title" value="Manager"/>
<attribute name="department" value="Offering Management"/>
<attribute name="mailingAddress"/>
<attribute name="languages"/>
<attribute name="phone"/>
<attribute name="mobile"/>
<attribute name="email"/>
<attribute name="assistantName"/>
<attribute name="assistantPhone"/>
<attribute name="birthDate"/>
<attribute name="sapid"/>
</attributes>
</resource>
```

Optional Parameters

Name	Usage	Default
no-currency-formatting	If set to "true", then currency formatting for monetary values will be skipped.	false

Name	Usage	Default
include-actual-value	If set to "true", include the parameter <code>actualValue</code> in the <code>parameter</code> elements inside <code>required-parameters</code> . That parameter contains the name of the value, which can be different from the description of the value, which is reported in the <code>value</code> parameter. Supported starting with API v2.	false
include-reference-name	If set to "true", include referenced object name for attributes of type Reference/StrongReference/ReferenceList/StrongReferenceList. Supported starting with API v2.	false

Download Binary

Download the binary file stored in an attribute.

```
GET /api-v2.2/[type]/[id]/download/[attribute]
```

☰ Sample
▼

Request

```
GET /api-v2.2/proposal/adc0fd5ac73144e793e53afcd977c418/download/document
```

Response

The proposals PDF document.

Read History

Read the history of specific instance of an object type. Compared to `/list`, this call does not have 'offset' as optional parameter. It is recommended to use 'from' and 'to' instead. Returns XML with the revision information. The revision information includes:

- Number of revisions
- Revision identifiers
- modifiedby and modifiedtime
- The previous revision
- Elements ordered by modified time

By default limited to 10 results. See the limit parameter.

```
GET /api-v2.2/[type]/[id]/history
```

☰ Sample
▼

Request


```
GET /api-v2.2/solution/4942dc29dabf420e8a65c5d9a8b00841/shared-to
```

Response

```
<shared-to>  
<user id="7a3f0d9211fd43c49cb7eef29e738a8a" />  
</shared-to>
```

Add Additional Owner

Add a user to the list of additional owners for an object instance.

```
POST /api-v2.2/[type]/[id]/shared-to/add?userid=<userid>
```

Sample

Request

```
POST /api-v2.2/solution/4942dc29dabf420e8a65c5d9a8b00841/shared-to/add?userid=7:
```

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Set Additional Owner

Sets the list of additional owners for an object instance,

```
PUT /api-v2.2/[type]/[id]/shared-to
```

Sample

Request

```
PUT /api-v2.2/solution/4942dc29dabf420e8a65c5d9a8b00841/shared-to
```

Body

```
<shared-to>
<user id="7a3f0d9211fd43c49cb7eef29e738a8a"/>
</shared-to>
```

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Remove Additional Owner

Remove a user from the list of additional owners for an object instance.

```
POST /api-v2.2/[type]/[id]/shared-to/remove?userid=<userid>
```

Sample

Request

```
POST /api-v2.2/solution/4942dc29dabf420e8a65c5d9a8b00841/shared-to/remove?userid
```

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Validations

Start Product Validation

```
POST /api-v2.2/ConfiguredProduct/<resourceId>/validate
```

Check Validation Status

```
GET /api-v2.2/validation/<validationId>/state
```

Cancel Validation

```
POST /api-v2.2/validation/<validationId>/cancel
```

Product Variance Reports

List Available Reports

List variance reports for a product.

```
GET /api-v2.2/product/[product-id]/variance-report/v1/list
```

☰ Sample ▼

```
<product-variance-reports>
<product-variance-report
name="My Report"
id="12345"
data="https://.../api-v2.2/product/1/variance-report/v1/12345"/>
<product-variance-report
name="Compatibility table"
id="123321"
data="https://.../api-v2.2/product/1/variance-report/v1/123321"/>
</product-variance-reports>
```

Get Report Data

Retrieve the product variance report as an XML table.

```
GET /api-v2.2/product/[product-id]/variance-report/v1/[id]
```

☰ Sample ▼

```
<product-variance-report>
<columns>
<column name="req_disc_brake_field" description="Disc Brakes" domain="boolean" :
<column name="front_suspension_type_field" description="Front Fork" domain="fro
<column name="rear_suspension_type_field" description="Rear Shock" domain="rear_
</columns>
<rows>
<row>
<cell>No</cell>
<cell>Rigid Fork</cell>
<cell>None</cell>
</row>
<row>
<cell>No</cell>
<cell>Manitou Pro</cell>
<cell>None</cell>
</row>
</rows>
</product-variance-report>
```

BoM Edit

The BoM edit part of this API make it possible to modify the BoM of a ConfiguredProduct similar to how it works in the [BoM Editor](#).

When a BoM item is modified it will lock the entire BoM item. That means that it will be excluded from attribute updates in reconfigurations.

It is possible to adjust the locking behavior to only lock modified attributes instead of the entire item. This is enabled in the system setting *Bill of Materials Locking* at *Sales Process > Functions > System Settings*.

Note

The BoM edit API is not compatible with updates to the BoM from [Update Object](#) or [Update Object Instance from XML](#) calls. The latter calls blindly replace the entire BoM with no traceability of what came from the configuration versus BoM edits.

Get BoM

To get a list of BoM items for a configured product. BoM attributes sourced by pricing are excluded.

```
GET /api-v2.2/configuredproduct/[id]/bom-edit
```

Example Response

```

<resource>
  <bom>
    <item key="0$UNI-SAD-001">
      <values instance="0" isEto="false" variantName="UNI-SAD-001" description="Narrow" />
    </item>
    <item key="0$UNI-POL-001" parentKey="0$UNI-SAD-001">
      <values instance="0" isEto="false" variantName="UNI-POL-001" description="Short" />
    </item>
  </bom>
</resource>

```

Add BoM

Add non-standard BoM items to the BoM. It is possible to decide if the item needs to be approved or is resolved. Items with existing identifiers will be ignored, the identifier for a BoM Item is its BoM definition *Part of ID*.

An absent or empty *parentKey* will add the BoM item to the top-level of the hierarchy.

```
POST /api-v2.2/configuredproduct/[id]/bom-edit
```

Note

Adding non-standard BoM items to the BoM is not supported for System Configuration.

Example Request

```

<?xml version="1.0" standalone="no"?>
<resource>
  <bom>
    <item>
      <values description="Non standard item description" specialRequest="Special request" />
    </item>
    <item parentKey="0$UNI-SAD-001">
      <values description="Non standard item description" />
    </item>
  </bom>
</resource>

```

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Update BoM

Update existing BoM items by either using the key from the [GET request](#), or set all the [Part of ID](#) attributes in the *values* node of the request. Part of ID attributes can not be updated through the API.

BoM items hierarchy can be modified using the attribute key *parentKey* in the *item* tag. Absence of *parentKey* will make no impact on existing hierarchy. Empty value for *parentKey* will remove existing parent-child relation and move the item to the top-level. Unknown attributes will be ignored, same for BoM items with an invalid key on Part of ID attributes not matching an existing BoM item.

A key containing *null* value will still require an empty string attribute if you do not use the key to identify the BoM item. Part of Id attributes cannot be set with the API.

It's not possible to use subitem's key as *parentKey* value. To link the item to its own subitem, then two requests are required:

1. Change subitem's *parentKey* or remove it.
2. Link item to changed subitem.

```
PUT /api-v2.2/configuredproduct/[id]/bom-edit
```

Example Request

```
<?xml version="1.0" standalone="no"?>
<resource>
<bom>
<item key="0$UNI-SAD-001">
<values description="Narrow saddle Updated"/>
</item>
<item>
<values instance="0" variantName="UNI-POL-001" description="Short pole (d) Updat
</item>
<item key="0$UNI-SAD-001-a" parentKey="0$UNI-SAD-001">
<values/>
</item>
</bom>
</resource>
```

Note

Changing hierarchy will result in the moved BoM item being placed as the last element. Reconfiguration may change the order of moved BoM elements, but the hierarchy will remain the same.

Note

Changing the hierarchy of BoM items is not supported for System Configuration.

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Delete BoM

Delete non-standard BoM items from the BoM by using the key from a [GET request](#).

```
DELETE /api-v2.2/configuredproduct/[id]/bom-edit
```

Example Request

```
<?xml version="1.0" standalone="no"?>
<resource>
<bom>
<item key="0$SR-0000057"/>
<item key="0$SR-0000058"/>
</bom>
</resource>
```

Note

When deleting a non-standard BoM item with subitems, its subitems will also be deleted.

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Revert BoM Edits

Revert manual edits done on specified BoM items by using the key from a [GET request](#).

Reverting edits on manually added items, [special requests](#), added via the BoM editor or this API will be deleted.

```
PUT /api-v2.2/configuredproduct/[id]/bom-edit-revert
```

Example Request

```
<?xml version="1.0" standalone="no"?>
<resource>
<bom>
<item key="0$SR-0000057"/>
<item key="0$SR-0000058"/>
</bom>
</resource>
```

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false

Reset All BoM Edits

Resets manual edits done on all BoM items in the BoM. Manually added items, [special requests](#), added via the BoM editor or this API will be deleted.

```
PUT /api-v2.2/configuredproduct/[id]/bom-edit-reset
```

Optional Parameters

Name	Usage	Default
mute-events	"true" or "false" to indicate if the event should propagate to any registered event handlers in the action center.	false