

Callouts API

Overview	2
Scope	2
Implementation considerations	2
Callouts Setup	3
Callouts Request	4
Callouts Response	8
Success Response	8
Error Response	9

Overview

Callouts API capability provides DealHub customers' ability to retrieve prices and product attributes from any external source using an API while generating the product summary. The solution is based on a request/response in JSON format.

Scope

Through the Callouts API the CPQ system can send the list of standalone products or bundles of type "Product Summary".

Bundles of type "Product Summary" will be part of the Pricing Callouts request if **all** products within this bundle are configured with price type "ERP".

Implementation considerations

When setting up Callouts configuration within CPQ, keep in mind that:

- Proposal attributes that are received from DealHub Callouts will override any manual changes done by the sales rep. It is highly recommended to set such proposal attributes as read-only or hidden.
- Response data might contain more data than what the administrator configured. Any additional information in the response will be ignored (except for partner levels when generating a quote for the indirect sale).
- Product Attributes and Proposal Attributes may have space and a hyphen in the name. The JSON property name will convert these chars into underscores.

Callouts Setup

Enablement of Callouts integration is done by CPQ administrator via Advanced Settings screen:

The screenshot shows the 'Advanced Settings' tab selected in the top navigation bar. Below it, the 'Callouts' sub-tab is active. The configuration is divided into two main sections: 'Callout Request Information' and 'Callout Response Information'.

Callout Request Information:

- ☐ Use DealHub callouts (with a help icon)
- URL endpoint:
- Authentication Type:
- Select playbook: (dropdown)
- Product attributes to send: (dropdown)
- Playbook answers to send: (dropdown)

Callout Response Information:

- Allowed fields on response: (dropdown)

The Callouts configuration is managed per playbook.

When setting up Callouts in CPQ, the administrator should specify the following:

- URL of the external system, which will respond to the Callouts request
- Specify authentication details (as expected by an external system)
- Playbook question(s)/answer(s) to send within request payload: list of questions from non-repeatable question groups.
- Product attributes to send within request payload: list of product attributes.
- Which fields CPQ should receive in the response:
 - MSRP
 - List price
 - Partners (OOB CPQ supports list of partner discounts from `partner_discount1` to `partner_discount5`)
 - Proposal Attributes (list of all proposal attributes)



Callouts Request

The request will contain all the information required for the external system to calculate the prices and additional product characteristics information that will be populated into the relevant line item attributes upon response processing. The DealHub admin will be able to select which playbook answers to include in the request.

Request type: POST

URL: <EXTERNAL_SYSTEM_ENDPOINT_URL_CONFIGURED_BY_ADMIN>

Query body format: JSON

Query body example (the actual payload depends on the product model of specific DealHub customer):

```
{
  "request_id": "RANDOM-32bit-string",
  "authentication": "DASFE$df422ffg",
  "playbook_answers": {
    "general.currency": "USD",
    "general.geo": "North America",
    "group1.customer_type": "Enterprise",
    "group2.number_of_something": 4323.11,
    "group3.proposal_date": "2021-03-25T15:39:25Z"
  },
  "items": [
    {
      "id": 1,
      "sku": "A-1",
      "type": "product",
      "quantity": 15,
      "duration": 12,
      "family": "hardware",
      "returned_attributes": {
        "price": "number",
        "MSRP": "number",
        "partner_discount1": "percentage",
        "partner_discount2": "percentage",
        "start_date": "date"
      }
    },
    {
      "id": 2,
```

```
"sku": "B-1",
"type": "bundle",
"quantity": 2,
"duration": 24,
"family": "software",
"returned_attributes": {
  "MSRP": "number",
  "start_date": "date"
},
"bundle_items": [
  {
    "id": 3,
    "sku": "B-111",
    "type": "product",
    "quantity": 15,
    "duration": 12,
    "family": "hardware",
    "returned_attributes": {
      "price": "number",
      "MSRP": "number",
      "partner_discount1": "percentage",
      "partner_discount2": "percentage",
      "start_date": "date"
    }
  },
  {
    "id": 4,
    "sku": "B-222",
    "type": "product",
    "quantity": 15,
    "duration": 12,
    "family": "hardware",
    "returned_attributes": {
      "price": "number",
      "MSRP": "number",
      "partner_discount1": "percentage",
      "partner_discount2": "percentage",
      "start_date": "date"
    }
  },
  {
    "id": 5,
    "sku": "B-333",
    "type": "product",
    "quantity": 15,
    "duration": 12,
    "family": "hardware",
```

```

    "returned_attributes": {
      "price": "number",
      "MSRP": "number",
      "partner_discount1": "percentage",
      "partner_discount2": "percentage",
      "start_date": "date"
    }
  }
]
}
}

```

Query body explanation:

Name	Description	Mandatory
playbook_answers	<p>The list of playbook answers that were selected by the DealHub admin to be included on each request</p> <p>Date fields will be sent in an ISO_8601 format, in Zulu time, e.g: yyyy-MM-dd'T'HH:mm:ss.SSS'Z'</p>	No
items / bundle_items	<p>List of items that were selected in the quote and their metadata.</p> <p>Each item has the following fields:</p> <ul style="list-style-type: none"> ● id - a number that identifies the item (since there can be several items with the same item) should be returned in the response ● sku - The actual SKU ● type - either product or bundle ● all the relevant product factors (like quantity, etc.) 	<p>Yes</p> <p>Note: When a product is defined as a bundle, bundle_items is mandatory.</p>

Name	Description	Mandatory
	<ul style="list-style-type: none">● <u><i>selected product attributes</i></u> - DealHub admin will be able to select the product attributes to provide within the request payload (in the above example, family)● returned_attributes - a list of attributes and their expected types that can be returned for each item. this list includes price (list price), MSRP, all the discounts being used and any proposal attribute without a default value	



Callouts Response

Success Response

In the response (HTTP-200) DealHub expects to receive a list of items along with proposal attributes for each item (as per the administrator configuration).

The received proposal attributes will be copied into each matching proposal attribute.

Expected response example:

```
{
  "items": [
    {
      "id": 1,
      "sku": "A-1",
      "price": 100,
      "MSRP": 200,
      "partner_discount1": 10,
      "partner_discount2": 10,
      "start_date": "2021-03-25T15:39:25Z"
    },
    {
      "id": 2,
      "sku": "B-1",
      "MSRP": 600,
      "start_date": "",
      "bundle_items": [
        {
          "id": 3,
          "sku": "B-111",
          "price": 100,
          "MSRP": 200,
          "partner_discount1": 10,
          "partner_discount2": 10,
          "start_date": "2021-03-25T15:39:25Z"
        },
        {
          "id": 4,
          "sku": "B-222",
          "price": 100,
          "MSRP": 200,
          "partner_discount1": 10,
          "partner_discount2": 10,
          "start_date": "2021-03-25T15:39:25Z"
        }
      ]
    }
  ]
}
```



```

        "id": 5,
        "sku": "B-333",
        "price": 100,
        "MSRP": 200,
        "partner_discount1": 10,
        "partner_discount2": 10,
        "start_date": "2021-03-25T15:39:25Z"
    }
}
]
}
]
}

```

Below is the mandatory information for each item in the list of sent line items:

Name	Description	Mandatory
id	Same 'id' as sent in the request payload	yes
sku	Same 'sku' as sent in the request payload	yes
price	List price of the line item	yes

All the other attributes are optional, i.e. not all attributes could be returned for all the products. It is a valid scenario.

Date fields will be sent in an ISO_8601 format, in Zulu time, e.g: yyyy-MM-dd'T'HH:mm:ss.SSS'Z'

If at least one of the requested products will not receive its list price, the error will be displayed to the sales rep upon quote generation. The quote generation will stop.

Error Response

In the scenario where an external system need to return an error, it should follow the following response payload format (HTTP-400):

```

{
  "message": "This is an example of the formatted error from the external system."
}

```