



# CSM FOR BIGCOMMERCE

An App by Suite Engine

Microsoft Dynamics 365 Business Central

## Listing Management Setup

Release: 3.0

# LISTING MANAGEMENT SETUP

Channel Sales Manager (CSM) for BigCommerce | Release: 3.0

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This document presents Listing Management setup information regarding CSM for BigCommerce Listing Management functionality for Microsoft Dynamics 365 Business Central. CSM for BigCommerce Listing Management functionality is additional functionality available for subscription purchase with the CSM for BigCommerce Order Management module.

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## CSM Setup

CSM for BigCommerce Listing Management requires that you have already setup the CSM for BigCommerce Order Management functionality. Please follow the setup instructions for CSM for BigCommerce Order Management

## CSM Sales Channel

There is a 'Listing Management' Fast tab on the Sales Channel Card. These fields are mostly defaults that CSM uses to build a Channel Listing from Business Central Item Data using the Create Listing Wizard.

Listing Management FastTab		
Field	Description	Example Value
Prod Information Purpose	This field is for future use, it will allow you to specify a purpose for product information you populate in CSM	
Auto Build Attributes From	Indicates the method used to auto build attributes for a Sales Channel attribute set	Item Attributes
Enable New Attribute Design	Enabling this field will instruct CSM to store listing attribute information in separate tables. You should enable this field if you have not yet deployed CSM for BigCommerce's listing management functionality and are doing so for the first time. If you have been working with CSM for BigCommerce's listing management functionality in the past, please contact your Suite Engine partner before enabling this field, as there may be data migration activities to consider.	Yes/True
Use Shared Item Attributes	Enabling this field will instruct CSM to create common item attribute records that can be shared between CSM listings. This is to accommodate varying attribute structures across different eCommerce platforms. In the instance of BigCommerce, attributes are product-specific. Accordingly, this field <b>must be set to False</b> when you are configuring a BigCommerce sales channel.	No/False
Price Group Code	Price Group to use in Listing Management for pricing.	ECOMB2C
Attribute Set Behavior	Attribute sets are used by some eCommerce platforms as a way to group together product attributes. This concept does not exist within BigCommerce and this field can be ignored.	
Listing Default Attribute Set	Attribute sets are used by some eCommerce platforms as a way to group together product attributes. This concept does not exist within BigCommerce and this field can be ignored.	
Listing Default Long Description / Listing Default Short Description	CSM can populate the Long Description sent to BigCommerce based on a Long Description CSM Product Information record attached to the CSM Listing. This Product Information record can be something you create, or linked to Business Central data: <ul style="list-style-type: none"> <li>Manual: CSM will not link the Long Description to any value, however the user can create a long description product information record (with HTML tags supported) as a CSM Product Information entry for the listing.</li> <li>Description 2: CSM will link the Long Description Product Information record to Description 2 of the Item being listed.</li> <li>Extended Text: CSM will link the Long Description Product Information record to the Extended Text entry for the item being listed.</li> </ul>	Manual / Extended Text

	<ul style="list-style-type: none"> <li>LS Item HTML: If the LS Central extension from LS Retail is installed, CSM can link the LS Central Item HTML value to the Long Description product information record for the listing.</li> </ul>	
Default Images	CSM can send links/URLs to BigCommerce. BigCommerce does not receive images.	Item Picture
API Image File Path	The ability to assign and manage item pictures is not supported in CSM for BigCommerce 1.0. This functionality will be added in a subsequent product version.	
Base Image External ID		
Small Image External ID		
Thumbnail Image External ID		
Listing Management FastTab (Availability Defaults)		
Field	Description	Example Value
Send Availability Information	This field indicates whether CSM should send inventory availability to BigCommerce for this Sales Channel.	Switched On (True)
Default Availability Basis	<p>The Business Central Inventory method to use when calculating availability. This is a default that every CSM Listing for this Sales Channel will be created with. You can however override this value for each individual Listing. All of the below methods use the location specified on the Sales Channel for the calculation.</p> <ul style="list-style-type: none"> <li>Availability – (Item Availability) On hand, less what is due to ship on a sales order + what can be received on a Purchase Order where the expected release date is today or less.</li> <li>Available Inventory – On hand minus what is on reserve for other demand</li> <li>Inventory – On hand inventory for the Location specified by this Sales Channel.</li> </ul>	Availability
Default Availability Percent	Allows you to specify a percentage to reduce the above calculated availability basis by before sending the value to BigCommerce. For Example, if the Availability Basis calculation was 100, and the Availability percent was 80%, then a value of 80 would be sent to BigCommerce. This value will be used when creating the listing and can be changed for each listing.	100
Default Availability Threshold	A minimum inventory threshold that must exist before CSM will send a calculated value. If the actual inventory basis calculation was 9 and the threshold was set to 10, the CSM would send 0 to BigCommerce for the availability of this listing. If the calculation was 11, then CSM would send 11 to BigCommerce (except if the Subtract Threshold From Avail switch is On). A threshold value of 0 indicates that threshold adjustments should not be considered.	0
Subtract Threshold from Avail	A switch that indicates whether the threshold value should be subtracted from the calculated inventory availability before sending to BigCommerce. For Example, if the Availability Basis yielded 100, and the Availability Percent was 80, and the Threshold value was 10, CSM would send a value of 70 to BigCommerce for the Listing.	Switched Off (false)
Inventory Ship Plan Number Series	The number series CSM should use when creating new shipping plans	Shipping plans are not used in BigCommerce
Default Replenishment Location	The default replenishment location for Inventory Management moves.	Inventory Management is not used in BigCommerce

## CSM Tax Groups

Most eCommerce platforms contain some sort of way to group or categorize the different types of tax that are applied to products. The terminology for these records varies from platform to platform, but within CSM these categorizations are referred to as “CSM tax groups.” CSM tax groups are set up to correspond to existing Business Central tax group codes.

CSM tax groups correspond to “tax class” records in BigCommerce. By default, BigCommerce offers tax classes for default taxes, non-taxable products, shipping tax, and gift wrapping tax, although you can create additional classes to meet your

company's needs. Each tax class in BigCommerce has an external ID number that identifies it as unique. You can obtain the external ID for a tax class via BigCommerce's [API reference tool](#):

1. On the left-hand side of the API Reference tool, choose the **Tax Classes** menu option, select **Taxes**, and then choose **Get All Tax Classes**.
2. Fill in any necessary parameters, then choose the **Send API Request** button.

BigCommerce will return the tax classes and their external IDs from your platform.

You must link BigCommerce tax classes to CSM tax groups to ensure that the proper tax group codes are assigned to sales orders that are retrieved from BigCommerce. This is a manual process in which you associate an external ID from BigCommerce to a CSM tax group record in Business Central:

1. Open the CSM sales channel record for which you want to set up the tax group.
2. Choose the **Related** ribbon, then select the **Setup** menu and choose the **Tax Groups** action.
3. Create a new line. The API set code and sales channel code will be automatically populated by the application.
4. In the **Tax Group Code** field, enter or use the AssistButton to select the Business Central tax group code you want to assign.
5. In the **External ID** field, enter the external ID for the tax class you obtained from BigCommerce.

## CSM Price Groups

Most eCommerce platforms contain some sort of way to group or categorize customer pricing. This makes it possible to set up difference pricing schemas for different groups of customers, then assign customer records to these groups. When a customer orders products, the platform uses the pricing that has been defined for that customer's pricing group.

The terminology for these records varies from platform to platform, but within CSM these categorizations are referred to as "CSM price groups." CSM channel categories are set up to correspond to existing Business Central customer price group codes.

CSM price groups correspond to "customer group" records in BigCommerce. Each customer group in BigCommerce has an external ID number that identifies it as unique. You can obtain the external ID for a customer group by opening the customer group record in edit mode from BigCommerce's administration interface and then reviewing the URL in your browser. The BigCommerce customer group's ID can be identified as the final value that appears directly before the "edit" portion of the URL. For example, in the sample below, the customer group's external ID is 1:

*<https://mybigcommerce.com/manage/customers/groups/1/edit>*

It is recommended that you use CSM price groups to link your Business Central customer price groups and your BigCommerce customer groups, as this association can streamline the process of building channel listings. This is a manual process in which you associate an external ID from BigCommerce to a CSM price group record in Business Central:

1. Open the CSM sales channel record for which you want to set up the price group.
2. Choose the **Related** ribbon, then select the **Setup** menu and choose the **Price Groups** action.
3. Create a new line. The API set code and sales channel code will be automatically populated by the application.
4. In the **Price Group Code** field, enter or use the AssistButton to select the Business Central customer price group code you want to assign.
5. In the **External ID** field, enter the external ID for the customer group you obtained from BigCommerce.

## CSM Channel Categories

Most eCommerce platforms contain some sort of way to group or categorize the different types of items that are available for sale. The terminology for these records varies from platform to platform, but within CSM these categorizations are referred to as “CSM channel categories.” CSM channel categories are set up to correspond to existing Business Central item category codes. Just as Business Central supports the ability to have multiple item category hierarchy levels, CSM channel categories can be set up as “parents” to one or more “children” categories.

CSM channel categories correspond to “product category” records in BigCommerce. Each product category in BigCommerce has an external ID number that identifies it as unique. You can obtain the external ID for a product category by opening the product category record in edit mode from BigCommerce’s administration interface and then reviewing the URL in your browser. The BigCommerce product category’s ID can be identified as the final value that appears directly before the “edit” portion of the URL. For example, in the sample below, the category’s external ID is 23:

*<https://mybigcommerce.com/manage/products/categories/23/edit>*

Although linking your BigCommerce product categories to CSM channel categories is not required, it is recommended, as this association can streamline the process of building channel listings. CSM provides a wizard tool that allows you to automatically create channel categories from Business Central item categories. Once you have created these records, you can manually assign the external ID from the relevant BigCommerce product category to each one.

1. Open the CSM sales channel record for which you want to set up the category.
2. Choose the **Related** ribbon, then select the **Listing** menu and choose the **Create Category Wizard** action.
3. On the first page, in the **Method** field, choose the *Item Category* option, then choose the **Next** button.
4. On the second page, in the **Item Category Code** field, enter or use the AssistButton to select the Business Central item category for which you are setting up a CSM channel category.
5. If the item category you have selected has children categories and you want to create corresponding CSM channel category records, enable the **Auto Add Category Children** option.
6. Enable the **Create Sales Channel Attribute Set** and **Create / Sync Sales Channel Attributes** fields if you want to automatically create attribute sets for each new category, as well as sales channel attributes for each item attribute that is assigned to the corresponding Business Central item categories. For more information on these records types, click [here](#).
7. Choose the **Finish** button. New CSM channel category records are created for the selected item categories.
8. From the CSM sales channel record, choose the **Related** ribbon, then select the **Listing** menu and choose the **Channel Categories** action.
9. On the lines for the newly created channel categories, enter the external ID for the product category you obtained from BigCommerce in the **External ID** field.

## CSM Attributes and CSM Attribute Sets

Most eCommerce platforms contain some sort of way to define product characteristics, which then have several predefined values. For example, we might set up a product characteristic called “Color” and then define color values such as Red, Blue, and Yellow. Oftentimes, it will also be possible to organize these characteristics into defined groups that represent the characteristics that are applicable to different products or product lines. For example, we might have a category called “Apparel” that includes categories such as Brand, Color, Material, and Size.

The terminology for these records varies from platform to platform, but within CSM these categorizations are referred to as “CSM attributes,” while the category-specific values exist as “CSM attribute options.” CSM attributes can correspond to the following Business Central record types:

- **Item Attributes:** standard Business Central item attributes.
- **Item Variations:** if you are working with Suite Engine’s [item variations](#) module, it is possible to create item variation options and values that represent variable item characteristics.

Finally, a collection of attributes is an “CSM attribute set.” CSM attribute sets are set up to correspond to existing Business Central item category records.

## CSM Attributes

CSM attributes correspond to “product variant option” records in BigCommerce. CSM attribute options correspond to “attribute terms” in BigCommerce. Within BigCommerce, each product has its own product variant options; there is no concept of “shared” attributes. For example, if we set up two products in BigCommerce and assigned them both a product variant option called “Color,” two separate product variant option records would be created by BigCommerce.

CSM attributes can be automatically created by the user in different ways:

- Static, non-configurable attributes that are assigned to Business Central product categories can be generated by enabling the **Create / Sync Sales Channel Attributes** field when you are creating CSM categories with the [create category wizard](#).
- Variable attributes assigned to a [configurable item](#) are automatically generated when the CSM listing wizard is used to create listings for the configurable item.

CSM does not support the automated synchronization of CSM attributes and BigCommerce product variant options except when working with configurable items. For more information on how configurable attributes are handled by CSM, please click [here](#). Static, non-configurable item attributes will be assigned to CSM listings, but not sent to BigCommerce as part of data transfer.

CSM will also create new CSM attributes when product information is retrieved from BigCommerce to create CSM listings. Again, each BigCommerce product will have its own product variant options: retrieving 10 products that all have a variant option called “Color” will result in the creation of 10 separate CSM attribute records.

It may be that the Business Central record to which a CSM attribute is linked has updates to its values. For example, suppose we have an item attribute called “Color” set up in Business Central, with option values of Red, Blue, and Yellow. At some point, we add Green to this list of option values. In this scenario, it is necessary to update the corresponding CSM item attribute’s values:

1. Open the CSM sales channel record for which you want to update item attribute values.
2. Choose the **Related** ribbon, then select the **Listing** menu and choose the **Channel Item Attributes** action.
3. Select the CSM item attribute you want to update, then choose the **Edit** action in the ribbon.
4. Choose the **Actions** ribbon, then select the **Data Sync** menu and choose the **Sync Option Values** action.

Newly-added values for the related Business Central record will be added to the **Item Attribute Options** FastTab.

## CSM Attribute Sets

The concept of an attribute set does not exist in BigCommerce, although it may be of value to still define these groupings within Business Central. You can manually set up an attribute set in the **CSM Attribute Sets** page, which is accessed from the CSM channel record by choosing the **Related** ribbon, selecting the **Listing** menu, and choosing the **Channel Attribute Sets** action. It is also possible to create CSM attribute sets as part of the [CSM category creation process](#); when working with the create category wizard, there is an option to create corresponding attribute sets for each selected category.

## Product Listings

Now that basic CSM For BigCommerce setup is complete, we can concentrate on creating CSM Listings which can then be sent to BigCommerce for inclusion in its Products page.

## Relevant Dynamics 365 Business Central Item Information

Let's start by looking at a D365 BC Item and related information and showing the relevant data that CSM can send to BigCommerce.

In D365 BC on the item you have already defined/created, let's pay attention to the values that CSM will look for. Note that all the information is not required for CSM to transmit product information to BigCommerce. CSM will send what it finds, and it can always be updated later.

- Item No.
- Type (Physical or digital)
- SKU
- Regular price
- Weight
- Primary category code
- Catalogue visibility
- Item Category
- Tax Class ID
- Width
- Depth
- Height
- Cost price
- GTIN
- Inventory tracking flag
- Extended Text (on the field 'Description,' type 'Short description')
- Set Special Prices (standard functionality for sales prices)
- Identifiers (CSM can use this to link a BigCommerce Product SKU that is different than the Item Number)

**Note:** *the ability to assign and manage item pictures is not supported in CSM for BigCommerce. This functionality will be added in a subsequent product version.*

In BC, the image is on the CSM Listing card, in the Listing Product Information section, on a line with "Information Type" = Image. The URL that CSM sends is built from the "API Image File Path" on the Listing Management tab of the Sales Channel Card plus the "CSM Name" field on the Listing Product Information line.

Use the action Channel Integration> Send Images to Channel. BigCommerce should return an External ID and fill some other fields with "External" in the name. On BigCommerce, the image should be assigned to the product.

## CSM Listings

Now that we have reviewed the necessary item information in Business Central, we are ready to define CSM listings for the BigCommerce sales channel.

There are two ways in which you can create CSM listing records:

- **Listing Wizard:** a step-by-step process that walks you through the creation of a CSM listing record for a single Business Central record.
- **From BC Items Import:** allows you to create multiple CSM listing records for a group of Business Central records.

### Creating Listings with the Listing Wizard

1. Open the CSM sales channel record for which you want to create listings.
2. Choose the **Listing** ribbon, then choose the **Wizard** action.
3. On the first page of the wizard, enter or use the lookup in the **Item No.** field to assign the Business Central item that will have a listing.
4. If the item exists in multiple variants or units of measure and you want to create separate listing records for each one, enter these values in the relevant fields.

***Note:** if you are creating a listing for a configurable item with multiple children records that were built with the item variations module and you want to create separate listings for these children, you must assign the parent item in the **Item No.** field of the wizard and leave the **Variant Code** field blank. This will instruct CSM to create multiple CSM listing records with the proper parent/child structure. For more information on configuring item variations to be used as the basis for CSM listings, see [here](#).*

5. Choose the **Next** button.
6. In the **Sales Channel SKU** field, enter a value that will identify the CSM listing as a unique record for the CSM sales channel. By default, CSM will assign a SKU in this field based on the values that were entered on the first page of the wizard, but you can modify this, if desired.
7. Choose the **Next** button.
8. Choose the **Finish** button.

A new listing record is created for the sales channel based on the values that were entered in the wizard.

### Creating Listings with BC Items Import

1. Open the CSM sales channel record for which you want to create listings.
2. Choose the **Related** ribbon, then select the **Listing** menu and choose the **Channel Listings** action.
3. On the **CSM Listings** page, choose the **Actions** ribbon, select the **Create Listing** menu, and then choose the **From BC Items** action.
4. On the **Create CSM Listing from BC Items** page, fill in the following fields:

- **Listing Unit of Measure:** select the item unit of measure that will be assigned to newly-created CSM listing records. You can instruct CSM to assign an item’s base unit of measure or sales unit of measure as the CSM listing’s unit of measure.
  - **SKU Number:** select the method by which sales channel SKU values will be assigned to new CSM listing records. A sales channel SKU identifies the CSM listing as a unique record for the CSM sales channel. Sales channel SKUs can be assigned from a combination of an item’s number, variant, and unit of measure; item identifier; or barcode values.
5. If you only wish to create CSM listing records for a selected group of items, set the necessary filters on the **Filter: Item** FastTab.
  6. Choose the **OK** button.

New listing records are created for the sales channel according to the criteria that you specified in the **Create CSM Listing from BC Items** page.

### CSM Listing Card

Once CSM listing records have been created, it is necessary to associate them to external platform records and perform other configuration activities:

1. Open the CSM sales channel record for which you want to configure listings.
2. Choose the **Related** ribbon, then select the **Listing** menu and choose the **Channel Listings** action.
3. On the **CSM Listings** page, open the record you want to configure.

Now, let’s review the sections of the listing that CSM assembled from Business Central item data.

The first two FastTabs on the listing are the **General** FastTab and the **Listing** FastTab.

General FastTab		
Field	Description	Example Value
Sales Channel Code	The Sales Channel Code this listing is for.	BIGCOMMERCEB2C
Channel Item SKU	The SKU which BigCommerce uses to identify the product.	79999
Type	<p>The Business Central Sales Line Type that this listing links:</p> <ul style="list-style-type: none"> <li>• Item: The listing links to a D365 BC Item.</li> <li>• G/L Account: The Listing links to a D365 BC General Ledger Account.</li> <li>• Resource: The Listing links to a D365 BC Resource.</li> <li>• Charge (Item): The Listing links to a D365 BC Item Charge.</li> </ul> <p>Note that the Wizard will only build Listings for Items, however, you could create a listing manually with a different item type. Example use case: You would like your customers to be able to donate to a charity on your site, you could then record these donations to a “Due to Charity” G/L account on the Sales Order.</p>	Item
No.	The No. representing the Type. If the type was Item, this would be the Item No.	1936-S
Variant Code	This is valid for Type Item only. If you are using D365 BC Variants for the item, you can specify which Variant is to be listed in this field.	
Unit of Measure	This is only valid for Type Item. This represents the Unit of Measure for the Item being listed. The wizard will default this to the Item base unit of measure, but you can select which item unit of measure is to be listed.	PCS
Blocked	This value corresponds to the “Is Visible” setting for listings in BigCommerce. You can use this field to control a listing’s visibility.	

Channel Product Type	This controls the BigCommerce Product Type (Simple, Configurable, Grouped, Virtual, Bundle, Downloadable). Note that this documentation will only cover Simple Items. Configurable items are possible but requires a more advanced setup of attributes.	Simple
Listing FastTab		
Field	Description	Example Value
Channel Product Name	The product name representing the listing.	BERLIN Guest Chair, yellow
CSM Channel Primary Category	The CSM Channel Category linked to this Listing.  If you need to change the categories that this item is part of, please go to BigCommerce admin and change it there.	
Channel Attribute Set	Enter or use the AssistButton to assign an attribute set to the CSM listing record. BigCommerce does not utilize attribute sets, but it may still be beneficial to assign attribute sets to listings for grouping purposes.	

The next Fast Tab is the **Listing Product Information** FastTab. This is a powerful piece of CSM functionality allowing you to add additional product information (descriptions, images, etc.) to the listing that can be sent to BigCommerce.

The CSM Listing Wizard brings product information record(s) for the listing based on the Sales Channel settings.

You can see more details: **click Manage > click View/Edit**. The Product Information Card associated with the Listing is displayed.

### Adding a Long HTML Description to the Listing

You must assign a long description to CSM listings before they can be sent to BigCommerce. If a default long description has been defined for the BigCommerce sales channel, a long description line will be automatically created for new CSM listings. If a default has not been assigned, however, long descriptions must be manually created for CSM listings:

You can include HTML as part of long descriptions to influence the format of the text.

1. Open the CSM listing that will have a long description.
2. Choose the **Add Description to Product Information** action in the ribbon. A new CSM product information card opens.
3. In the **Tags** field, enter a value of *Long Description*.
4. On the **Description** FastTab enter a description for the item in the **Description Raw HTML** field. You can include HTML as part of long descriptions to influence the format of the text. The **Description HTML Preview** FastTab presents a preview of the text, including any HTML format adjustments.
5. Close the CSM product information card.

### CSM Listing Attributes

The **CSM Listing Attribute List** FastTab presents the attributes and their values that exist for the listing. Attributes may be retrieved from:

- Business Central item attributes that have been defined for the CSM listing’s assigned item.
- Item variation attributes that have been defined for the CSM listing’s assigned item variation setup.
- Attributes that are defined and maintained in external sources or extensions.
- Manual assignment. This setting is also assigned to attributes that are retrieved from BigCommerce.

Each line on the **CSM Listing Attribute List** FastTab presents a separate item attribute and its values.

***Note:** CSM does not support the export of static, non-configurable listing attributes to BigCommerce. As a result, their presence on CSM listings is purely informational. CSM will export any configurable attributes to BigCommerce, however. For more information on how configurable attributes are handled by CSM, please click [here](#).*

## CSM Listing Children

It is possible to create CSM listings for configurable items, which are items that you make available in multiple variations due to variable characteristics, such as color or size. CSM will create separate listings for the top-level parent item and each of the parent's child items, with each child representing a different combination of variable attributes. The relationship between these records is maintained by CSM, and you can view any child listings that exist for a CSM listing on the **CSM Listing Children List** FastTab.

For more information on how CSM manages configurable items, see [here](#).

## Sending Listing Data to BigCommerce

Once you have created a CSM listing and defined any additional information such as product description, you can send the listing to your BigCommerce platform by choosing the **Actions** ribbon, then choose the **Channel Integration** menu and executing **Send All Listing Data to Channel** function. This will send the basic information about the item to BigCommerce. As part of this process, a new, corresponding product will be created on your BigCommerce platform. BigCommerce will assign a unique identification number to this record; this value will be retrieved by CSM and presented in the **External ID** field on the listing's **Listing Status** FastTab. The **Last External Update Result** field on this FastTab will also contain information about the process; this is particularly useful if CSM was unable to send the listing information to BigCommerce, as the message in this field will contain insight into the nature of the error.

CSM follows standard Business Central sales pricing logic when it comes to sending a product's unit price to BigCommerce. If the **Price Group Code** field on the relevant sales channel record has been populated, CSM will first attempt to locate a price for the item within that price group; if a price exists, it will be sent to BigCommerce. If CSM is unable to identify a price within the assigned price group, it will use the unit price that has been defined for the item record.

You can also perform these actions against multiple listing records at once from the **CSM Listings** page:

1. Select the relevant CSM listing records.
2. Choose the **Actions** ribbon, then choose the desired action in the **Channel Integration** group. Both the **Send All Listing Data to Channel** and **Send Listing Base Info to Channel** actions can be executed for multiple CSM listing records.

***Note:** the instructions in this section pertain to the export of simple or non-configurable items from Business Central to BigCommerce. Exporting a configurable item (defined as a top-level or parent item with a number of "children" based on variable attributes) is a multi-step process; see [here](#) for more information.*

## Loading CSM Listings from BigCommerce Data

It is possible to import product information from your connected BigCommerce platform into Business Central, then create CSM listings from this data. You can then link these CSM listings to Business Central items. This is useful if you have

already created products on your BigCommerce platform, and would prefer to use this external platform, rather than Business Central, as the basis for your CSM listings.

***Note:** the process of importing listing information from BigCommerce and into Business Central is meant to assist in the initial setup of your CSM listing management module. For the ongoing maintenance of products between platforms, we recommend using Business Central as the primary source and then exporting data to BigCommerce.*

To load listings from BigCommerce:

1. Open the CSM sales channel that represents your BigCommerce platform.
2. Choose the **Related** ribbon, then select the **Setup Actions** menu and choose the **Load Products From Channel** action.
3. On the **Get Listings from Channel** page, confirm the correct sales channel has been selected, then choose the **OK** button.

CSM will import product data from BigCommerce and create a separate CSM listing record for each product. The external ID for each listing will be populated with the unique identification number assigned by BigCommerce.

4. Open each CSM listing, and on the **General** FastTab, enter the corresponding Business Central item number in the **No.** field to link the CSM listing to an item.

***Note:** you can automate this linkage prior to loading items from BigCommerce by assigning the product's channel item SKU as one of the Business Central item's item identifiers. When CSM creates a new listing with data from BigCommerce, it will determine if any Business Central items have an item identifier that shares that listing's channel item SKU; if it can find a match, it will assign the item to the new listing.*

## Product Listing Availability

It is possible to instruct CSM to calculate availability for a CSM listing's Business Central item and then send this information to BigCommerce. It is necessary for the **External Inventory ID** field on the CSM listing's **Inventory Information** FastTab to be populated with the BigCommerce product's unique variant ID; this information value should be automatically retrieved by CSM when the listing is initially associated to the related BigCommerce product.

To send calculate and send available information from a CSM listing to BigCommerce:

1. Open the CSM listing record for which you want to calculate and send inventory availability.
2. On the **Availability** FastTab, enable the **Send Availability** field. This field will be automatically enabled/disabled based on the sale channel's default setting, but it can be changed on a listing-by-listing basis.
3. Fill in the following fields:
  - **Availability Basis:** select the Business Central value that will be used as the basis for the item's availability calculation.
  - **Compare availability To:** select the *Last Value Sent* option. This will instruct Business Central to calculate the item's availability from the last availability quantity that was sent from Business Central to BigCommerce. The other option, *External Inventory on Hand*, is not supported at this time.
  - **Available Channel Percent:** enter the percentage of Business Central availability that will be sent to BigCommerce. This percentage will be applied to the item's quantity when calculating availability for the listing. This is useful if you want to retain a portion of your on-hand quantity as safety stock.

- **Available Min Qty Threshold:** enter the minimum available product quantity that will be sent to BigCommerce. CSM will not send an available quantity that is less than the defined minimum threshold to BigCommerce; in such a scenario, an available quantity of zero will be sent to BigCommerce.
  - **Subtract Threshold From Availability:** select this field to instruct CSM to subtract the defined minimum quantity threshold value as part of the listing's availability calculation.
4. To manually calculate the product's availability, choose the **Actions** ribbon, then select the **Data** menu and choose the **Calculate Channel Availability** action.

CSM will calculate availability for the item based on the settings on the **Availability** FastTab and enter the result of this calculation in the **Available Last Qty Calc** field.

For example, suppose we have a CSM listing record with the following settings:

- Available Channel Percent: 90%
- Available Minimum Quantity Threshold: 15
- Subtract Threshold from Availability: Yes

If we instruct CSM to calculate availability for the item and it has an on-hand quantity of 600, the CSM listing's calculated availability would be  $(600 \times 90\%) - 15 = 525$ .

Following the listing availability calculation, CSM uses the setting in the **Compare availability To** field:

- *Last Value Sent:* CSM compares the listing's calculated availability to the value in the **Available Last Qty Sent** field. This field presents the quantity that was most recently sent to BigCommerce for the listing.

If the listing's calculated availability value differs from the comparison value, you can instruct CSM to send updated availability information to BigCommerce by choosing the **Actions** ribbon, then selecting the **Channel Integration** menu and choosing the **Send Availability to Channel** action.

## Configurable Items

Depending on your business, you may include configurable items as part of your product portfolio. A configurable item is an item that you offer in different variants based on variable attributes or characteristics.

For example, assume we are a company that sells apparel. We sell a t-shirt item in three colors (red, blue, and yellow) and three sizes (small, medium, and large), resulting in nine possible configurations. While we need to account for these nine variants in some manner, from a listing perspective we want to list just the top-level t-shirt item, then allow buyers to select their preferred color and size from the listing page.

You can use CSM's [item variations module](#) to define an item's variable characteristics (using our example above, these would be color and size), then create additional items or item variants that represent the different configurations of these characteristics. You can also use this variation framework to create CSM listings; if you use the CSM listing wizard to create a new listing for the top-level or "parent" item, CSM will automatically create CSM listings for any "children" items or item variants that have been selected for inclusion in the CSM listing creation process.

## Setup

The configurable item features in CSM utilize an updated item attribute structure that stores different attribute data types in separate tables. If you wish to create CSM listings for configurable items, you must enable this structure for the relevant sales channel:

1. Choose the  icon, enter **CSM Sales Channels**, and then choose the related link.
2. Open the sales channel for which you want to create configurable items.
3. On the **Listing Management** FastTab, enable the **Enable New Attribute Design** field.

Configurable item listings also use the item variations module as the basis for listing creation. Accordingly, you must configure an item variation's SKUs:

1. Choose the  icon, enter **Item Variations**, and then choose the related link.
2. Open the item variation for which you want to create configurable items.
3. On the **SKUs** FastTab, choose the **Functions** ribbon, then choose the **Generate SKUs** action. CSM will build a value from the SKU item number and (if applicable) SKU variant code, then assign it in the **SKU** field on each line. If you intend to create CSM listings based on a configurable item's variations, a SKU must be assigned on the relevant variation SKU lines. Alternatively, you may manually enter a value that identifies the item variation SKU as a unique record in the **SKU** field.
4. Select all item variation SKU lines, choose the **Functions** ribbon, and then choose the **Update SKU Status** action to automatically update the SKU status for all selected lines to *Active*. SKUs are initially created with a status of *Pending*, but if you intend to create CSM listings based on a configurable item's variations, you must update the status on the relevant variation SKU lines to either *Active* or *No Replenish*. Alternatively, you may manually select one of these values in the **SKU Status** field.

## Configurable Item Listings

The process of creating CSM listings for configurable items is no different than the process of creating CSM listings for non-configurable or simple items:

1. Open the CSM sales channel record for which you want to create listings.
2. Choose the **Listing** ribbon, then choose the **Wizard** action.
3. On the first page of the wizard, enter or use the lookup in the **Item No.** field to assign the parent, or top-level Business Central item.

**Note:** *if you are creating CSM listings for a configurable item whose variations exist as item variants, do not populate the **Variant Code** field in the listing wizard. If you assign a specific variant code, the listing wizard will create a single CSM listing for that item variant. If you leave the **Variant Code** field blank, the listing wizard will create CSM listings for all variants.*

4. Choose the **Next** button.
5. In the **Sales Channel SKU** field, enter a value that will identify the CSM listing as a unique record for the CSM sales channel. By default, CSM will assign a SKU in this field based on the values that were entered on the first page of the wizard, but you can modify this, if desired.
6. Choose the **Next** button.
7. Choose the **Finish** button.

New CSM listings are created for the top-level parent item and the item/variant "children" that represent different configurable variations. The assigned product type for these CSM listings differs between parents and children:

- Parent listings have an assigned channel product type of *Configurable*.
- Child listings have an assigned channel product type of *Variation*.

As part of this record creation, the parent/child relationship is maintained between these listings. You can view this relationship by opening the CSM listing that represents the parent item and reviewing the **CSM Listing Children List** FastTab. This FastTab presents all of the CSM listing records that exist as children to the parent. This FastTab will be empty on the child listings.

## Configurable Item Attributes

In addition to creating the CSM listing records themselves, the listing wizard will automatically create CSM item attributes for the variable attributes that differentiate the children listings. The manner in which listing attributes are presented also differs between parent and children listings. On the **CSM Listing Attribute List** FastTab for the parent listing, a separate line will be presented for each configurable attribute that is used to define item variations. The attribute value on these lines, however, will remain blank. The **CSM Listing Attribute List** FastTab on child listings will include a line for each attribute, as well as the attribute values that are assigned to that particular child.

If we revisit our earlier example where we have a top-level t-shirt item and children that vary by color and size, the **CSM Listing Attribute List** FastTab on the parent listing would present separate lines indicating that color and size are that listing's configurable attributes. The **CSM Listing Attribute List** FastTab for the child listings would also include lines for color and size, but the value would be assigned as red, blue, small, medium, etc.

The CSM listing attributes that are created for configurable attributes are unique to each listing. There are no "shared" item attributes with BigCommerce. To use an example, if items 123, 456, and 789 all had a configurable attribute called *COLOR*, CSM would create three separate item attribute records identified as *123-COLOR*, *456-COLOR*, and *789-COLOR*.

BigCommerce supports a variant option type called "swatch" that allows you to specify hexadecimal color values. If you have set up a configurable item attribute in Business Central that represents color, you can send it to BigCommerce as a swatch-type attribute:

1. On the CSM listing record for the parent item, in the **CSM Listing Attribute List** FastTab, choose the configurable attribute that represents color.
2. In the **Display Type Big** field, choose the *Swatch* option.
3. Open the CSM sales channel record for BigCommerce.
4. Choose the **Related** ribbon, then choose the **Listing** menu and choose **Channel Item Attributes**.
5. On the **CSM Item Attributes** page, choose the configurable item attribute that represents the listing's color. Remember that a unique CSM item attribute record is created for each listing's configurable attributes.
6. Choose the **Edit** action in the ribbon. The **CSM Item Attribute Card** page opens.
7. In the **General** FastTab, choose the *Swatch* option in the **Display Type Big** field.
8. In the **Item Attribute Options** FastTab, enter the hexadecimal color value for each color option in the **External Reference** field. The format of this value should be a hashtag followed by a combination of six characters. For example, *#EBEBEB*.

**Note:** if you assigned hexadecimal color values to the related [item variation option values](#), this information will be automatically copied to the item attribute options when they were created.

## Sending Configurable Item Listings to BigCommerce

The same setup activities and requirements that can be performed for any listing are relevant for configurable items. For example, the requirement that a long description exist for a CSM listing before it can be sent to BigCommerce applies to configurable items. Setup activities and additional information only need to be entered for the configurable, parent item.

It is necessary to perform three separate data export activities to properly send a configurable item, its variable options and their values, and the configurable children records to BigCommerce. All three actions can be performed from the CSM listing for the configurable, parent item. Choose the **Actions** ribbon, then choose the **Channel Integration** menu and execute the following functions in order:

- **Send Listing Base Info to Channel:** this will send basic information about the configurable item to BigCommerce. A new product will be created in your BigCommerce platform based on the listing's information. BigCommerce will assign a unique identification number to this record; this value will be retrieved by CSM and presented in the **External ID** field on the listing's **Listing Status** FastTab.
- **Send Configurable Options To Channel:** this will send the listing's configurable options and their values to BigCommerce. This information is assigned to the BigCommerce product, and can be viewed in the **Variations** section of the BigCommerce product record. BigCommerce will assign a unique identification number to each option and option value; CSM retrieves this information and updates the relevant lines on the CSM listing's **CSM Listing Attribute List** FastTab as well as the related CSM item attributes accordingly.
- **Send Config Children To Channel:** this will send the listing's children to BigCommerce, where they can be viewed in the **Variations** section of the BigCommerce product record. These children are not created as separate BigCommerce products, but rather variants of the original, top-level item. BigCommerce will assign a unique identification inventory and SKU number to each configurable child; these values will be retrieved by CSM and presented in the **External Inventory ID** and **External SKU ID** fields on the child listing's **Inventory Information** FastTab.

## Product Listing Availability

The process of updating BigCommerce with a product listing's availability is no different for configurable items as other listings. You can calculate channel availability for CSM listings for child items, then send this information to BigCommerce. The stock quantities for the relevant product variants are updated accordingly.

## Updating Configurable Option Values

It may be that you wish to add configurable option values over time. For example, suppose we have a configurable option called "Color" set up in Business Central, with option values of Red, Blue, and Yellow. At some point, we want to add Green to this list of option values. In this scenario, it is necessary to update a number of records:

### Create and Explode New Item Variation SKUs

If you are using the item variations framework to manage your configurable items, you must add the new item variation option value, then use this information to create a new item or item variant in Business Central:

1. Open the item variation that you want to update.
2. Add the new item variation option value to the desired option. The manner in which you enter this information depends on whether the item variation option is linked to a Business Central item attribute. For more information, see [here](#).
3. On the **Item Variation Card** page, choose the **Actions** ribbon, then choose the **Create Item Variation SKUs** action. The system will enter new lines for the new configurable option value in the **SKUs** FastTab.
4. Choose the **Actions** ribbon, then choose the **Explode SKUs** action.
5. Choose the **OK** button.

Business Central records are created for the new variation SKUs.

6. On the **SKUs** FastTab, choose the **Functions** ribbon, then choose the **Generate SKUs** action. CSM will build a value from the SKU item number and (if applicable) SKU variant code, then assign it in the **SKU** field. If you intend to create CSM listings based on a configurable item's variations, a SKU must be assigned on the relevant variation SKU lines. Alternatively, you may manually enter a value that identifies the item variation SKU as a unique record in the **SKU** field.
7. With the new item variation SKU selected, choose the **Functions** ribbon, then choose the **Update SKU Status** action to automatically update the SKU's status to *Active*. SKUs are initially created with a status of *Pending*, but if you intend to create CSM listings based on a configurable item's variations, you must update the status on the relevant variation SKU lines to either *Active* or *No Replenish*. Alternatively, you may manually select one of these values in the **SKU Status** field.

### Update the CSM Item Attribute Values

Once you have added a new item variation option value, you must update the corresponding CSM item attribute accordingly:

1. Open the CSM sales channel record for which you want to update item attribute values.
2. Choose the **Related** ribbon, then select the **Listing** menu and choose the **Channel Item Attributes** action.
3. Select the CSM item attribute you want to update, then choose the **Edit** action in the ribbon.
4. Choose the **Actions** ribbon, then select the **Data Synch** menu and choose the **Synch Option Values** action.

Newly-added attribute values will be added to the **Item Attribute Options** FastTab.

### Create New CSM Listings and Send Information to BigCommerce

A CSM listing must be created for each new item variant that has been added to the list of the configurable item's children:

1. Open the CSM sales channel record for which you want to update item attribute values.
2. Choose the **Related** ribbon, then select the **Listing** menu and choose the **Channel Listings** action.
3. Open the top-level parent configurable item listing you want to update.
4. Choose the **Actions** ribbon, then select the **Data** menu and choose the **Synchronize Item Variations** action.

New CSM listings will be created for the newly-added attribute value. These listings will be added to the lines on the configurable item's **CSM Listing Children List** FastTab.

Now that you have updated the CSM item attributes and CSM listings, you can send this information to BigCommerce:

1. From the CSM listing for the configurable, parent item, choose the **Actions** ribbon, then choose the **Channel Integration** menu and execute the following functions in order:
  - **Send Configurable Options To Channel:** this will send the new configurable option value to BigCommerce. This information is assigned to the BigCommerce product, and can be viewed in the **Variations** section of the BigCommerce product record. BigCommerce will assign a unique identification number to each option value; CSM retrieves this information and updates the relevant lines on the CSM listing's **CSM Listing Attribute List** FastTab as well as the related CSM item attributes accordingly.
  - **Send Config Children To Channel:** this will send the new listings to BigCommerce, where they can be viewed in the **Variations** section of the BigCommerce product record. These children are not created as separate BigCommerce products, but rather variants of the original, top-level item. BigCommerce will assign a unique identification inventory and SKU number to each configurable child; these values will be retrieved by CSM and

presented in the **External Inventory ID** and **External SKU ID** fields on the child listing's **Inventory Information** FastTab.

## Retrieving Configurable Items from BigCommerce

Executing the [load products from channel action](#) for a sales channel retrieves all products from the connected eCommerce platform and creates corresponding CSM listings in Business Central. This includes any configurable items that you have set up in BigCommerce. CSM creates a number of different records in Business Central for each retrieved configurable item:

- CSM listings are created for the top-level parent configurable item as well as each child variation.
- CSM listing attributes are created for the configurable item's variable attributes. These attributes are assigned to the newly-created CSM listing records.

As with any CSM listing that is retrieved from BigCommerce, it is necessary for you to associate configurable item listings to Business Central items or variants by using the **Type** and **No.** fields on the **General** FastTab to select the relevant record.

It is also possible for you to retrieve configurable attributes and children from BigCommerce for an existing CSM listing. The listing must have the following values:

- **Channel Product Type:** this is set to *Configurable*.
- **External ID:** this is populated with a value that connects the listing to a BigCommerce product.

Choose the **Actions** ribbon, then choose the **Retrieve Information from Channel** menu and execute the following functions in order:

- **Get Configurable Attributes:** this retrieves the product's configurable attributes and their values. New CSM listing attributes are created for these records. In addition, these attributes are assigned to the configurable CSM listing.
- **Get Variants for Listing:** this retrieves the configurable variations that exist for the product in BigCommerce. These variations are entered as separate CSM listings in Business Central. These listings are structured as children of the top-level parent configurable listing. The relevant attributes and their values will also be assigned to each new CSM listing.

## Appendix A: Working with the BigCommerce API Reference Tool

Whenever a new record is created within BigCommerce, a unique identification number is assigned to that record. For the purposes of the end user, these numbers are not as informative as the record’s name or title, but they are necessary to identify each record as unique within the system.

As part of configuring your CSM for BigCommerce solution, it is necessary to establish links between corresponding Business Central and BigCommerce records. In order to complete this setup, it is necessary to supply the BigCommerce record’s unique ID; it is this value that is associated to a Business Central record.

As stated above, a BigCommerce record’s ID is generally not of value to the end user. As such, record IDs are not readily visible or accessible from within BigCommerce. In some instances, it is possible to obtain this information by opening the record in BigCommerce and deriving the ID from the URL. In other scenarios, however, this is not an option. CSM typically recommends the use of a tool such as [Postman](#) that can retrieve this information from an eCommerce platform. However, in the case of BigCommerce, an out-of-the-box API reference tool is also available. This tool can be accessed at <https://developer.bigcommerce.com/api-reference>. The various types of BigCommerce record you can obtain are presented on the left-hand side of this page. In some cases, a category may present a list of subcategories. For example, the *Catalog* option expands to allow you to select records such as products, product variants, etc.

Selecting a record type will present a list of available request options. When you choose a request type, the API reference tool presents information about the request, including the different parameters you can specify. You can enter parameter and authorization information in the area on the righthand side of the page. Mandatory parameters are indicated with an \*. The specific mandatory values will vary from request to request, but you will always need to provide the **store\_hash** and **X-Auth-Token** values:

### Get All Tax Classes

GET `https://api.bigcommerce.com/stores/{store_hash}/v2/tax_classes`

Returns a list of all *Tax Classes* in a store.

Default sorting is by tax-class id, from lowest to highest.

#### Request

Security: API Key

##### OAuth Scopes

UI NAME	PERMISSION	PARAMETER
Information & Settings	modify	store_v2_information
Information & Settings	read-only	store_v2_information_read_only

##### Headers

HEADER	PARAMETER	DESCRIPTION
--------	-----------	-------------

Auth

X-Auth-Token : 123

Parameters

store\_hash\* : string

limit : number

page : number

Accept\* : application/json

Content-Type\* : application/json

Send API Request

It is only necessary to enter these credentials one time; they will be stored within the API reference tool for all future requests.

After you have assigned the necessary parameters, you can choose the **Send API Request** button to instruct the API reference tool to present a list of values from your BigCommerce platform according to the established parameters.

## Appendix B: Item Variations

Depending on your business, you may include configurable items as part of your product portfolio. A configurable item is an item that you offer in different variants based on variable attributes or characteristics.

For example, assume we are a company that sells apparel. We sell a t-shirt item in three colors (red, blue, and yellow) and three sizes (small, medium, and large), resulting in nine possible configurations. While we need to account for these nine variants in some manner, from a listing perspective we want to list just the top-level t-shirt item, then allow buyers to select their preferred color and size from the product page.

There are different ways in which these configurable products can be set up in Business Central:

- **Items:** a separate item record is set up for each product configuration.
- **Variants:** a single item record is set up for the top-level item, which then has separate variant records.

Regardless of which method your company employees, the process of creating separate records for configurable product variations can be time-consuming: if we make our t-shirt item available in eight different colors and 10 different sizes, there would be 80 different variations to define.

To assist in the process of setting up configurable item structures that can subsequently be exported to your external eCommerce platform, CSM contains an item variations module. This functionality allows you to set up the criteria you want to use for defining an item's many configurations, then generate Business Central items or variants based on these criteria.

***Note:** while the item variations module is included in CSM to assist with the creation of configurable CSM listings, it is not strictly tied to CSM listing functionality. You can use this feature to create item variations for any of your Business Central items, regardless of whether they are involved in your eCommerce activities.*

## Setup

### Item Attribute Setup

Before you can create item variations, you must set up default item attributes that represent non-variable item variation characteristics in Business Central:

- **Brand:** an item attribute that represents an item's brand.
- **Common Item:** an item attribute with an item-specific value that can be used to establish a clear link between a top-level "parent" item and the separate "children" items that represent that item's different product configurations. For example, if an item with a common item attribute value of 1234 has a number of children items representing different product configurations, each of these child items' unique identification number would begin with 1234.

These item attributes represent static characteristics of an item's variations, meaning that an assigned value is shared across an item's product configurations. For example, if an item has a brand of Suite Engine, that Suite Engine brand remains the same for all of that item's variations.

These item attributes are [set up in the same manner as any item attribute in Business Central](#). It is recommended that they be set up as text type attributes.

Once you have set up these item attributes, you must indicate that they will be assigned to new item variations:

1. Choose the  icon, enter **Variations Setup**, and then choose the related link.
2. On the **Variations Setup** page, assign the item attributes you want to use for default brand and common item information for item variations.
3. Enable the **Confirm After Create Item Variation** field, if desired. Enabling this option will instruct the system to present a notification message to users whenever an item variation is created for an item.

The **Variation Option Limit** field presents the maximum number of variation options that can be assigned to an item variation. The item variations module supports a maximum of three variation options per item variation, and by default this field is set to three. To prevent inadvertent changes to this functionality, this field is uneditable. If you wish to adjust your variation option limit, please contact your Suite Engine partner for assistance.

## Item Variation Templates

You can streamline the process of item variation creation by defining item variation templates. When you create a new item variation for an item, you can choose to copy it from an existing template. You can then make any item-specific adjustments as needed.

To create a new item variation template:

1. Choose the  icon, enter **Item Variation Templates**, and then choose the related link.
2. On the **Item Variation Templates** page, choose the **New** action in the ribbon.

A new item variation template card opens.

3. Fill in the **Template Code** field to identify the item variation template as a unique record in the system.
4. The remaining values have corresponding fields on the **Item Variation Card** page. Please review the [documentation on item variations](#) to understand the purpose behind these fields and receive guidance on how to set them up.

**Note:** the one unique field on the item variation template that does not have a corresponding value on the **Item Variation Card** page is **Common Item Attribute Value Max Length**. An item variation's common item attribute is an item attribute with an item-specific value that can be used to establish a clear link between a top-level "parent" item and the separate "children" items that represent that item's different product configurations. For example, if an item with a common item attribute value of 1234 has a number of children items representing different product configurations, each of these child items' unique identification number would begin with 1234. Because an item variation template is not associated to a specific item record, it is not possible to enter an item-specific value for this common item attribute. It is still necessary to specify the maximum number of allowable characters, however, to ensure that the generated identification numbers for child items does not exceed maximum field lengths.

You can also copy an existing item variation template and use it as the basis for a new one:

1. Choose the  icon, enter **Item Variation Templates**, and then choose the related link.
2. Open the item variation template you want to copy.
3. Choose the **Actions** ribbon, then choose the **Copy Template** action.
4. In the **New Template Code** field, enter a unique code for the new item variation template you want to create.
5. Choose the **OK** button.

The system will create a new item variation template based on the one from which you executed the copy function. You can now make any adjustments to this new template as needed.

## Creating an Item Variation

The item variations functionality allows you to manage the records that represent configurable variations of an item in Business Central. This is useful in scenarios where multiple versions or variants of an item are available based on variable characteristics.

For example, assume we are a company that sells apparel. We sell a t-shirt item in three colors (red, blue, and yellow) and three sizes (small, medium, and large), resulting in nine possible configurations. From a setup perspective, we want to create a single t-shirt item as a “parent,” and nine “children” representing each color/size combination. The records we set up in Business Central depend on our business processes:

- **Items:** we may wish to define each variable configuration as a separate item record. Although these configurations exist as unique items, it is still beneficial to establish a relationship between these items and the top-level parent items.
- **Variants:** we may wish to define each variable configuration as a variant of the top-level parent item.

The item variations functionality allows you to establish an item’s configurable characteristics, review a proposed list of that item’s variable SKUs, and then generate corresponding items or variants in Business Central.

## Assigning Item Attributes

Each item variation supports two non-variable characteristics:

- **Brand:** an item attribute that represents an item’s brand.
- **Common Item:** an item attribute with an item-specific value that can be used to establish a clear link between a top-level “parent” item and the separate “children” items that represent that item’s different product configurations. For example, if an item with a common item attribute value of *1234* has a number of children items representing different product configurations, each of these child items’ unique identification number would begin with *1234*.

These item attributes represent static characteristics of an item’s variations, meaning that an assigned value is shared across an item’s product configurations. For example, if an item has a brand of Suite Engine, that Suite Engine brand remains the same for all of that item’s variations.

It is possible to [define global brand and common item attributes](#). These item attributes will be automatically assigned to newly-created item variations, but you can manually change them, if desired.

When you are creating an item variation for an item, it is necessary for you to assign the item attributes that will be used as the item variation’s brand and common item attributes:

1. Open the item for which you want to create an item variation.
2. Choose the **Item** ribbon, then choose the **Attributes** action.
3. On a new line, in the **Attribute** field, enter or use the AssistButton to select the item attribute you want to assign as the item’s brand attribute.
4. In the **Value** field, enter the value you want to assign as the item’s brand attribute value.
5. Repeat steps 3-4 for the item attribute you want to assign as the item’s common item attribute.

## Creating Item Variations

An item variation contains the setup and configuration options that instruct the system on how an item's variation SKUs will be built. An item variation is also where you define the item's configurable item variation options and item variation option values:

- **Item variation options:** the variable characteristics or attributes that comprise different product configurations.
- **Item variation option values:** the different values that a given characteristic can take.

For example, if we offered a product in multiple colors and were setting up an item variation to reflect this variable characteristic, we would create an item variation option called *Color*. This variation option would then have option values such as *Red*, *Blue*, and *Yellow*.

Each item in Business Central can have a single corresponding item variation:

1. Open the item for which you want to create an item variation.
2. Choose the **Actions** ribbon, then choose the **Create Variation** action in the **Functions** menu.
3. If you wish to create the item variation from an existing item variation template, enable the **Create From Template** field, then enter or use the AssistButton in the **Item Variation Template Code** field to enter the desired template.
4. Choose the **OK** button.

A new item variation is created for the item; depending on how you have set up the item variations module, the system may notify you then the item variation has been created. You can view this item variation by choosing the **Related** ribbon, then choosing the **Variation Info** action in the **Item** menu.

It is not possible to create more than one item variation for an item. Accordingly, if an item has a related item variation, the **Create Variation** action is removed from the ribbon. If you wish to re-run this action for an item, you must first delete the item variation. This will restore the **Create Variation** action to the ribbon.

## Configuring an Item Variation

Once an item variation has been created for an item, you must configure it to instruct the system how to generate variation SKUs. If the item variation was created from a template, by default that template's settings will be assigned, but you can modify them, if desired.

1. Open the item for which you want to create an item variation.
2. Choose the **Related** ribbon, then choose the **Variation Info** action in the **Item** menu.

The item variation card opens. The **Item Number** and **Item Description** fields will default to present information about the related item.

3. In the **Brand Item Attribute Name** and **Common Item Attribute Name** fields, enter or use the AssistButton to assign the item attributes that you want to use as the item variation's brand and common item attributes. The system will automatically assign the brand and common item attributes that have been defined as [global defaults](#), but you can modify them, if desired. The corresponding value fields will present the attribute value that has been assigned to the item.
4. Assign SKU explosion values that will instruct the system how to create new Business Central records for the item variation SKUs:

- **SKU Explode Method:** select the type of Business Central record that will be created from an item's variation SKUs. Item variation SKUs can be used as the basis for either item or variant records.
- **SKU Key Mask:** select the manner in which the identification number that identifies each variation SKU's corresponding Business Central record is generated. Options are:
  - *Segments:* identification numbers will be generated from a series of segment values that reflect each one of an item variation SKU's variable values.
  - *Numerical:* if the item variation's SKUs will be used to generate variants, it is possible to assign identification numbers from a defined number series. It is not possible to use a number series if the item variation's explosion method instructs the application to create items.
- **Variant Nos.:** if you select the *Numerical* option in the **SKU Key Mask** field, enter or use the AssistButton to assign the number series that will be used to assign unique identification numbers to variants that are created for item variation SKUs.

If the item variation was created from an item variation template, that template's code will be presented in the **Item Variation Template Code** field. The **Synchronize with Template** field can be ignored, as the ability to synchronize an item variation with an assigned template is not supported at this time.

## Item Variation Options

Item variation options represent the variable characteristics or attributes that comprise different product configurations. These characteristics are defined as option values.

For example, if we offered a product in multiple colors and were setting up an item variation to reflect this variable characteristic, we would create an item variation option line with a code of *Color*. This variation option would then have option values such as *Red*, *Blue*, and *Yellow*.

As part of setting up an item variation, you must configure options and option values. If the item variation was created from a template, by default that template's options and options values will be assigned, but you can modify them, if desired.

Item variations support up to three options. Each item variation option is entered as a separate line in the **Options** FastTab.

Fill in the fields as follows:

Field	Description
Option Code	Enter a code that identifies the item variation option as a unique record in the system.
Option Sequence	This field will be automatically populated by the system when the line is validated.
Link Type	<p>Select the Business Central record to which you want to associate to the item variation option, if desired. Options are:</p> <ul style="list-style-type: none"> <li>• <i>None:</i> the option is not associated to any Business Central records.</li> <li>• <i>Item Attribute:</i> the option is associated to an item attribute record.</li> </ul> <p>Although the two options listed above are available in the out-of-the-box product, this feature is fully extendable and contains the necessary functionality to integrate to other entities. If you were using another extension to manage product attributes or characteristics, for example, it could be added as an item variations link type.</p>
Link Key 1	If you select an option other than <i>None</i> in the <b>Link Type</b> field, enter or use the AssistButton to select the record you want to associate to the item variation option.
Description	Enter a description to more fully identify the item variation option.

Field	Description
Key Segment Max. Length	<p>Enter the maximum number of characters that can be assigned as part of the key segment which represents this item variation option. Key segments are used to create unique identification numbers for variation SKUs; the identification number is comprised of a series of “segments,” with each segment representing a separate option value. When you are defining these key segment values for each option value, it is not possible to enter a greater number of characters than the established maximum length.</p> <p>To ensure that generated identification numbers do not exceed standard Business Central character requirements, there are limitations to the values that can be assigned as an item variation option’s maximum key segment length. These limitations depend on the item variation’s assigned SKU explosion method:</p> <ul style="list-style-type: none"> <li>• <b>Items:</b> the sum of the characters for the value in the <b>Common Item Attribute Value</b> field and the values in the <b>Key Segment Max. Length</b> and <b>Key Segment Delimiter</b> fields across all item variation option lines cannot exceed 20.</li> <li>• <b>Variants:</b> the sum of the characters for the values in the <b>Key Segment Max. Length</b> and <b>Key Segment Delimiter</b> fields across all item variation option lines cannot exceed 10.</li> </ul>
Key Segment Min. Length	<p>Enter the minimum number of characters that can be assigned as part of the key segment which represents this item variation option. Key segments are used to create unique identification numbers for variation SKUs; the identification number is comprised of a series of “segments,” with each segment representing a separate option value. When you are defining these key segment values for each option value, it is not possible to enter a lesser number of characters than the established minimum length.</p>
Key Segment Position	<p>Enter the position in which the key segment that represents this item variation option should be placed in relation to other key segments. Key segments are used to create unique identification numbers for variation SKUs; the identification number is comprised of a series of “segments,” with each segment representing a separate option value.</p>
Key Segment Delimiter	<p>Enter a character that is used to separate the key segment which represents this item variation option from other key segments. Key segments are used to create unique identification numbers for variation SKUs; the identification number is comprised of a series of “segments,” with each segment representing a separate option value.</p> <p>The key segment delimiter precedes the key segment value. As a result, it is not necessary to assign a delimiter to the item variation option with the first key segment position if the assigned SKU explosion method is by variant.</p> <p><b>Note:</b> because the unique identification numbers for variation SKUs are used to generate Business Central records, it is not recommended that you assign characters that are used in standard Business Central filter expressions.</p>
Preferred UI Orientation	<p>Select the manner in which the item variation option values are displayed in matrix-style views.</p> <p><b>Note:</b> the column display is the only supported orientation at this time.</p>
Column Caption	<p>Enter a caption that will be used to identify the item variation option when it is displayed in a column orientation. This includes the columns on the <b>SKUs</b> FastTab; the captions for the option value fields on this FastTab will be replaced by these column captions.</p>
Row Caption	<p>The ability to display item variation options in a row orientation is not supported at this time; this field may be left blank.</p>
Common Caption	<p>Enter a caption that will be used to identify the item variation option in scenarios where a display orientation is not specified. Because a single orientation type is supported at this time, this field may be left blank.</p>
Option Type	<p>Select an option type to further classify the item variation option. An item variation option can be identified as a color, a size, or “other.”</p> <p>The assignment of an option type is purely informational, and has no functional impact.</p>

Once you have set up an item variation option, you must define its option values. You can view the option values that have been defined for a selected item variation option in the **Option Values** FactBox.

The manner in which you perform this setup depends on the selected link type:

- *None*: you must manually define option values on the **Item Variation Option Card** page by choosing the **Line** ribbon on the **Options** FastTab, then choosing the **Option Card** action.
- *Item Attribute*: you can automatically retrieve the Business Central item attribute’s values by choosing the **Line** ribbon on the **Options** FastTab, then choosing the **Synchronize with Link** action.

The **Item Variation Option Card** page is where you either define a variation option’s values or, if you have copied this information from Business Central item attributes, edit existing ones. You can open this card by choosing the **Line** ribbon on the **Options** FastTab, then choosing the **Option Card** action.

The values on the **General** and **Matrix Settings** FastTabs present the corresponding fields on the item variation option line. You can make any changes to these values, if desired.

You can define as many option values as you wish. Each value is entered as a separate line in the **Option Values** FastTab.

Fill in the fields as follows:

Field	Description
Value Code	Enter a code that identifies the option value as a unique record. If the option values were synchronized from a Business Central item attribute, the item attribute’s values will be automatically copied as the value codes, but they can be modified, if desired.
Value Description	Enter a description to more fully identify the option value. If you send option values to a connected eCommerce platform, the description will be used to identify these values in the online storefront.  If the option values were synchronized from a Business Central item attribute, the item attribute’s values will be automatically copied as the value descriptions, but they can be modified, if desired.
Active	Enter a check mark in this field to indicate that the option value is active and should be included when the system is instructed to create variation SKUs based on variable option values.
Option Value Sequence	Enter the position in which the option value should be placed in relation to other option values. If you send option values to a connected eCommerce platform, the option value sequence will determine the order in which these values are displayed in the online storefront.
Key Segment Value	Enter the value that will be used to represent the option value when it is included as part of a key segment. Key segments are used to create unique identification numbers for variation SKUs; the identification number is comprised of a series of “segments,” with each segment representing a separate option value. The number of characters in the key segment value must fall within the ranges defined by the item variation option’s key segment maximum and minimum lengths.  If the option values were synchronized from a Business Central item attribute, the item attribute’s values will be automatically copied as the key segment values. If the item attribute value has more characters than the variation option’s maximum key segment length, it will be truncated accordingly. For example, if an item attribute value of <i>Orange</i> was copied to an item variation with a maximum key segment value of four, the corresponding option value would have a key segment value of <i>ORAN</i> .
Common Value	Enter any alternative verbiage or terminology that is used to identify the option value, if desired.
Industry Value	Enter any alternative industry-specific verbiage or terminology that is used to identify the option value, if desired. If the option represents a color, you can enter the related hexadecimal value for that color; if you send the option value to BigCommerce, this hexadecimal value will be used to assign a color to the BigCommerce value.
Brand Value	Enter any alternative brand-specific verbiage or terminology that is used to identify the option value, if desired.
Swatch FactBox	If the option value represents a color, pattern, logo, or other image, you can upload an image file via the <b>Swatch FactBox</b> .

## Creating Item Variation SKUs

Once you have defined the configuration settings, options, and option values for an item variation, you can instruct the system to suggest variation SKUs based on these variable characteristics by choosing the **Actions** ribbon, then choosing the **Create Item Variation SKUs** action. The system will enter a separate line for each combination of configurable option values in the **SKUs** FastTab.

For example, assume we are a company that sells apparel. We sell a t-shirt item in multiple colors and sizes. On the t-shirt's item variation card, we define two options. For each option, we define three option values:

Option	Option Value 1	Option Value 2	Option Value 3
Color	Red	Blue	Yellow
Size	Small	Medium	Large

When we instruct the system to create new variation SKUs, a separate SKU line will be entered for each color/size configuration (Red-Small, Blue-Small, Yellow-Small, Red-Medium, etc.).

If you wish to add a value to an option, you can do so and then re-run the item variations SKU creation action. Additional lines will be created based on your changes.

The item variations SKU creation action will create new SKU lines, but it will not update existing ones. If you wish to modify existing variation SKU lines due to changes to option values, you must first delete the lines, make the necessary changes, and then re-run the item variations SKU creation action.

## Exploding Item Variation SKUs

An item variation's SKUs do not represent separate Business Central items or item variants. They are, however, used as the basis for new Business Central records. Once you have reviewed an item variation's SKUs and confirmed they are correct, you can create new records from them:

1. Choose the **Actions** ribbon, then choose the **Explode SKUs** action.
2. If you only wish to create records for a selected group of SKUs, set the necessary filters on the **Filter: Item Variation SKU** FastTab. Please note that the filters for option values do not use the related option's column caption, but rather generic **Option Value 1**, **Option Value 2**, and **Option Value 3** captions.
3. Choose the **OK** button.

New Business Central records are created according to the criteria that you specified in the **Explode Item Variation** page. The **SKU Item No.** and (if relevant) **SKU Variant Code** fields are automatically updated with information about these new records.

4. Enter other variation SKU values on the line, if desired:
  - **SKU:** enter a value that identifies the variation SKU as a unique record. You can either enter a value manually, or choose the **Functions** ribbon and then choose the **Generate SKUs** action to build a value from the SKU item number and (if applicable) SKU variant code, then assign it in the **SKU** field. This field can be used if there are other identification values for a given SKU beyond what is automatically generated via the item variations feature. For example, if a variation SKU has an external UPC value, it could be entered in this field. If you intend to create CSM listings based on a configurable item's variations, you must assign a SKU on the relevant variation SKU lines.

- **SKU Unit of Measure:** enter or use the AssistButton to assign a unit of measure to the variation SKU. The assignment of a SKU unit of measure is purely informational, and has no functional impact.
- **SKU Status:** select a status to indicate the SKU's place in your product workflow. SKUs are initially created with a status of *Pending*, but if you intend to create CSM listings based on a configurable item's variations, you must update the status on the relevant variation SKU lines to either *Active* or *No Replenish*. You can either manually select a value on each line, or select multiple lines, then choose the **Functions** ribbon and choose the **Update SKU Status** action to automatically update the status for all selected lines to *Active*.

The SKU explosion action will create a number of new Business Central records based on the item variation's SKUs. The type of record that is created is determined by the value in the item variation's **SKU Explode Method** field:

- *Items*: an item is created for each SKU. These items exist as separate item records from the item variation's parent item.
- *Variants*: an item variant is created for each SKU. These variants are assigned to the item variation's parent item.

The manner in which these records' identification numbers are assigned is determined by the value in the item variation's **SKU Key Mask** field:

- *Segments*: the item or variant's identification number is comprised of a series of "segments," with each segment representing a separate option value. When an option value is being created, a key segment value must be defined. When a new item or item variant involving the option value is created, the relevant key segment is entered as part of that record's identification number. The manner in which segments are used to create identification numbers depends on the item variation's SKU explosion method:
  - *Items*: for each variation SKU, the item's identification number is determined by the item variation's common item attribute value, followed by the key segments for each value. These key segments are segregated by key segment delimiters.

For example, assume we have an item variation with a common item attribute value of *SE200*. This item variation has a SKU with two values: a color value of *RED* and a size value of *S*. Both of these values have a preceding delimiter character of *-*. If we instruct the system to generate an item for the SKU, it will be assigned an identification number of *SE200-RED-S*.

- *Variants*: for each variation SKU, an item variant's identification number is determined by the key segments for each value. These key segments are segregated by key segment delimiters. Because the key segment delimiter precedes the key segment value, it is not necessary to assign a delimiter to the item variation option with the first key segment position.

For example, assume we have an item variation with a SKU that has two values: a color value of *RED* and a size value of *S*. The size value also has a preceding delimiter character of *-*. If we instruct the system to generate an item variant for the SKU, it will be assigned an identification number of *RED-S*.

- *Numerical*: when exploding variation SKUs into item variants, it is possible to assign variant codes from the number series that has been defined in the item variation's **Variant Nos.** field. The system will assign the next available number from the defined series to each new item variant. If you are exploding variation SKUs into items, it is not possible to use a number series.

A variation record's unique identification number will be presented in the **SKU Item No.** or **SKU Variant Code** field (depending on the relevant record type) on the item variation's SKU line.

Regardless of whether a variation's SKU is exploded into an item or variant, the record's description is determined by the parent item's description, followed by the descriptions for the variation's values. For example, assume we have an item variation for an item with a description of *T-Shirt*. This item variation has a SKU with two values: a color value with a description of *Red* and a size value with a description of *Small*. If we instruct the system to generate an item or variant for the SKU, it will be assigned a description of *T-Shirt, Red, Small*.

In addition, items that are created from variation SKUs inherit all field values (excluding calculated values) from the parent item, including unit of measure, price and cost information, and posting group setup. Any item attribute values that have been defined for the parent item are also copied to the children items. There are no inheritance considerations for item variants, which are not comprised of much more than a code and a description.

Following the explosion of a variation SKU into an item or item variant, the system will update fields on the variation SKU's line with information about the related Business Central record:

- **SKU Item No:** if the variation SKU is used as the basis for a Business Central item, that item's number is presented in this field. If the variation SKU is used as the basis for a Business Central item variant, the item number for the variant's parent item is presented in this field.
- **SKU Variant Code:** if the variation SKU is used as the basis for a Business Central item variant, that variant's code is presented in this field. This field remains blank if the variation SKU is used as the basis for a Business Central item.

The **Item Variation Details** FactBox presents the number of item variation SKUs that have been created for the item variation, as well as the number of item or variant records that have been created from these SKUs. These values are presented as cues, meaning that you can choose one of them to open a separate list of the records that comprise the total. In this way, you can compare the number of Business Central records that have been created against the number of SKUs that exist for the item variation.