



# CSM FOR BIGCOMMERCE

An App by Suite Engine

Microsoft Dynamics 365 Business Central

## Listing Management Setup

Release: 3.4

# LISTING MANAGEMENT SETUP

Channel Sales Manager (CSM) for BigCommerce | Release: 3.4

(D365 Business Central Version 23.2 (Platform 23.0.15562.0 + Application 23.2.14098.14274))

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	Select the method by which you want CSM to manage <a href="#">attribute sets</a> for the channel: <ul style="list-style-type: none"> <li>One Per Category: a single attribute will be assigned per CSM channel category.</li> <li>Single: the channel's defined listing default attribute set will be assigned to all channel listings.</li> <li>Multiple Categories: a many to one relationship will exist between CSM channel categories and CSM attribute sets.</li> </ul>	
Listing Default Attribute Set	If the channel's defined attribute set behavior is Single or Multiple Categories, enter or use the AssistButton to assign a default attribute set for new channel listings. The manner in which the listing default is assigned is dependent on the attribute set behavior: <ul style="list-style-type: none"> <li>Single: the listing default will be assigned as the attribute set to all new channel listings.</li> <li>Multiple categories: if a category without an associated attribute set is assigned to a channel listing, the listing default will be assigned as the attribute set.</li> </ul>	
Update Product Categories	Enabling this field will instruct CSM to send a CSM listing's assigned categories to BigCommerce as part of the channel integration actions that can be executed from the CSM listing record or related automation. If you wish to manage the categories that are assigned to BigCommerce products from within Business Central, it is recommended that you enable this setting.	Yes/True
Listing Default Short Description / Listing Default Long Description	CSM can send short and long descriptions about a product to BigCommerce based on information that is entered in Business Central. The short description is defined directly on the CSM listing, while the long description is entered as a product information record for a CSM listing. You can select different source types for listing short and long descriptions: <ul style="list-style-type: none"> <li>Manual: CSM will not use any item information in Business Central as the basis for the description. The user can manually enter this information on a CSM listing.</li> </ul>	Extended Text / Item Marketing Text

Field	Description	Example Value
	<ul style="list-style-type: none"> <li>Description 2: CSM will use an item's Description 2 value as the basis of the description.</li> <li>Extended Text: CSM will use an item's extended text as the basis of the description. If you wish to use extended text, you must assign a description of either <i>Short Description</i> or <i>Long Description</i> to your extended text records.</li> <li>LS Item HTML: If the LS Central extension from LS Retail is installed, CSM will use an item's LS Central item HTML value as the basis of the description.</li> <li>Item Marketing Text: CSM will use an item's marketing text as the basis of the description. This option is not available for short descriptions; it can only be selected as the default for long descriptions.</li> </ul>	
Default SKU Method	If you want to <a href="#">automatically create new CSM listings from the Item card</a> , you must select the method by which sales channel SKU values will be assigned to these 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 an item's number; a combination of an item's number, variant, and unit of measure; item identifier; or barcode values.	
Default Images	CSM can send links/URLs to BigCommerce. BigCommerce does not receive images.	Item Picture
API Image File Path Base Image External ID Small Image External ID Thumbnail Image External ID	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.	
Default Product Status	Select the product status you want to assign by default to all CSM listings that are created for the sales channel. When a CSM listing is sent to an external BigCommerce channel, this setting indicates the status that will be assigned to the product in BigCommerce.	Active

### 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)
Channel Inv. Location	Assign the ID of the BigCommerce location to which you want to send calculated inventory values. By default, inventory information can be sent to a single BigCommerce location.	
Default Availability Basis	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. <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 different 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.

### Sending Price Groups to BigCommerce

It is also possible to instruct CSM to send/update price group records from Business Central to BigCommerce:

1. Open the CSM sales channel record for which you want to send price groups.
2. Choose the **Related** ribbon, then select the **Setup** menu and choose the **Price Groups** action.
3. In the **CSM Price Groups** window, choose the CSM price group line that you want to send to BigCommerce. This record must have an assigned Business Central customer price group. It also must have an assigned tax class ID (refer to CSM tax group records or your BigCommerce tax classes to obtain valid IDs).
4. If necessary, enter the value that BigCommerce will use to identify the price group in the **External Description** field.
5. Enter a check mark in the **Default** field if you want the price group to be assigned as the default customer group to new BigCommerce customers. You cannot define more than one default group.
6. Enter a check mark in the **Guest** field if you want the price group to be assigned as the default customer group to new BigCommerce guest customers. You cannot define more than one guest group.

**Note:** you can designate the same price group as both the default and guest group, if desired.

7. Choose the **Actions** ribbon, then choose the **Send to External** action.

CSM sends the selected price group's information to the sales channel's connected BigCommerce store. If the price group did not previously exist as a record in BigCommerce, it will be created and that BigCommerce customer group's ID will be retrieved and assigned in the **External ID** field on the CSM price group line. If the record already exists within BigCommerce and an external ID is present, the BigCommerce record will be updated with new data from the CSM price group record (a new external description, for example).

### CSM Item Inventory Locations


If you wish to send item availability information from Business Central to BigCommerce, you must map the locations in each platform to each other. CSM allows you to map multiple Business Central locations to a single BigCommerce



location. This is useful in scenarios where you want to aggregate inventory from multiple Business Central locations when sending item availability to BigCommerce.

You can obtain the ID of your locations on your BigCommerce site by opening the locations list, choosing a location, and reviewing the identification number in the URL.

Once you have this information, you can set up this information in Business Central:

1. Choose the  icon, enter **CSM Sales Channels**, and then choose the related link.
2. Choose the **Related** ribbon, then select the **Setup** menu and choose the **Inventory Locations** action.
3. Choose the **New** action in the ribbon to open a blank inventory location card.
4. In the **Channel Inv Location ID** field, enter the external ID you obtained from BigCommerce.
5. Select the first available line on the **CSM Locations** FastTab enter or use the AssistButton in the **Location Code** field, to map a Business Central location to the CSM inventory location.
6. If you want CSM to use inventory from the location as part of availability calculations, place a check mark in the **Incl in Inventory Calculation** field.
7. If the location represents a virtual location to which you want to receive returned or credited items that you do not wish to re-stock, place a check mark in the **Is Returnless** field.

The other fields on the line exist to support upcoming functionality that will allow greater flexibility in location mapping and can be ignored.

Repeat steps 5-7 if you want to map additional Business Central locations to the BigCommerce location.

## 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 functionality that allows for the definition of various product traits or characteristics. The scope of these characteristics can range from basic identification information (such as model number or serial number), physical or visual elements of an item (such as weight, color, and size), to other characteristics (year of manufacture/publication, country of origin, other product-specific categorization considerations, and so forth).

The terminology for these records varies from platform to platform, but within CSM these traits are referred to as “CSM attributes.” You can create CSM attributes for a sales channel from a variety of data sources in Business Central. When a CSM listing is created from an item, CSM will automatically add item values for any CSM attributes that are associated to that item’s configuration.

### Shared Item Attributes

Depending on the eCommerce platform, the overall item attribute structure typically follows either a shared or non-shared model. In a shared environment, a single item attribute is defined as its own record, which can then be assigned to multiple products. In a non-shared scenario, item attributes are defined for each product, independent of any other product’s setup or configuration.

For example, consider a scenario where we have three items: Item A, Item B, and Item C. We want to define an attribute called “Color” for all three of them.

- In a shared environment, we would set up an attribute record called “Color,” then assign this attribute to Items A, B, and C. Any changes made to the Color attribute would take effect for all three items.
- In a non-shared environment, we would define a “Color” attribute for Item A, another “Color” attribute for Item B, and a third “Color” attribute for Item C. If we wanted to make changes to the Color attribute, we would need to do this for all three items.

Please note that it is possible to define shared attributes for a CSM sales channel, even if that sales channel does not follow a shared model. For example, we might have a single Business Central item attribute called “Color” from which we

build a single CSM channel attribute. This attribute will be added to multiple CSM listings, and when these listings are sent from Business Central to the non-shared environment, unique, item-specific attributes will be created.

BigCommerce does not follow a shared attribute model. Accordingly, the **Use Shared Item Attributes** field on the sales channel's **Listing Management** FastTab should be set to *False*. The CSM sales channel wizard should automatically set this value to *False* as part of the channel creation process, but please double-check to ensure that this is the case before you start the process of setting up CSM item attributes.

## CSM Item Attributes

CSM item attributes can be associated to the following sources in Business Central:

- **None:** it is possible to define CSM item attributes that are not linked to corresponding Business Central records. This is generally not recommended, as it will require you to maintain this information directly on your CSM listings.
- **Item Attributes:** a CSM item attribute can be linked to a Business Central item attribute.
- **Item Variations:** if you are using Suite Engine's item variations functionality to build [configurable items](#), item variation attributes are set up to represent the variable values in which an item can be made available.
- **Item Fields:** a CSM item attribute can be linked to any field that exists in the **Item** table.
- **Item Unit of Measure Fields:** a CSM item attribute can be linked to any field that exists in the **Item Unit of Measure** table.

In addition, CSM includes the integration events required to extend this list of options to include other tables or sources. This is useful if you are maintaining your attributes in a custom table.

## Creating and Managing CSM Item Attributes

To view, create, and edit a sales channel's CSM item attributes:

1. Open the CSM sales channel record for which you want to work with attributes.
2. Choose the **Related** ribbon, then select the **Listing** menu and choose the **Channel Item Attributes** action.
3. If you want to view or edit an existing CSM item attribute, you can open its card by selecting it from the list and then choosing the **Edit** action in the ribbon.

You can manually create any CSM item attribute, but some attribute types can also be automatically created through various processes:

- CSM attributes based on Business Central item attributes can be automatically created along with CSM channel categories. If you use the [CSM category creation wizard](#) for a sales channel to automatically create CSM categories from existing Business Central item categories, you can enable the **Create / Sync Sales Channel Attributes** field to automatically create CSM item attributes for any item attributes that are assigned to the item category.
- CSM attributes based on item variation options can be automatically created when the CSM listing wizard is used to create CSM listings for configurable items.
- CSM attributes based on item and item unit of measure fields must always be manually created.

The link between a CSM item attribute and a Business Central record is defined on the **Link** FastTab of the **CSM Attribute Card** page. The manner in which these links are established depends on the attribute's type:

- Manual: attributes are not linked to Business Central records.
- Item Attribute: the Business Central attribute is assigned in the **Link Value 1** field.
- Item Variation: the item variation record is assigned in the **Link Value 1** field, and the item variation option code is assigned in the **Link Value 2** field.
- Item Field: the item field number is assigned in the **Link Value 1** field.
- Item Unit of Measure Field: the item unit of measure field number is assigned in the **Link Value 1** field.

When a CSM item attribute is linked to a Business Central record, CSM will automatically assign it an attribute type. Each CSM attribute type corresponds to one or more data types for standard Business Central fields:

Business Central Field Type	CSM Item Attribute Type
Date	Date
Decimal	Decimal
Text, Code, TableFilter, RecordID, OemText, Time, DateFormula, OemCode, BigInteger, Duration, GUID, DateTime	Text
Integer	Integer
Option	Option
Media, MediaSet, Binary, BLOB	Not Applicable

For most attribute types, no additional setup is required, but for option type attributes, it is also necessary to include that option's values on the **Item Attribute Options** FastTab. These options should be automatically assigned from the corresponding Business Central record when the CSM item attribute is initially linked to a Business Central record, but you can manually perform this activity from the **CSM Item Attribute Card** page by choosing the **Actions** ribbon, then selecting the **Data Sync** menu and choosing the **Sync Option Values** action. You can also use this action to update an attribute if at any point in the future new options are added to the corresponding Business Central record.

### Sending Attributes to BigCommerce

Because BigCommerce does not follow a shared attribute model, it is not necessary to send CSM item attributes to BigCommerce prior to synchronizing your CSM listings. CSM attributes will be sent to BigCommerce along with other information on a listing by listing basis.

### Retrieving Attributes from BigCommerce

If you use the [Load Products from Channel](#) action to create CSM listings from retrieved BigCommerce data, CSM will retrieve product variant options for each listing and then create CSM item attribute records for them. Again, CSM does not support the concept of shared attributes for BigCommerce, so unique CSM item attributes will be created for each listing's values.

### CSM Item Attribute Sets

In order to automatically assign CSM attributes to a CSM listing, you must set up and define CSM attribute sets for the sales channel. A CSM attribute set represents a collection of CSM attributes that can be associated to CSM categories, which are in turn associated to Business Central item categories. When a CSM listing is created for an item, these relationships are used to assign an attribute set to the listing. CSM then assigns that attribute set's CSM item attributes to the listing and attempts to retrieve values for these attributes from their corresponding sources in Business Central.

The concept of an attribute set does not exist in BigCommerce, so there is no requirement to link or associate CSM item attribute sets to a corresponding record type on the BigCommerce platform. Because CSM attribute sets are necessary for the assignment of attributes to CSM listings, however, you still must define them if you want to send attribute information from Business Central to BigCommerce.

You can determine the way in which attribute sets are assigned to a CSM sales channel's listings by choosing an option in the **Attribute Set Behavior** field on the CSM sales channel's **Listing Management** FastTab:

- **One Per Category:** each CSM category will have one and only one corresponding attribute set. This is useful in scenarios where you want the way in which you group your attributes to perfectly mirror the way in which standard Business Central item attributes are assigned to item categories.
- **Single:** a single attribute set will be assigned to all CSM listings that are created for the sales channel. This attribute set is assigned in the **Listing Default Attribute Set** field. This configuration is relevant if you have a single grouping of attributes you want to apply to all of your channel items.
- **Multiple Category:** it is possible to assign a single attribute set to multiple CSM categories. This would be applicable in situations where a single attribute grouping does not apply to all items, but at the same time the grouping requirements are not unique on a category by category basis.

To following tables present examples of one attribute set per category versus multiple categories per attributes set:

**One Per Category**

Category	Attribute Set
Kitchen and Dining	Kitchen and Dining
Barware	Barware
Dinnerware	Dinnerware
Kitchenware	Kitchenware
Outdoor and Garden	Outdoor and Garden
Patio	Patio

**Multiple Categories**

Category	Attribute Set
Kitchen and Dining	Kitchen and Dining
Barware	Kitchen and Dining
Dinnerware	Kitchen and Dining
Kitchenware	Kitchen and Dining
Outdoor and Garden	Outdoor and Garden
Patio	Outdoor and Garden

Both models have their advantages and disadvantages. The one-to-one relationship allows the greatest level of flexibility in that we can create a unique set of attributes for every one of our categories. It is also easier to create new attribute sets from new categories, since we can instruct CSM to automatically build a new attribute set for every new category we create. This comes at the cost of additional maintenance considerations; if we want to introduce a new attribute to all of our items, we have to add it to each separate category.

Conversely, the many-to-one relationship doesn't allow us to be as detailed with our attribute grouping on a category by category basis. It also takes longer to initially set up, in that we need to manually associate an attribute set to each category. But from a maintenance perspective, this model can be more convenient, in that we can update a single attribute set and then deploy that change across multiple categories.

### Creating and Managing CSM Attribute Sets

To view, create, and edit a sales channel's CSM item attribute sets:

1. Open the CSM sales channel record for which you want to work with attribute sets.
2. Choose the **Related** ribbon, then select the **Listing** menu and choose the **Channel Item Attribute Sets** action.
3. If you want to view or edit an existing CSM item attribute set, you can open its card by selecting it from the list and then choosing the **Edit** action in the ribbon.

You can manually create any CSM item attribute set, but they can also be automatically created through various processes:

- If you use the [CSM category creation wizard](#) for a sales channel to automatically create CSM categories from existing Business Central item categories, you can instruct CSM to automatically create a CSM item attribute set for each category. By default this attribute set will be automatically assigned to the newly-created CSM category.
- On the **CSM Channel Categories** page, you can select a CSM category, choose the **Actions** ribbon, then select the **Data Sync** menu and choose the **Build Attribute Set** action.

The link between a CSM item attribute and a Business Central item category is defined in the **Link Value 1** field on the **Link FastTab** of the **CSM Attribute Set Card** page.

After a CSM attribute set is created, it is necessary to assign one or more CSM attributes to it in the **CSM Item Attribute Set Attributes** FastTab. As part of the automatic attribute set creation process that occurs when using the CSM category creation wizard, it is possible to instruct CSM to automatically assign any CSM attributes that were built from Business Central item attributes to the attribute set. For other attribute types (those created for item or item unit of measure fields, for example), it will be necessary for you to manually assign these attributes to the attribute set.

If you add new Business Central item attributes to an item category at any point in the future and have built corresponding CSM attributes, you can update a CSM attribute set's list of assigned attributes from the **CSM Item Attribute Set Card** page by choosing the **Actions** ribbon, then selecting the **Data Sync** menu and choosing the **Sync Attributes For Set** action. CSM will add any new CSM attributes to the attribute set based on item category changes.

### 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 three 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.
- **From the Item Card:** you can create listings for one or more sales channels directly from the Item card.

### 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 an item's number; 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.

### Creating Listings from the Item Card

It is possible to create CSM listings directly from the Item card in Business Central. You must have defined a default SKU method on every sales channel for which you want to create listings in this manner.

To create listings from the Item card:

1. Open the item record for which you want to create listings.
2. On the **Auto Create CSM Listings** FastTab, choose an available line.
3. In the **Sales Channel Code** field, enter or use the lookup to assign the sales channel that will have a listing.

The sales channel's default SKU method is automatically assigned to the line. If the item has an existing value that corresponds to this SKU method, it will be automatically entered in the **Channel Item SKU** field.

4. If the line does not have a value in the **Channel Item SKU** field, you must enter one.
5. If you wish to create a listing for a specific item variant or unit of measure, adjust the values in the corresponding fields.
6. Repeat steps 3-5 on subsequent lines if you want to create listings for the item on other sales channels.
7. When you are ready to create the listing for a given sales channel, change the value in the **Auto Creation Status** field to *Ready*.
8. Choose the **Auto Create CSM Listings** menu option in the FastTab ribbon, then choose the **Create CSM Listings** action.
9. Choose the **Yes** button on the message asking you if you want to proceed.

CSM will attempt to create a new listing record for the selected line(s). If this process is successful, the line(s) will be removed from the **Auto Create CSM Listings** FastTab. If the process fails, a message explaining the failure will be presented in the **Error Text** field. Common reasons for failure include the auto creation status not set to *Ready* or the item already having a listing for the relevant sales channel.

You can also configure CSM to automatically create listings for any auto creation lines as part of a scheduled automation routine. To do so, you must create and schedule the AUTOCREATELISTINGS automation process to occur as part of your CSM listing automation. When this automation routine is executed, CSM will attempt to create new listings for any auto creation lines with a *Ready* status.

For more information on how to automate CSM activities using job queues, please refer to the [CSM for BigCommerce Order Management documentation](#).

### 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
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	<p>The CSM Channel Category linked to this Listing.</p> <p>If you need to change the categories that this item is part of, please go to BigCommerce admin and change it there.</p>	
Channel Attribute Set	<p>Enter or use the AssistButton to assign an attribute set to the CSM listing record.</p> <p>BigCommerce does not utilize attribute sets, but it may still be beneficial to assign attribute sets to listings for grouping purposes.</p>	
Product Status	<p>Select the product status that you want to assign to the CSM listing. This value will initially be assigned from the sales channel's default product status, but it can be modified on a listing-by-listing basis, if desired.</p> <p>When the CSM listing is sent to an external BigCommerce channel, this setting will be used to determine the purchasability status of the product in BigCommerce. In this way, you can control the manner in which a product is made available for sale on your BigCommerce channel when it is sent from Business Central. Options are:</p> <ul style="list-style-type: none"> <li><i>Active</i>: the product is available for purchase on your storefront.</li> <li><i>Preorder</i>: the product is not currently available on your storefront, but you want to allow customers to place pre-orders.</li> <li><i>Disabled</i>: the product is not available for purchase on your storefront.</li> </ul>	Active

	If you update a CSM listing's product status in Business Central and re-send the listing's data to BigCommerce, the status of the product in BigCommerce will be updated accordingly. In this way, you can move a product from preorder to active, or from active to disabled.	
Visibility	Select the visibility option that you want to send to BigCommerce along with the rest of the listing's information. This setting determines whether the product is visible to visitors on the BigCommerce site.	

The next FastTab 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.

## CSM Listing Descriptions

It is possible to maintain the descriptive text that is displayed with a product on an eCommerce platform, then send this information to the external channel along with other listing information, from within Business Central. There are two descriptions that can be assigned to each listing:

- Short descriptions represent a brief summary or tagline for the product. Short descriptions are defined on the **Listing** FastTab of the **CSM Listing** card.
- Long descriptions represent the full marketing text that accompanies a product on an eCommerce site. Long descriptions are set up as unique product information records for a CSM listing.

It is possible to define default sources for both short and long descriptions for a given sales channel. When a new CSM listing for an item is created for the sales channel, its short and long descriptions are retrieved according to the channel's defaults.

While short descriptions are always entered directly on the **CSM Listing** card, the manner in which a long description is created depends on its source type. For example, when a long description is based on extended text, CSM will copy an item's extended text directly to the product information record as part of the CSM listing creation process. Conversely, when a long description is based on item marketing text, CSM does not copy any text to the product information record but rather establishes a link to the item's marketing text information. In this way, any changes to the item's marketing text do not need to be regenerated for the CSM listing.

### Adding a Long HTML Description to the Listing

You **must** assign a long description to CSM listings before they can be sent to BigCommerce; attempting to send a CSM listing without a long description to BigCommerce will result in a failure. 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.

## Adding Multiple CSM Categories to a CSM Listing

When a CSM listing is created, CSM uses the category mapping that has been defined for the BigCommerce channel to assign a primary channel category. In some scenarios, however, it may be desirable to associate multiple categories to a single listing. For example, if we created a listing for a pair of women's pants, we might have separate categories for women's clothing and pants, both of which would be applicable to the listing.

You can assign additional categories to a CSM listing:

1. In the navigation ribbon on the **CSM Listing** page, select the **Add Additional Category to Product Information** action.
2. A CSM Product Information card will open. From there, enter the following fields:
  - a. **Information Type** is *Category*
  - b. Enter a **Caption** field for the product
  - c. **Source Type** is *CSM Channel Category*
  - d. **Source Type 1** is the sales channel code
  - e. **Source Type 2** is the channel category name (must already exist as a CSM Category in Business Central or an error will occur)

## CSM Listing Attributes

When a CSM attribute set is assigned to a CSM listing, a separate line is added to the CSM listing's **CSM Listing Attribute List** FastTab for each CSM attribute that [has been assigned to the related attribute set](#). CSM will then attempt to assign listing-specific values to each attribute line based on the Business Central value to which the CSM item attribute is linked. For example, if we had a CSM item attribute that was linked to the **Vendor Item No.** field on the **Item** table and that CSM attribute was assigned to a listing, CSM would assign the vendor item number from the listing's linked Business Central item to the attribute line.

**Note:** *when working with configurable items, the manner in which attribute information is presented will differ depending on whether the listing is a parent or child item. Please see the [documentation on configurable item attributes](#) for more information.*

CSM will automatically assign attributes to a CSM listing at the time of listing creation, but you can manually update a CSM listing's assigned attributes by choosing the **Actions** ribbon, then selecting the **Data** menu and choosing the **Synchronize Item Attributes** action. CSM will review the CSM listing's assigned attribute set and update the listing's attribute lines based on any changes that have been made to the attribute set. For example, perhaps there is a new attribute by which you want to group your items. If you set up the proper CSM item attribute and then assign it to a listing's attribute set, executing the synchronization action will automatically add the new attribute to the listing.

You can also execute this synchronization action from the **CSM Listings** list page, allowing you to update multiple listings at once. When this process is completed, CSM will present a message to the user specifying the number of listings that

were successfully synchronized and the number of listings for which this process failed. You can review the [CSM Listing Synchronization History](#) table for more details into which listings were unsuccessfully updated.

Assigned attributes that represent static, non-configurable characteristics must have assigned values in the **External Attribute Value** and **External Name** fields if they are to be sent to BigCommerce; these fields should be reviewed and populated if they are blank.

When a CSM listing's information is sent to BigCommerce as part of either a product creation or update process, its attributes can be included in this communication. These attributes and their values are assigned to the product on the BigCommerce platform as either custom fields or product variants. The attributes are unique to the BigCommerce product, and as part of the synchronization process CSM will retrieve the unique product's attribute identification information and add it to the **CSM Listing Attribute List** FastTab.

## 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](#).

## CSM Listing Synchronization History

CSM maintains a history of the following data synchronization activities that are performed against CSM listings:

- CSM attributes synchronization

You can view the synchronization history for a CSM listing from the **CSM Listing** page by choosing the **Related** ribbon, then choosing the **Listing Synchronization History** action. You can also open the **CSM Listing Synchronization History** page via Business Central search functionality to obtain a list of all synchronization activities across all CSM listings.

The **CSM Listing Synchronization History** page presents a line for each data synchronization activity that has been performed against the listing, including the data synchronization type, timestamp, and information as to whether the activity was successful.

***Note:** over time, the number of listing synchronization entries will continue to grow. Suite Engine recommends using the [standard Business Central data retention policy definition features](#) to periodically delete old information from this table.*

## 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.

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.

If you are using CSM to synchronize product attributes between Business Central and BigCommerce, you can send a CSM listing’s defined attributes to the external platform by choosing the **Actions** ribbon, then opening the **Channel Integration** group and choosing the **Send Attribute Values to Channel** action. Static attributes will be assigned as custom fields for the corresponding product record in BigCommerce, while configurable attributes will be set up as product variant options.

If you have assigned [multiple categories to a listing](#), they will be sent to BigCommerce as part of the **Send All Listing Data to Channel** action. If you add these categories after the listing is initially sent to BigCommerce, however, you can update the product on BigCommerce with this additional information by choosing the **Actions** ribbon, then opening the **Channel Integration** group and choosing the **Send Additional Categories to Channel** action.

The **Actions** ribbon also has a dedicated **Send Price Update to Channel** action that will only send pricing information from Business Central to BigCommerce. This is useful in scenarios where an item’s pricing changes, but all other information remains the same. When sending price information for an item, CSM will first review the price group that has been assigned in the **Price Group Code** field for the BigCommerce sales channel. If a price exists for the item within that price group, this amount will be sent to BigCommerce. If CSM is unable to find the item within the assigned price group, it will use the unit price that has been defined for the item record.

In addition to the manual process of sending updated pricing to BigCommerce described above, these actions can be scheduled as part of BigCommerce’s automation routines. There are two automation routines included to support different update scenarios:

- **PRODBASEPRICEALL:** when this automation is executed, prices for all CSM listing items will be sent to BigCommerce.
- **PRODBASEPRICEUPDATE:** when this automation is executed, only prices for CSM listings items whose **External Requires Update** field is enabled will be sent to BigCommerce.

## 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. In addition, any product listing availability default settings that are defined for the sales channel will be assigned to these new CSM listings.

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 value should be automatically retrieved by CSM when the listing is initially associated to the related BigCommerce product.

If default product availability calculation settings are defined for a CSM sales channel, they will be assigned to new CSM listings that are created for the channel. It is possible to modify these values on a listing-by-listing basis:

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. CSM will include inventory from any Business Central locations that have been [mapped to the sales channel's assigned channel inventory location](#), which is defined in the **Channel Inv. Location ID** field on the **CSM Sales Channel** page. You can map more than one Business Central location to this channel location, allowing you to calculate and send an inventory availability quantity that is an aggregate of item availability across multiple locations.

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.
5. If any item variations are maintained in a unit of measure other than the parent configurable item's assigned unit, this information must be specified in the **SKU Unit of Measure Code** 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 Attribute Values 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. Note: this action will also send any static, non-configurable attributes and their values to BigCommerce.
- **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. In addition, the **External Requires Update** field for all child listings will be turned off.

## 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 Attribute Values 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
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**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</b> FactBox.

## 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. If you intend to create CSM listings based on a configurable item's variations, CSM will assign this value as the unit of measure to the related child listing. If this value is left blank, CSM will assign the parent item's assigned unit of measure to the related child listing.
- **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.

## Using the Item Variation Worksheet


The standard process flow of the item variations functionality is as follows:

1. You begin with a top-level parent item;
2. The item variations framework is used to define variation SKUs based on configurable attribute values;
3. New items or item variants are built from these variation SKUs.

It may be, however, that both the parent and children records already exist in Business Central. In such a scenario, it is necessary to establish an item variations framework that links these existing records together in a parent/child relationship.

The item variations module includes a worksheet that can be used to link existing records together as part of an item variation. This worksheet can also be used as an alternative way to create variation SKUs for new configurable variations.

To use the item variation worksheet:

1. Choose the  icon, enter **Item Variation Worksheet**, and then choose the related link.
2. In the **Batch Name** field, enter or use the AssistButton to choose the worksheet batch in which you want to work.

The item variation worksheet uses standard Business Central journal batch functionality. You can create multiple batches if you want to segregate your worksheet activities.

3. In the **Worksheet Visible Fields** field, select the column view you want to see. Options are:
  - *Normal*: this is a view of the standard information that is typically entered across three configurable options.
  - *Required* option views: by default, the item variations functionality supports up to three configurable options for a given item. The required option view selections allow you to present only those columns that are required for the number of attributes with which you are working. For example, if you are entering worksheet lines for a series of items that only use a single configurable attribute, you could choose the *Required – 1 Option* selection. This would result in all columns for options 2 and 3 being removed from the worksheet.
  - *All*: all setup fields are presented on the worksheet. This selection presents columns for three configurable options and includes fields for optional information such as common, brand, and industry values.
4. On the first available line, enter the Business Central item for which you are defining the item variation SKU in the **Item No.** field.
5. By default, the item variation worksheet will create/establish variation SKUs as variants of the parent item. If you want these variation SKUs to exist for other Business Central items, enter a value of *Items* in the **SKU Explode Method** field.
6. In the **Option 1 Code** field, enter the unique code for the configurable option you are assigning to the item variation SKU.
7. In the **Option 1 Value** field, enter the option value that you are assigning to the item variation SKU.
8. In the **Option 1 Key Segment Value 1** field, enter the value that will be used to represent the option value when it is included as part of a key segment, if desired. If this field is left blank, Business Central will attempt to use the entry in the **Option 1 Value** field as the key segment value.
9. Fill in other, optional, fields, as desired.
10. If necessary, repeat steps 6-9 for configuration options 2 and 3, if necessary.
11. In the **SKU** field, enter a value that will identify the variation SKU as a unique record.
12. Depending on how you want the item variation worksheet to generate records, populate the **SKU Item No.** and **SKU Variant Code** fields:
  - If you are creating a variation SKU for an existing Business Central item or item variant, enter these values.
  - If you are creating a variation SKU for configurable variants that do not yet exist as records in Business Central, leave these fields blank.
13. Repeat this process for additional variation SKUs.

Every variable configuration of an item must be entered as a separate worksheet line. 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 separate worksheet lines for red, blue, and yellow.

14. Select the worksheet lines for which you want to create variation SKUs, then choose the **Process Selected Lines** action.

The item variation worksheet will attempt to create new variation SKUs for the item that is assigned as the worksheet line's parent item; the **Line Status** field on each line will indicate whether this was successful. In addition, the **Status Message** field will contain information about the processing activity. This is especially useful if the line failed to process, as information about the nature of the failure can assist in correcting the underlying issue. Lines will typically fail to process due to validation issues. For example, if you entered a SKU item number for an item that doesn't exist in Business Central,

the validation would fail and a message would be presented to the user indicating that the item variation worksheet was unable to find the specified item.

If an item variation record did not exist for a parent item at the line of line processing, a new one will automatically be created based on the settings and values that were entered on the worksheet line. The manner in which key segment information is determined for these newly-created item variations is dependent on worksheet line values:

- If key segment values are assigned on item variation worksheet lines, they will also be assigned as key segment values for the newly-created item variation's option values. However, if key segment values are not specified on item variation worksheet lines, the option value will be assigned as the key segment value for the newly-created item variation's option values.

For example, if we created an item variation worksheet line with an option code of *COLOR*, an option value of *Yellow*, and a blank key segment value, the system would assign a key segment value of *Yellow* to the newly-created item variation's option value. If in that same scenario we assigned *YLW* as the key segment value on the worksheet line, the system would use this as the key segment value for the newly-created item variation's option value.

- The maximum length for an item variation option's key segments is determined by the longest value that is used to create item variations for that option from the item variation worksheet.

For example, if we created three item variation worksheet lines with an option code of *COLOR* and option values of *Red*, *Blue*, and *Yellow*, the maximum key segment length for the newly-created item variation option *COLOR* would be 6, based on the number of characters in *Yellow*.

If an item variation worksheet line is used to create a variation SKU for a record (either item or variant) that does not yet exist in Business Central, please be aware that it is still necessary to [explode these variation SKUs](#) from the related item variation card. This process will not be automatically performed as part of the item variation worksheet processing actions.

Processed lines are not automatically removed from the item variation worksheet. You can choose the **Delete Processed Lines** action to remove any successfully processed line from the worksheet.

**Note:** the steps described above assume the manual entry of values in worksheet lines. In scenarios where you are working with a large volume of records, it is also possible to populate worksheet lines via a [RapidStart configuration package](#) or other import process.