Commerce

V200 Commerce Edition (BigCommerce Connector)

Training Guide

Acumatica
The Cloud ERP

Last Revision: 04/14/2021
Acumatica ERP 2021 R1

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Software Version: 2021 R1

Last Updated: 04/13/2021

How to Use This Course

The course is to be completed on Acumatica ERP 2021 R1 Update 2 and later versions. For this course, ask your system administrator to deploy an instance of Acumatica ERP for training and to create a tenant and preload the *U100* dataset to it; this data set provides the preconfigured settings and entities you will need as you complete the course. (You can find detailed instructions on creating a tenant below.)

This course consists of five parts, each part providing a set of lessons that illustrate the basic implementation of the e-commerce functionality of Acumatica ERP in a midsize company. You will learn how to set up the synchronization of customers, products, and orders between your BigCommerce store and your Acumatica ERP instance, as well as explore available synchronization features.

Follow these steps to complete the course:

1. Deploy an instance of Acumatica ERP 2021 R1 Update 2, and prepare the tenant with the needed data as described in the *How to Create a Tenant with the U100 Dataset*.
2. Complete the lessons of the course in the order in which they are presented to learn how to implement the e-commerce functionality in Acumatica ERP.
3. Take the assessment test at Partner University.
4. Complete the course survey at Partner University to finish the course and get the Partner University certificate of course completion.

What Is in a Guide?

The guide includes the *Company Story* topic and lessons, including general information and activity related to the lesson. *Company Story* explains the organizational structure of the companies preconfigured in the *U100* dataset, as well as the company's business processes and requirements. General information topics provide overviews of the processes that are performed in Acumatica ERP and in the BigCommerce store. Each of the course activities is dedicated to a particular user scenario and consists of processing steps that you complete.

What Is in a Configuration Lesson

A *configuration lesson*—that is, a lesson dedicated to the configuration of system settings and entities—provides a brief overview of the required system configuration and a description of other settings that could affect the configuration workflow.

Each configuration lesson includes at least one implementation activity that you have to complete in your Acumatica ERP instance to configure the core system settings or to prepare system entities.

What Is in a Process Lesson

A *process lesson*—that is, a lesson dedicated to the performing of a particular business process—includes a brief user scenario, a description of the process workflow and can include process diagrams that illustrate the user scenario supported by this process. The lesson also provides a brief overview of the settings that need to be specified and the entities that need to be prepared in the system before you start to perform this business process.

Each process lesson includes at least one process activity that you have to complete in your Acumatica ERP instance to learn how to perform the described business process.

What Are the Documentation Resources

The complete Acumatica ERP documentation is available on *https://help.acumatica.com/* and is included in the Acumatica ERP instance. While viewing any form used in the course, you can click the **Open Help** button in the top pane to bring up a form-specific Help menu; you can use the links on this menu to quickly access form-related concepts and procedures and to open a reference topic with detailed descriptions of the form elements.

How to Create a Tenant with the *U100* Dataset

To add to an existing Acumatica ERP instance a tenant with the *U100* dataset, which is required for the completion of this course, and prepare the tenant for completing the activities, perform the following instructions:

1. Go to *Amazon Storage*.
2. Open the folder of your Acumatica ERP instance version.
3. In this folder, open the `Snapshots` folder, and download the `u100.zip` file.
4. Launch the Acumatica ERP instance, and sign in.
5. Open the *Tenants* (SM203520) form, and click **Add New Record** on the form toolbar.
6. In the **Login Name** box, type the name to be used for the tenant.
7. On the form toolbar, click **Save**.
8. On the **Snapshots** tab, click **Import Snapshot**.
9. In the **Upload Snapshot Package** dialog box, select the `u100.zip` file, which you have downloaded, and click **Upload**.

   The system uploads the snapshot to the **Snapshots** tab of the *Tenants* form.
10. On the form toolbar, click **Restore Snapshot**.
11. If the **Warning** dialog box appears, click **Yes**.
12. In the **Restore Snapshot** dialog box, make sure that the correct snapshot package is being uploaded, and click **OK**. The system will restore the snapshot and sign you out.

    You are now on the Sign-In page, and you can sign in to the tenant you have just created.

Licensing Information

For educational purposes of this course, you use Acumatica ERP under the trial license that does not require activation and provides all available features. For production use of this functionality, you have to activate the license your organization has purchased. Each particular feature may be subject to additional licensing; please consult the Acumatica ERP sales policy for details.

Company Story

This topic explains the organizational structure and operational activity of the company with which you will work during this training.

Company Structure

The SweetLife Fruits & Jams company is a midsize company located in New York City. The company consists of the following branches:

- SweetLife Head Office and Wholesale Center: This branch of the company consists of a jam factory and a large warehouse where the company stores fruit (purchased from wholesale vendors) and the jam it produces. Warehouse workers perform warehouse operations by using barcode scanners or mobile devices with barcode scanning support.
- SweetLife Store: This branch has a retail shop with a small warehouse to which the goods to be sold are distributed from the company's main warehouse. This branch is also planning on selling goods via a website created on an e-commerce platform to accept orders online. The e-commerce integration project is underway.
- Service and Equipment Sales Center: This branch is a service center with a small warehouse where juicers are stored. This branch assembles juicers, sells juicers, installs juicers, trains customers' employees to operate juicers, and provides juicer servicing.

Operational Activity

The company has been operating starting in the *01-2020* financial period. In November 2020, the company started using Acumatica ERP as an ERP and CRM system and migrated all data of the main office and retail store to Acumatica ERP. Because the company has grown, the equipment center has begun its operations in *01-2021*.

Company Purchases

The company purchases fruits and spices from large fruit vendors for sale and for jam production. For producing jams and packing jams and fruits, the company purchases jars, labels, and paper bags from various vendors. For the internal needs of the main office and store, the company purchases stationery (printing paper, pens, and pencils), computers, and computer accessories from various vendors. The company also purchases juicers and juicer parts for sale from a large juicer vendor and either purchases the installation service for the juicers or provides the installation service on its own, depending on the complexity of the installation.

Company Sales and Services

Each company's branch has its own business processes, as follows:

- SweetLife Head Office and Wholesale Center: In this branch, jams and fruit are sold to wholesale customers, such as restaurants and cafés. The company also conducts home canning training at the customer's location and webinars on the company's website.
- SweetLife Store: In the store, retail customers purchase fresh fruit, berries, and jams, or pick up the goods they have ordered on the website. Some of the goods listed in the website catalog are not stored in the retail warehouse, such as tropical fruits (which are purchased on demand) and tea (which is drop-shipped from a third-party vendor).

- Service and Equipment Sales Center: This branch assembles juicers, sells juicers, provides training on equipment use, and offers equipment installation, including site review and maintenance services. The branch performs one-time endeavors as well as complex projects with their own budgets.

Part 1: Initial Configuration and Manual Synchronization

Lesson 1.1: Initial Configuration

Initial Configuration: General Information

Before you can start using the e-commerce functionality of Acumatica ERP Retail-Commerce Edition, you need to set up a BigCommerce store, establish a connection between the Acumatica ERP instance and the BigCommerce store, and perform the initial configuration of the connection.

Learning Objectives

In this section, you will learn what general steps are involved in establishing a connection between Acumatica ERP and the BigCommerce store and in performing the initial configuration of these systems.

Steps for Establishing the Store Connection and Performing the Initial Configuration

In order to connect the Acumatica ERP instance to the BigCommerce store, you perform the following general steps:

1. Set up a BigCommerce store.
2. Obtain the BigCommerce API keys and WebDAV information.
3. Prepare the Acumatica ERP instance.
4. Establish the connection to the BigCommerce store.
5. Perform the initial configuration of the store connection.
6. Configure the entities enabled for synchronization.
7. Start synchronizing data.

Each of these steps is described in greater detail below.

Setup of a BigCommerce Store

Before you can connect Acumatica ERP to a BigCommerce store, you need to set up the store. For a test implementation, we recommend that you sign up for a BigCommerce trial site. For more information, see *Initial Configuration: To Set Up a BigCommerce Store*.

Obtaining of the BigCommerce API Keys and WebDAV Information

When you create a BigCommerce store in Acumatica ERP, you need to specify the following details:

- Store admin path, which is the URL of the BigCommerce store followed by */manage*

- API credentials (API path, client ID, and access token)
- WebDAV settings (WebDAV path, username, and password)

For details on obtaining API and WebDAV information, see *Initial Configuration: To Establish and Configure the Store Connection*.

Preparation of the Acumatica ERP Instance

During the configuration of the connection to the BigCommerce store, you need to specify certain values coming from the Acumatica ERP instance, such as the numbering sequence to be used for generating the identifiers of customers imported from the BigCommerce store, and the payment methods that will be mapped to the payment methods configured in the BigCommerce store. Some of these values can be created on the fly. However, we recommend that the Acumatica ERP instance be prepared in advance.

For more information, see *Initial Configuration: To Prepare the Acumatica ERP Instance*.

Establishing of the Connection to the BigCommerce Store

Once you have captured the API account details for your BigCommerce store, you proceed to set up the connection on the **Connection Settings** tab of the *BigCommerce Stores* (BC201000) form. You specify the store name, the admin path to the store, the API account details, and the WebDAV credentials to use for file transfer (that is, for uploading product images). Once you have specified these settings, you click **Test Connection** on the form toolbar to ensure that the data has been specified correctly.

Initial Configuration of the Store Connection

After you have successfully established a connection to the BigCommerce store, you can perform the basic required configuration. This step involves the following substeps:

1. On the **Entity Settings** tab of the *BigCommerce Stores* (BC201000) form, you activate the needed entities—that is, you select the **Active** check box in the row of each entity whose records you want to synchronize between Acumatica ERP and the BigCommerce store.

   The synchronization of a particular entity may require that some other entities also be synchronized as a prerequisite. When you select the **Active** check box for such an entity, the system automatically selects it for all other required entities required as a prerequisite. Similarly, when you clear the **Active** check box for an entity that is a required entity for other entities, the check box becomes cleared for all dependent entities.

   In this substep, you also review the following default synchronization settings for each entity for which the **Active** check box is selected, and make sure the default settings are appropriate for your configuration needs:

   - **Sync Direction**: The direction of the synchronization, which can be *Import* (data is imported to Acumatica ERP), *Export* (data is exported to the BigCommerce store), and *Bidirectional* (data is both exported to the BigCommerce store and imported to Acumatica ERP).
   - **Primary System**: The system, *ERP* (Acumatica ERP) or *External System* (the BigCommerce store), whose data takes precedence if conflicts occur during the synchronization.
   - **Real-Time Import**: The status of the real-time import process. At the time of the initial configuration, this status is either *Stopped* (that is, real-time synchronization is currently not

running in the *Import* direction) or *Not Supported* (that is, real-time synchronization cannot be started in the *Import* direction).

- **Real-Time Export**: The status of the real-time export process. At the time of the initial configuration, this status is either *Stopped* (that is, real-time synchronization is currently not running in the *Export* direction) or *Not Supported* (that is, real-time synchronization cannot be started in the *Export* direction).

- **Real-Time Mode**: The mode of the processing of the synchronization records, which can be either of the following:

  - *Prepare*: As soon as a push notification about a change to data is received, the corresponding synchronization record is placed in the processing queue.

  - *Prepare & Process*: As soon as a push notification about a change to data is received, the corresponding synchronization record is placed in the processing queue, and the data synchronization process is immediately started for the synchronization record.

- **Max. Number of Failed Attempts**: The maximum number of errors that are allowed during the import or export before the record is automatically skipped. By default, 5 attempts are allowed.

Although all settings except *Real-Time Import* and *Real-Time Export* can be changed, we recommend that you leave the default values during the initial configuration. For more information about configuring synchronization, see *Data Synchronization: General Information*.

2. On the **Customer Settings** tab, you specify the following settings, which will be applied to customers and customer locations imported from the BigCommerce store to Acumatica ERP:

   - **Customer Class**: The customer class from which default customer settings will be populated for new customers that are imported from the BigCommerce store.

   - **Customer Auto-Numbering**: The numbering sequence the system will use to automatically generate the identifiers of the customers that are imported from the BigCommerce store.

   - **Location Auto-Numbering**: The numbering sequence the system will use to automatically generate identifiers of the customer locations (that is, addresses) that are imported from the BigCommerce store.

   - **Generic Guest Customer**: The customer account to be used in orders placed in the BigCommerce store by non-registered customers. This customer account is used only if guest orders are allowed in the BigCommerce store.

   If your company uses segmented keys that consist of multiple segments for customers and customer locations, you also need to specify the numbering templates in the **Customer Numbering Template** and **Location Numbering Template** boxes.

3. On the **Inventory Settings** tab, you specify the following settings that apply to inventory items:

   - **Default Stock Categories** and **Default Non-Stock Categories**: The sales item categories that are assigned to stock and non-stock items, respectively, when the items are exported to the BigCommerce store, if these items are not assigned any item sales category in Acumatica ERP.

   - **Related Items**: The types of related items information about which can be exported to the BigCommerce store. In the drop-down list, you select the check box of each type of related items to be exported, and the system displays the selected categories in the box, separated by commas. You can select any of the following types:

- *Cross-Sell*
- *Related*
- *Up-Sell*

If an item is specified as a related item of any of the selected types for a stock item, non-stock item, or a template item on the **Related Items** tab of the *Stock Items* (IN202500), *Non-Stock Items* (IN202000), or the*Template Items* (IN203000) form, information about this item is exported to the BigCommerce store during the synchronization of the *Stock Item*, *Non-Stock Item*, or *Template Item* entity, respectively.

- **Default Availability**: The default availability assigned to stock and non-stock items exported from Acumatica ERP. You can select any of the following options:

  - *Set as Available (Track Qty)*: The exported items will be available in the store, and their quantity will be tracked.
  - *Set as Available (Don't Track Qty)*: The exported items will be available in the store, and their quantity will not be tracked.
  - *Set as Pre-Order*: The exported items will be available for pre-order—that is, the **Purchasability** of the items in BigCommerce will be set to *This product is coming soon but I want to take pre-orders*.
  - *Set as Unavailable*: The exported items will not be available for purchase—that is, the **Purchasability** setting of the items in BigCommerce will be set to *This product cannot be purchased in my online store*.

  The default availability can be overridden for each particular item on the **eCommerce** tab of the *Stock Items* or *Non-Stock Items* form.

  If you select *Set as Available (Track Qty)*, in the **When Qty Unavailable** box, you also need to select the action to be taken if after the synchronization of the *Product Availability* entity the item's available quantity becomes zero. You can select one of the following actions:

  - *Do Nothing*: The system should perform no action.
  - *Set as Disabled*: The system should make the item unavailable for purchase.
  - *Set as Pre-Order*: The system should make the item unavailable for purchase but available for pre-order.

- **Availability Mode**: You select which item quantities need to be synchronized with the BigCommerce store: all available items, items available for shipping, or items on hand.
- **Warehouse Mode**: You specify if you want to use all warehouses or only specific warehouses for quantity calculations. In the latter case, you need to specify the warehouses whose quantities are to be included in calculations.

> If *Multiple Warehouse Locations* feature is enabled on the *Enable/Disable Features* (CS101000) form, you can specify warehouse locations whose item quantities should be used for calculating the items' available quantities in the BigCommerce store.

4. On the **Order Settings** tab, you define default settings for the BigCommerce store as follows:

   - In the **General** section, you select the branch that will appear on sales orders imported from the BigCommerce store.

   - In the **Order** section, you select the order types to be assigned to sales orders and return orders imported from the BigCommerce store and order types that should be exported to the store. Here you also specify if discounts should be aggregated on the level of the entire document or for particular items in the order (if discounts are provided), and select the non-stock item that will represent gift certificates that you can sell in the BigCommerce store and accept as payment. For more information about order synchronization, see *Synchronizing Orders: General Information*. For details about importing refunds from the BigCommerce store, see *Importing Refunds: General Information*.

   - In the **Taxes** section, you specify if taxes need to be synchronized with the BigCommerce store. If synchronization of taxes is enabled—that is, if the **Tax Synchronization** check box is selected—you can also specify in the **Default Tax Zone** box, the tax zone that the system will assign to imported sales orders if no tax zone was identified during the order import. In some cases, for example, if you use an external tax calculation service, you might need to always assign a particular tax zone to imported orders. In this case, you select the **Use as Primary Tax Zone** check box. For more information about tax synchronization, see *Synchronizing Orders: Setup of Tax Synchronization*.

   - In the **Substitution Lists** section, you can select the substitution lists that you will use to map tax codes and tax categories between Acumatica ERP and the BigCommerce store.

   - In the **Shipping Option Mapping** section, you specify the **Ship Via** options for the combinations of the shipping zone and shipping method configured in the BigCommerce store. For each combination of the store shipping zone and store shipping method, you can optionally specify the shipping zone and shipping terms to make the mapping more granular. The values specified in this table appear on the **Shipping** tab of orders imported to Acumatica ERP from the BigCommerce store.

5. On the **Payment Settings** tab, you map the payment methods defined in the BigCommerce store (that is, the values in the **Store Payment Methods** column) to the combination of the payment method and cash account defined in Acumatica ERP (that is, with the values in the **Payment Method ID** and **Cash Account** columns, respectively). To indicate that payments by a specific payment method should be processed in Acumatica ERP, you select the **Active** check box for a particular store payment method; you can also indicate that payments based on a specific payment method that are imported from the BigCommerce store should be released on import automatically by selecting the check box in the **Release Payments** column.

6. On the form toolbar, you click **Save** to save the settings.

Configuration of the Entities Enabled for Synchronization

For each entity that you want to synchronize between Acumatica ERP and the BigCommerce store and that you have activated on the **Entity Settings** tab of the *BigCommerce Stores* form, you can also set up the mapping of custom fields for synchronization and synchronization filtering settings on the *Entities* (BC202000) form.

For more information about defining filtering and mapping settings for the needed entities, see *Preparing Entities for Synchronization*.

Synchronization of Data

After you have performed the initial configuration, you can start to synchronize data between Acumatica ERP and the BigCommerce store. First, you perform manual synchronization for entities in a specific order. Then you set up synchronization to run automatically, either in real-time or according to a specific schedule. For information about synchronization, see *Data Synchronization: General Information*.

Initial Configuration: Setting Up a BigCommerce Store

Before you start configuring the integration between Acumatica ERP and BigCommerce, you should set up the BigCommerce store, prepare entities in Acumatica ERP, and obtain store connection information. In this topic, you will learn about the minimum settings of the BigCommerce store that you need to configure.

> This topic covers only the essential settings that you need to configure in BigCommerce for integration with the Acumatica ERP instance. For details on the configuration of other settings, refer to the BigCommerce documentation.

Setting Up a BigCommerce Store

You use the control panel in BigCommerce to initially set up and configure your store, as well as to perform ongoing management of products, customers, and orders. By using the control panel, you set up the BigCommerce store by performing the following general steps:

1. Signing up for a BigCommerce account
2. Completing the store profile
3. Setting up the currencies in which goods will be available for purchase and the payment methods that you will accept
4. Setting up taxes
5. Configuring the shipping zones and shipping rules

Signing Up for a BigCommerce Trial Account

Before you implement the integration with Acumatica ERP on the production BigCommerce store, we recommend that you test your desired configuration in a test environment. To do that, you need a free BigCommerce trial account, which you can sign up for on the *BigCommerce Essentials Trial* page. The registration requires that you provide a valid email address, the name of your store (which you can change at any time), your name and contact details, and your admin password.

For information about the detailed steps that you need to complete to create a trial account, see the *BigCommerce documentation*.

Completing the Store Profile

After you have created a new BigCommerce store, you need to set it up so that you can accept and process orders. The first thing you should do is complete the store's profile on the **Store Profile** page, which you access by clicking **Store Setup > Store Profile** in the left pane. Here you can specify such settings as the store name, store address, store country, contact email address, and contact phone. It is important to specify the store country early in the setup process because this setting determines which payment gateways or shipping providers are available for use in your store.

Setting Up Currencies and Payment Methods

You set up the currencies that your store's customers will see and can be charged in on the **Currencies** page, which you open by clicking **Store Setup > Currencies** in the left pane.

You can configure multiple currencies to be used as display currencies and transaction currencies in your store. The default currency is determined based on the store's general settings; however, it can be changed. For each currency that you want to use as a transactional currency in your store, at least one acceptable payment method must be configured.

You should check and, if necessary, update the display settings of the default currency, and then configure at least one payment method for this currency on the **Payment Methods** page, which you can open by clicking **Store Setup > Payments** in the left pane.

For more information about working with currencies in BigCommerce, see *Managing Currencies* in the BigCommerce documentation. For details on payment methods, see *Payment Methods*.

Configuring Taxes

You set up tax zones, tax calculation rules, the way of displaying taxes in the storefront, and the way of specifying prices for products (that is, whether prices are entered inclusive or exclusive of tax) on the **Tax** page, which you can open by clicking **Store Setup > Tax** in the left pane.

For more information about configuring taxes, see *Tax Overview* in the BigCommerce documentation.

Configuring Shipping

BigCommerce provides a wide range of shipping options that you can flexibly configure to your needs. On the **Shipping Setup** page, which you open by clicking **Store Setup > Shipping** in the left pane, you specify the place where you will ship your products from, as well as the shipping zones and shipping rules.

For information about configuring shipping, see *Shipping Setup* in the BigCommerce documentation.

Deleting Existing Orders, Products, Product Categories, Customers, and Customer Groups

When you first create a BigCommerce store, it might contain some pre-populated data to help you get started. Before you begin implementing the BigCommerce integration with Acumatica ERP, you might want to delete customers, customer groups, products, product categories, and orders that already exist in the store. Deleting these entities from the store will reduce the amount of data that needs to be synchronized; thus, you can more easily see which data comes from which system when you configure synchronization between Acumatica ERP and the BigCommerce store.

You delete customers, products, product categories, and orders as follows:

- To delete customers, you click **Customers > View** in the left pane to open the **Customers** page. On this page, you select the unlabeled check box for all customers in the list and click the Delete button on the table toolbar; then in the confirmation dialog box that opens, you click **OK**.
- To delete customer groups, you click **Customers > Customer Groups** in the left pane to open the **Customer Groups** page. On this page, you select the unlabeled check box for all customer

groups in the list and click the Delete button on the table toolbar; then in the confirmation dialog box that opens, you click **OK**.

- To delete product categories and products in them, you click **Products > Product Categories** in the left pane to open the **Product Categories** page. On this page, you select the unlabeled check box for all product categories in the list and then click the Delete button. In the **Reassign Products in Categories Marked for Deletion** dialog box, which opens, you select the **Delete products in these categories** option button and click **OK**.
- To delete orders, you click **Orders > View** in the left pane to open the **Orders** page. On this page, you select the unlabeled check box for all orders in the list and click the Delete button on the table toolbar; then in the confirmation dialog box that opens, you click **OK**.

Initial Configuration: To Set Up a BigCommerce Store

This activity will guide you through the process of signing up for a BigCommerce trial account and performing the minimum configuration of a BigCommerce store so that it can be connected with the Acumatica ERP instance.

Story

The SweetLife company is planning on opening an online store built on the BigCommerce platform. The store's warehouse, from which the goods sold online will be shipped, is based in New York. The company maintains the prices of its products in U.S. dollars and delivers products across New York by using the company's own vehicles. As an implementation consultant helping SweetLife to implement the integration between BigCommerce and Acumatica ERP, you want to set up a new store and perform the minimum required configuration of the BigCommerce store that will be sufficient to proceed with the configuration of the integration.

> This activity covers the creation and basic configuration of a new BigCommerce store. The results of performing the instructions presented below are used in subsequent activities. We recommend that you sign up for a new trial account and create a new store for testing purposes. If you have an existing test store and do not want to set up another one, make sure that in the subsequent activities, you make the necessary adjustments where the results of the current activity are used.

Process Overview

In this activity, you will perform the following steps in BigCommerce:

1. Sign up for a BigCommerce trial account
2. Complete the store profile
3. Specify the default currency
4. Configure the payment methods
5. Configure the shipping rules
6. Delete existing customers
7. Delete existing customer groups
8. Delete existing products and product categories

9. Delete existing sales orders

Step 1: Signing Up for a BigCommerce Trial Account

Create a BigCommerce trial account by following *the instructions in the BigCommerce documentation*. Make a note of the login and password that you have created, because you will use them to sign in to the control panel of your store.

Step 2: Completing the Store Profile

To complete the profile of the BigCommerce store that you have created in Step 1, do the following:

1. Sign in to the BigCommerce store by using the login and password you have created in Step 1. You are now viewing the BigCommerce control panel, which you will use for setup and management of the store.

2. In the left pane, select **Store Setup > Store Profile**.

3. On the **Store Profile** page, in the **Contact Information** section, specify the following details:

   - **Store Name**: `SweetStore`
   - **Store Address**: `3950 Hoffman Avenue, Elmont, New York`
   - **Store Country**: *United States*
   - **This address is a**: *Warehouse*
   - **Email**: The email address you used when signing up for the trial account (specified by default)

   > Make sure that you have specified the correct country in the store profile, because it affects the range of payment and shipping options available for your store.

4. Click **Save** (bottom right) to save your changes.

Step 3: Specifying the Default Currency

To specify the default currency in which prices will be displayed to customers and in which transactions will be made, do the following:

1. While you are still signed in to the BigCommerce store, in the left pane of the control panel, click **Store Setup > Currencies**.

2. On the **Currencies** page, which opens, make sure that the default currency (which is determined by BigCommerce automatically) is *US Dollar - USD*.

3. If the default currency is anything other than *US Dollar - USD*, do the following:

   a. In the **Allow shoppers to purchase in their currency** section, click **Add new currency**.

   b. In the **Add Currency** pop-up window, which opens, in the **Currency code** box, select *USD - US Dollar* and click **Next**.

   c. On the **USD - US Dollar** page, leave the default settings, and click **Save**.

d. On the **Currencies** page, in the **Additional Currencies** section, click the button in the rightmost column in the row for the *US Dollar - USD* currency, and in the menu that is opened, select **Set as default**.

e. In the **Set USD as your default currency** pop-up window, click **Set as default** again.

The default currency changes to *US Dollar - USD*, and the **Currencies** page opens.

Because SweetLife wants to display prices and sell products only in United States dollars, the configuration of other currencies is not needed.

Step 4: Configuring the Payment Methods for the Default Currency

To configure the payment methods that the store will accept for the United States Dollar (USD) currency, do the following:

1. While you are on the **Currencies** page, in the **Default Currency** section, in the *US Dollar - USD* row, which is the only row in this section, click **Set up** under **Payment Provider**.
2. On the **Payment Methods** page, which opens, make sure that *USD (US Dollar)* is selected in the **Show payment methods for** box.

   > ⚠ This box is not displayed if only one currency is configured in the control panel.

3. On the **Checkout Payment Settings** tab, expand the **Offline Payment Methods** group.
4. In the **Offline Payment Methods** group, in the row of **Pay in Store**, click **Set up**.
5. On the **Pay in Store Settings** tab, which appears, in the **Payment Information** box, type `You can pay for the order when you pick it up in the store.`, and click **Save**.

For simplicity, you do not need to set up other payment methods at this time.

Step 5: Configuring the Shipping Rules

To configure the shipping rules for your online store, do the following:

1. While you are signed in to the BigCommerce store, in the left pane of the control panel, click **Store Setup > Shipping**.
2. On the **Shipping Manager** page, which opens, in the **Shipping Origin** section, review the location from which products are going to be shipped.
3. In the **Checkout Shipping Options** section, under **Default shipping rules**, in the row of *United States*, switch on the toggle and click **Configure**.
4. On the page that opens, in the **Static shipping quotes** section, switch on the toggle to enable the *Free Shipping* rule.
5. In the **Free Shipping Options** dialog box, specify the following settings:
   - **Limit to order over**: Selected
   - Amount (USD): `100.00`
   - **Use discounted order subtotal (Recommended)**: Selected

This setting means that the orders in the amount over $100 will be eligible for free shipping.

6. Click **Submit** to save your changes.

   For simplicity, you do not need to specify any other shipping rules at this time. In a production environment, you are most likely to configure the shipping options on a more granular level.

Step 6: Deleting Existing Customers

To delete customers that you might have created in your BigCommerce store, do the following:

1. While you are signed in to the BigCommerce store, in the left pane of the control panel, click **Customers > View**.
2. On the **View Customers** page, select the unlabeled check box in the header of the first table column to select the check box in all rows, and on the table toolbar, click the Delete button.
3. In the confirmation dialog box that opens, click **OK**.
4. Repeat Instructions 2 and 3 as many times as is necessary to delete all rows.

Step 7: Deleting Existing Customer Groups

To delete existing customer groups that you might have created in your BigCommerce store, do the following:

1. While you are signed in to the BigCommerce store, in the left pane of the control panel, click **Customers > Customer Groups**.
2. On the **Customer Groups** page, select the unlabeled check box in the header of the first table column to select the check box in all rows, and on the table toolbar, click the Delete button.
3. In the confirmation dialog box that opens, click **OK**.
4. Repeat Instructions 2 and 3 as many times as is necessary to delete all rows.

Step 8: Deleting Existing Products and Product Categories

Products and product categories, too, have been preloaded to your BigCommerce store for the exploration of new administrators. To delete all product categories and products assigned to these categories in your BigCommerce store, do the following:

1. In the left pane, click **Products > Product Categories**.
2. On the **Product Categories** page, select the unlabeled check box in the header of the first table column to select the check box in all rows, and on the table toolbar, click the Delete button.
3. In the **Reassign Products in Categories Marked for Deletion** dialog box, which opens, select the **Delete products in these categories** option and click **OK**.
4. Repeat Instructions 2 and 3 as many times as is necessary to delete all rows.

Step 9: Archiving Existing Sales Orders

To archive existing sales orders that you might have created in your BigCommerce store, do the following:

1. In the left pane, click **Orders > View**.
2. On the **View Orders** page, select the unlabeled check box in the header of the first table column to select the check box in all rows.
3. On the table toolbar, in the **Choose an action** box, select *Archive Selected*, and click **Confirm**.
4. Repeat Instructions 2 and 3 as many times as is necessary to archive all orders.

You have specified the minimum set of store settings that you will need for the basic configuration of the BigCommerce integration. Now you should proceed to review the configuration of your Acumatica ERP instance, as described in *Initial Configuration: To Prepare the Acumatica ERP Instance*.

Initial Configuration: To Prepare the Acumatica ERP Instance

In this activity, you will go through the settings that need to be specified in the Acumatica ERP instance before you set up the connection to the BigCommerce store.

Story

The SweetLife company is planning on opening an online store built on the BigCommerce platform. The warehouse from which the goods will be shipped is based in New York. The company maintains the prices of its products in United States dollars and delivers products across New York by using the company's own vehicles. As an implementation consultant helping SweetLife to implement the integration between BigCommerce and Acumatica ERP, you want to make sure that the features required for the e-commerce functionality are enabled and the necessary entities are created and configured in the Acumatica ERP instance.

Process Overview

The Acumatica ERP instance with the *U100* dataset already contains most of the settings and data that you will need to specify when you start configuring the store connection. In this activity, you will review the following settings or entities on the following forms of the Acumatica ERP instance:

- *Enable/Disable Features* (CS100000) form: The features that have been enabled to support e-commerce functionality
- *Customer Classes* (AR201000) form: The customer class for the customers imported from the BigCommerce store
- *Numbering Sequences* (CS201010) form: The numbering sequences to be used for generating the identifiers for new customers and customer locations imported from the BigCommerce store
- *Customers* (AR303000) form: The customer account to be used for guest orders (orders placed by unregistered users) in the online store
- *Item Sales Categories* (IN204060) form: The item sales category to be used as the default sales category; items that have no item sales category in Acumatica ERP will be displayed under this category in the online store
- *Order Types* (SO201000) form: The order type to be used for orders imported from the BigCommerce store, and the order type to be used for handling returns of online purchases
- *Ship via Codes* (CS207500): The carrier to be used for handling shipping

- *Cash Accounts* (CA202000): The cash account to be used for e-commerce orders
- *Payment Methods* (CA204000): The payment method to which payment methods from the BigCommerce store will be mapped

System Preparation

Sign in to the Acumatica ERP instance with the *U100* dataset preloaded by using the *gibbs* username and the *123* password.

Step 1: Enabling the Needed Features

To make sure the needed features for e-commerce functionality have been enabled, do the following:

1. Open the *Enable/Disable Features* (CS100000) form.
2. Make sure that the following features are enabled:
   - *Inventory*
   - *Business Account Locations*
   - *Commerce Integration*
   - *BigCommerce Connector*

   If any of these features is not enabled, click **Modify** on the table toolbar, select the check box that activates the feature, and click **Enable** on the form toolbar.

   Depending on the setup of your BigCommerce store and the inventory and order management processes in your company, you might need to enable additional features. For more information, see *Initial Configuration: Implementation Checklist*.

Step 2: Reviewing the Customer Class for Customers Imported from BigCommerce

During the process of establishing and configuring the connection between Acumatica ERP and the BigCommerce store, you will need to specify the customer class that will be used for creating customer records for customers imported from the BigCommerce store. You can use an existing customer class or create a new one with a different set of default settings to be used specifically for online customers. In the instance with the *U100* data preloaded, a dedicated customer class for online customers has already been created.

To review the customer class that will be used for customers imported from the BigCommerce store, do the following:

1. Open the *Customer Classes* (AR201000) form.
2. In the **Class ID** box, select *ECCUSTOMER*.

   In a subsequent activity, you will specify this customer class in the store settings so that the system will use the settings of this customer class to populate customer records for new customers that will be imported from the BigCommerce store to Acumatica ERP.

Step 3: Reviewing the Numbering Sequences for Customers and Customer Locations

To review the numbering sequences that Acumatica ERP will use to assign identifiers to customers and customer locations (addresses) imported from the BigCommerce store, do the following:

1. Open the *Numbering Sequences* (CS201010) form.
2. In the **Numbering ID** box, select *ECCUSTOMER*.

   Review the settings of the numbering sequence that will be used to automatically generate the identifiers of the customers imported from the BigCommerce store to Acumatica ERP. With these settings, these customers will be assigned identifiers that start with the letter *C* followed by a numerical portion.
3. In the **Numbering ID** box, select *ECLOCATION*.

   Review the settings of the numbering sequence that will be used to automatically generate the identifiers of the customer locations imported from the BigCommerce store to Acumatica ERP. With these settings, these customer locations will be assigned identifiers that start with the letter *L* followed by a numerical portion.

In a subsequent activity, you will specify these numbering sequences in the store settings so that the system will use them to create identifiers for customers and addresses imported from the BigCommerce store to Acumatica ERP.

Step 4: Reviewing the Customer Record to be Used for Guest Orders

SweetLife's online store is going to accept guest orders (that is, orders from customers who are not registered in the store). During the configuration of the store connection, you will need to select the customer record in Acumatica ERP that will appear in orders that are placed as guest orders in the BigCommerce store. In the instance with the *U100* data preloaded, the generic online customer account has already been created.

To review the customer account that will be used for guest orders, do the following:

1. Open the *Customers* (AR303000) form.
2. In the Summary area, in the **Customer ID** box, select *ECOMGUEST*.

   In a subsequent activity, you will specify this customer in the store settings to make it appear on all orders imported from the BigCommerce store that were placed in the store by non-registered customers.

Step 5: Reviewing the Item Sales Categories

To review the inventory-related settings that you will need to specify during the configuration of the store connection, do the following:

1. Open the *Item Sales Categories* (IN204060) form.
2. In the tree on the left, select *Other*.

   Notice that the **Category Members** table does not contain any stock or non-stock items assigned to it. You will select this category in a subsequent activity to make stock and non-stock items that do not have their own categories appear under the *Other* category after they are imported to the BigCommerce store.

Step 6: Reviewing the Order Settings

In order to review the order types created for the orders coming from the BigCommerce store, do the following:

1. Open the *Order Types* (SO201000) form.
2. In the **Order Type** box, select *EO - eCommerce Order*.

   In the **Order Template** box notice that this order type is based on the *SO* order template. In a subsequent activity, you will configure the system to assign this order type to all orders imported from the BigCommerce store.
3. In the **Order Type** box, select *ER - eCommerce Return Order*.

   In the **Order Template** box notice that this order type is based on the *RC* order template. In a subsequent activity, you will specify this order type to be used for all returns of products purchased in the BigCommerce store.

Step 7: Reviewing the Shipping Settings

To review the Acumatica ERP shipping settings that you will need to specify during the configuration of the store connection, do the following:

1. On the *Ship via Codes* (CS207500) form.
2. In the **Ship Via** box, select *LOCAL*.

   Because SweetLife is going to deliver the products sold in the online store by using only its own fleet of vehicles, you will specify this shipping option when you configure the store connection.

Step 8: Reviewing the Cash Account and Payment Method Settings

To review the payment method in Acumatica ERP that will be mapped to the BigCommerce payment methods configured in the online store, do the following:

1. Open the *Payment Methods* (CA204000) form.
2. In the **Payment Method ID** box, select *ONLINE*.

   For simplicity, you will later map this payment method to all payment methods configured in the BigCommerce store. On the **Allowed Cash Accounts** tab, notice that the table contains only one cash account, *10250ST - Company Merchant Account*.
3. In the **Cash Account** column, click the link with the cash account identifier.
4. On the *Cash Accounts* (CA202000) form, which opens in a pop-up window, review the cash account settings.

   In the Summary area, notice that the *10250ST* cash account has been configured for the *USD* currency and the *RETAIL* branch.

In the next activity, *Initial Configuration: To Capture Store Connection Information*, you will learn how to capture the store's API and WebDAV information required for establishing the connection between your instance of Acumatica ERP and the BigCommerce store.

Initial Configuration: To Capture Store Connection Information

Before you can start setting up a connection to the BigCommerce store in Acumatica ERP, you need to obtain the following BigCommerce connection information:

- The store admin path, which is the URL of the BigCommerce store followed by */manage*
- The API credentials (API path, client ID, and access token)
- The WebDAV settings (WebDAV path, username, and password)

In this activity, you will learn where to find the listed information.

Process Overview

In this activity, you will perform the following steps:

1. Obtaining the API credentials of the BigCommerce store
2. Obtaining the WebDAV information to be used for the BigCommerce store

System Preparation

Before you start this activity, make sure that you have completed the instructions in *Initial Configuration: To Set Up a BigCommerce Store*.

Step 1: Obtaining the BigCommerce Store API Credentials

Before you can establish a connection between your instance of Acumatica ERP and the online store, you need to generate an API account. Do the following:

1. Sign in to your BigCommerce store as the store administrator.
2. In the left pane of the control panel, select **Advanced Settings > API Accounts**.
3. On the **Store API Accounts** page, which opens, create a new API account as follows:
   a. Click **Create API Account > Create V2/V3 API Token**.
   b. On the **Create API Account** page, specify the name of the account in the **Name** box.
   c. In the **OAuth Scopes** section, set each permission to the highest (rightmost) level.
   d. Click **Save** at the bottom of the page to save your changes.
4. In the **BigCommerce API Credentials** pop-up window, which appears, the following details of the created API account are displayed:
   - Client ID
   - Client secret
   - Access token

If you are using Chrome, Firefox, or Edge, a text file with this information, as well as the API Path, may be automatically downloaded to your local computer.

5. Save the API account information to a file.

> Make sure to securely store these API credentials. If you lose this information, you will have to delete the account and create a new one.

6. Click **Done** to close the pop-up window.

Step 2: Obtaining the BigCommerce Store WebDAV Information

To find the information that is required to set up file transfer between Acumatica ERP and the online store over WebDAV, do the following:

1. While you are still signed in to your BigCommerce store as the store administrator, in the left pane of the control panel, select **Server Settings > File Access (WebDAV)**.

2. On the **File Access** page, notice the following WebDAV information:

- WebDAV Path
- WebDAV Username
- WebDAV Password

3. Save this information to a file.

You will need this information to set up file access in the next activity.

Now you can move on to establish a connection between Acumatica ERP and the BigCommerce store and perform the minimum configuration of the connection. To do so, follow the steps described in *Initial Configuration: To Establish and Configure the Store Connection*.

Initial Configuration: To Establish and Configure the Store Connection

In this activity, you will learn how to connect your Acumatica ERP instance to the BigCommerce store and perform the initial configuration of the connection.

Story

Suppose that the SweetLife company wants to sell jam in its online store deployed on the BigCommerce platform. SweetLife is already using Acumatica ERP and now needs to integrate it with a new BigCommerce store. As SweetLife's implementation consultant, you need to configure the connection to the BigCommerce store and perform the minimum configuration required for synchronization of data between Acumatica ERP and the BigCommerce store.

Configuration Overview

For the purposes of this activity, a number of entities have been defined as described in *Initial Configuration: To Prepare the Acumatica ERP Instance*.

Process Overview

On the *BigCommerce Stores* (BC201000) form, you will create a new connection to the online store by using the information you captured in *Initial Configuration: To Capture Store Connection Information*. After the connection is successfully established, you will perform the minimum configuration of the store settings.

System Preparation

Before you start this activity, do the following:

- Make sure that you have completed the following activities:
  - *Initial Configuration: To Set Up a BigCommerce Store*
  - *Initial Configuration: To Capture Store Connection Information*

    You will need to specify the captured information in Step 1 below.
  - *Initial Configuration: To Prepare the Acumatica ERP Instance*
- Sign in to the Acumatica ERP instance with the *U100* dataset preloaded by using the *gibbs* username and the *123* password.

Step 1: Establishing a Connection Between Acumatica ERP and the BigCommerce Store

To establish a connection with the BigCommerce store in your instance of Acumatica ERP, do the following:

1. Open the *BigCommerce Stores* (BC201000) form.
2. In the Summary area, in the **Store Name** box, type `SweetStore`.
3. On the **Connection Settings** tab, use the information that you have captured while completing *Initial Configuration: To Capture Store Connection Information* to specify the settings as follows:
   - In the **Store Admin Path** box, enter the path of your BigCommerce store followed by */manage*.
   - In the **REST Settings** section, specify **API Path**, **Client ID**, and **Access Token**.

     You need to specify the API path without the API version.
   - In the **WebDAV Settings** section, specify **WebDAV Path** (which is the path of your BigCommerce store followed by */dav*; the system inserts it automatically as soon as you fill in **Store Admin Path**), **WebDAV Username**, and **WebDAV Password**.
4. Click **Save** to save your changes.
5. On the form toolbar, click **Test Connection** to check if you have specified the connection settings correctly.

   If the connection test is successful, you can proceed to specifying the required settings for entities, customers, inventory, orders, and payments.

Step 2: Specifying the Entity Settings

Do the following to specify the entity settings:

1. While you are still on the *BigCommerce Stores* (BC201000) form, open the **Entity Settings** tab.
2. In the table, select the **Active** check box for the *Shipment* and *Payment* entities.

   Notice that the system automatically selected this check box for the *Customer*, *Sales Category*, *Stock Item*, *Non-Stock Item*, and *Sales Order* entities. When you activate an entity, the system activates all prerequisite entities for the current entity—that is, the entities that must be synchronized before the current entity can be synchronized. For example, stock and non-stock items cannot be exported if the sales category they are assigned to has not been synchronized, and a sales order cannot be imported if the customer that placed the order and stock or non-stock items included in the order have not been synchronized.

   The table displays all entities that are supported by the BigCommerce connector and their default settings (such as, the synchronization direction and primary system). For the purposes of this activity, you can leave the default settings of the activated entities as they are.

Step 3: Specifying the Customer Settings

To specify the settings that will be used by default for importing customers from the BigCommerce store to Acumatica ERP, do the following:

1. While you are still on the *BigCommerce Stores* (BC201000) form, open the **Customer Settings** tab.
2. In the **Customer** section, select the following values:
   - **Customer Class**: *ECCUSTOMER*

     This is the default customer class based on which customer records will be created in Acumatica ERP for customers imported from the online store.
   - **Customer Auto-Numbering**: *ECCUSTOMER*

     This numbering sequence has been configured in Acumatica ERP to automatically generate identifiers for customer records imported from the BigCommerce store.
   - **Location Auto-Numbering**: *ECLOCATION*

     This numbering sequence has been configured in Acumatica ERP to automatically generate identifiers for customer location records for customer addresses imported from the BigCommerce store.
   - **Generic Guest Customer**: *ECOMGUEST*

     This customer account, which has been created in Acumatica ERP, will appear on orders imported from the BigCommerce stores and placed by non-registered users. This account will be used only if placing guest orders is allowed in the BigCommerce store.

Step 4: Specifying the Inventory Settings

To specify the inventory-related settings, do the following:

1. While you are still on the *BigCommerce Stores* (BC201000) form, open the **Inventory Settings** tab.

2. In the **Inventory Settings** section, specify the following settings:

    - **Default Stock Categories**: *Other*

      Here you select the check box or check boxes corresponding to the sales categories that will be assigned by default to stock items exported to the online store if no sales category has been assigned to them in Acumatica ERP.

    - **Default Non-Stock Categories**: *Other*

      In this box, too, you select the check box or check boxes corresponding to the sales category or sales categories that will be assigned to non-stock items exported to the online store if no sales category has been assigned to them in Acumatica ERP.

    - **Default Availability**: *Set as Available (Don't Track Qty)*

      This availability option will be assigned by default to stock items and non-stock items if no other availability option has been selected for these items on the **eCommerce** tab of the *Stock Items* (IN202500) and *Non-Stock Items* (IN202000) forms, respectively.

    For the purposes of this activity, you can leave the other settings on the tab as they are.

Step 5: Specifying the Order Settings

To specify the order-related settings, do the following:

1. While you are still on the *BigCommerce Stores* (BC201000) form, open the **Order Settings** tab.
2. In the **General** section, in the **Branch** box, select *RETAIL*.

    This branch will be inserted in sales orders imported from the BigCommerce store.

3. In the **Order** section, select the following values:

    - **Order Type for Import**: *EO - eCommerce Order*

      This order type has been configured specifically for sales orders imported from BigCommerce stores.

    - **Return Order Type**: *ER - eCommerce Return Order*

      This order type will be used for creating return orders for returns initiated in the BigCommerce store.

    - **Refund Amount Item**: *REFUNDAMT*

      This non-stock item will be used as a dummy product to reflect refunded amounts in sales orders and return orders for returns initiated in the BigCommerce store. The non-stock item selected in this box is excluded from synchronization and is not exported when the *Non-Stock Item* entity is synchronized. The non-stock item representing refund amounts should be exempt from taxes (that is, on the **General** tab of the *Non-Stock Items* (IN202000) form, in the **Tax Category** box, a category corresponding to tax-exempt items should be assigned). Also, the **Require Receipt** and **Require Shipment** check boxes must be cleared for the item.

    - **Refund Reason Code**: *EREFUND*

This reason code of the *Issue* usage type will be inserted in return orders created for returns and refunds initiated in the BigCommerce store.

- **Show Discounts In**: *Line Discount*

  When this option is selected, all discounts applied to an order in the BigCommerce store—including order-level discounts—will be displayed in order lines after the order is imported to Acumatica ERP.

4. In the **Taxes** section, leave the **Tax Synchronization** check box cleared.

   For simplicity, during the initial setup of the BigCommerce store, configuration of taxes has been skipped. Hence, you do not need to configure the synchronization of taxes at this point.

5. In the **Shipping Option Mapping** section, map the shipping methods configured in BigCommerce with the Ship Via options in Acumatica ERP as follows.

Active	Store Shipping Zone	Store Shipping Method	Ship Via	Shipping Zone	Shipping Terms
Selected	*United States*	*Free Shipping*	*LOCAL*	Leave empty	Leave empty

   For the purposes of this activity, leave the **Shipping Zone** and **Shipping Terms** columns empty.

Step 6: Configuring the Payment Method Mapping

If you want to import payments based on a particular payment method configured in the BigCommerce store to Acumatica ERP, you need to map the payment method to a corresponding payment method configured in Acumatica ERP. To configure the payment method mapping, do the following:

1. While you are still on the *BigCommerce Stores* (BC201000) form, open the **Payment Settings** tab.
2. In the **Payment Method Mapping** section, in the **Base Currency Payment Methods** table, map the payment method set up in the BigCommerce store with the payment method configured in Acumatica ERP as follows.

Active	Store Payment Method	Payment Method ID	Cash Account	Release Payments
Selected	*INSTORE (OFFLINE)*	*ONLINE*	*10250ST*	Cleared

   With these settings, the payments made with the *Pay in Store* payment method in the BigCommerce store will be imported to Acumatica ERP for further processing. In imported sales orders and payments made with this payment method, the mapped payment method, *ONLINE*, will be displayed.

3. On the form toolbar, click **Save** to save your changes.

   Now that the initial configuration is complete, you can move on to synchronize your data for the first time. For information on data synchronization, see *Data Synchronization: General Information* and *Data Synchronization: To Perform the First Synchronization*.

Lesson 1.2: Manual Synchronization

Data Synchronization: General Information

After the connection between Acumatica ERP and the BigCommerce store has been established and the initial configuration performed, you can start synchronizing data between the two systems.

Learning Objectives

In this chapter, you will learn how data synchronization works and how to synchronize data manually.

Stages of the Synchronization Process

The process of the synchronization of data between Acumatica ERP and the e-commerce store consists of the following stages:

- Preparing out-of-sync data for synchronization. For details, see the *Preparation of Out-of-Sync Data for Synchronization* section below.
- Processing out-of-sync data, as described in the *Processing of Out-of-Sync Data* section below.

Preparation of Out-of-Sync Data for Synchronization

During the preparation of data for synchronization, the system receives the data that needs to be synchronized between Acumatica ERP and the e-commerce system and puts it in the processing queue. The following mechanisms can be used for obtaining data:

- *Data preparation process*: The data preparation process pulls the data to be synchronized from Acumatica ERP and the e-commerce system through API calls and puts it in the processing queue. It can be performed in the following modes:
  - *Full* mode: In this mode, all records of the entity that have been created or modified during the specified date range are pulled from Acumatica ERP and the e-commerce system and put in the processing queue, regardless of whether they have been processed previously or not.
  - *Incremental* mode: In this mode, only the records that have been modified since the date of the last successful data preparation are pulled.
  - *Incremental by Date* mode: In this mode, only records that have been modified during the specified date range and that have not yet been processed are pulled.

  The pulled data is then filtered according to the filtering criteria defined on the *Entities* (BC202000) form and saved in the processing queue as synchronization records with the *Prepared* status, which indicates that these synchronization records have not yet been processed. The synchronization records are then processed as described in the *Processing of Out-of-Sync Data*.

  The data preparation process can be started in the following ways:
  - Manually, on the *Prepare Data* (BC501000) form. For information on manual synchronization, see *Data Synchronization: Manual Synchronization*.
  - By an automation schedule. For details about scheduling synchronization, see *Scheduling Synchronization: General Information*.
- *Push notifications*: If real-time synchronization is enabled for an entity on the *Entities* (BC202000) form, whenever a record is changed in the source system, the e-commerce connector is immediately notified about the change, and the corresponding synchronization record is created or updated in the processing queue.

This synchronization record is saved with the *Prepared* status and remains in the processing queue until it is processed.

The following diagram shows the process of preparing data for synchronization.

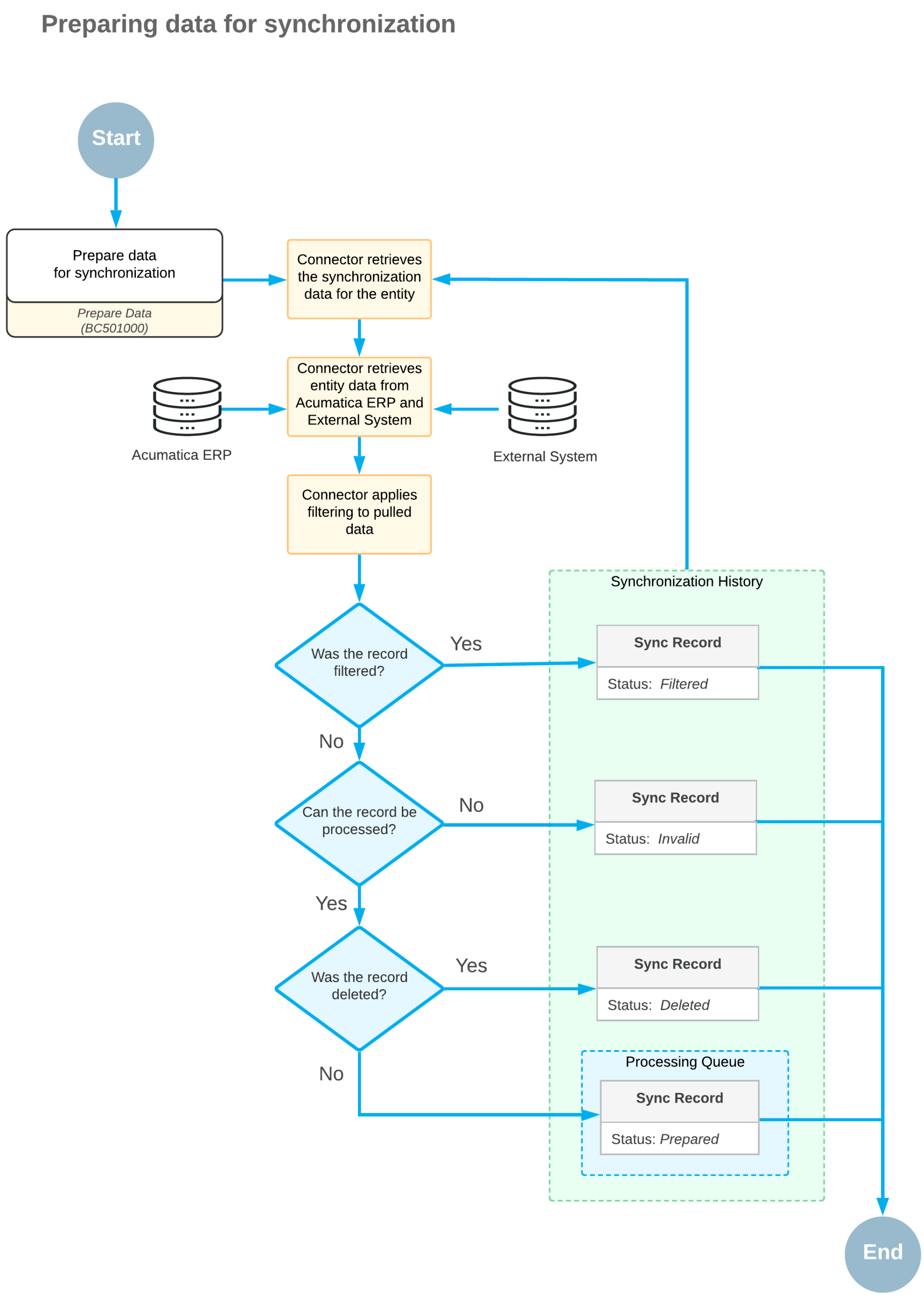


Figure: Preparing data for synchronization

Processing of Out-of-Sync Data

During the data processing stage, the system processes the synchronization records in the processing queue according to the synchronization settings defined for the corresponding entity on the *Entities* (BC202000) form or on the **Entity Settings** tab of the *BigCommerce Stores* (BC201000) form, and the synchronized data is saved in Acumatica ERP, in the BigCommerce store, or in both systems.

During the processing of out-of-sync data, the system performs the following operations for each synchronization record:

1. Pulling the record details from Acumatica ERP and the e-commerce system.
2. Determining the direction of the synchronization.
3. Determining if any other records should be synchronized as a prerequisite for the synchronization of the current record, and attempting to synchronize the prerequisite records.
4. Applying the standard field mapping for the entity.

   The default field mapping for each entity is detailed in *Retail-Commerce Edition Entity Reference*.
5. Applying the field mapping configured for the entity on the *Entities* (BC202000) form.
6. Saving the synchronized data in the destination system or systems.
7. Changing the status of the synchronization record to *Processed*.

The processing of out-of-sync data can be started as follows:

- You can start data processing manually, as described in *Data Synchronization: Manual Synchronization*.
- You can configure an automation schedule that will start data processing at regular intervals, as described in *Scheduled Synchronization*.
- You can configure the system to immediately start data processing for each synchronization record created or updated as a result of the real-time synchronization process. To do this, on the *Entities* form, you set **Real-Time Mode** for an entity to *Prepare & Process*. For more information about real-time synchronization, see *Real-Time Synchronization*.

In the following diagram, you can see the flow of the processing of data prepared for synchronization.

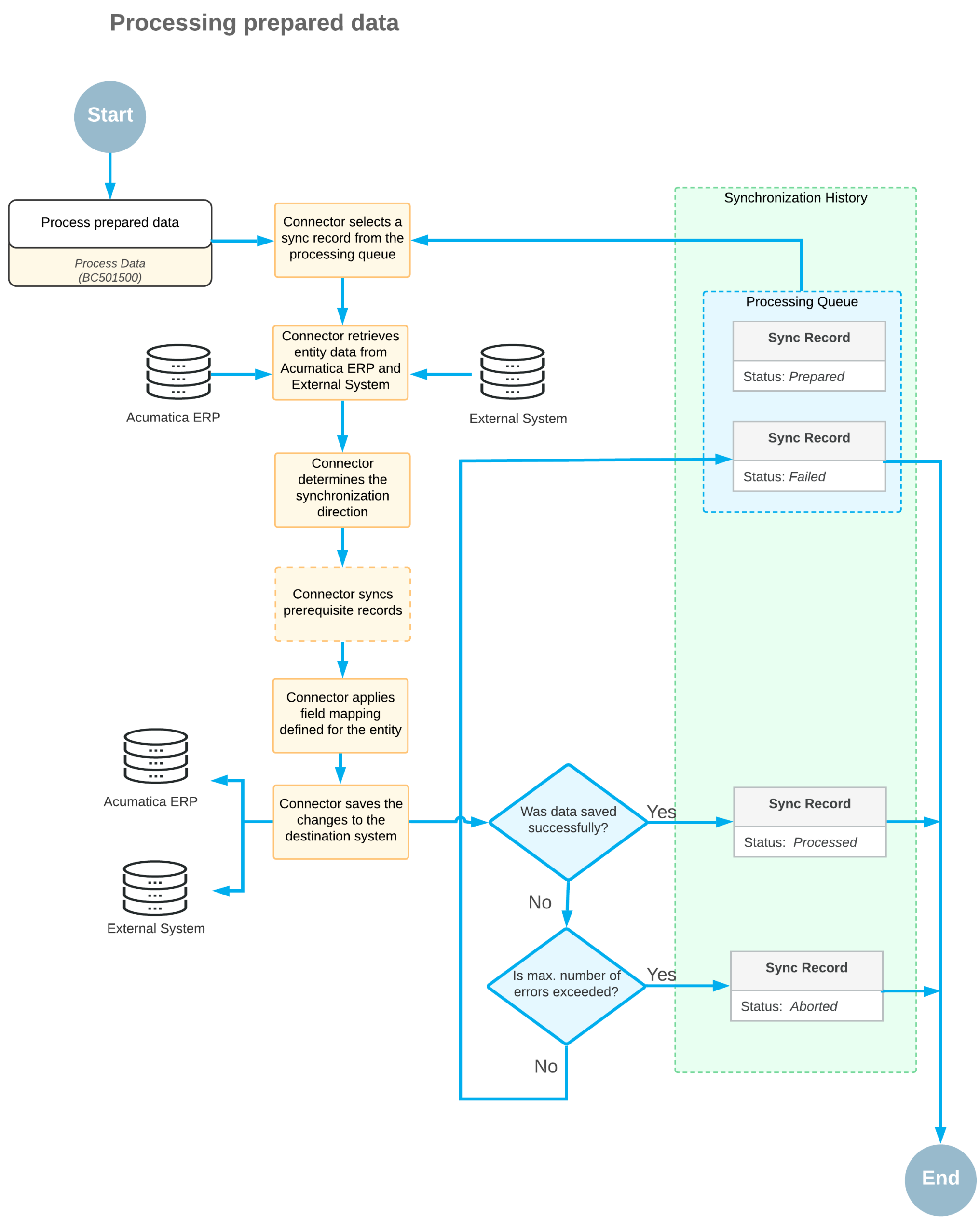


Figure: Processing prepared data

Data Synchronization: Synchronization Statuses

When a synchronization record is prepared and processed, the system assigns it one of the statuses described in the following table. You can review the synchronization status of any synchronization record on the *Sync History* (BC301000) form.

Status	Description
Prepared	The synchronization record has been created or updated, but out-of-sync data has not been saved in the destination system or systems.
Processed	The synchronization record has been processed, and data has been recorded to the destination system or systems according to the synchronization settings configured for the entity.
Failed	The processing of the synchronization record has failed and data could not be recorded to the destination system or systems.
Aborted	The synchronization record was excluded from synchronization by the system. The system automatically assigns the *Skipped* status to a synchronization record if the processing of the synchronization record has failed the number of times specified for the entity in the **Max. Number of Failed Attempts** box on the *Entities* (BC202000) form. The information about the error that occurred during the synchronization is available for the synchronization record in the **Last Error** column of the table on the *Sync History* form.
Skipped	The synchronization record was manually excluded from synchronization by a user.
Deleted	The record in the synchronization record has been deleted in one system or both systems.
Invalid	The synchronization record cannot be processed because its synchronization is not possible.
Filtered	The entity has been filtered as a result of applying a filter defined in the code or on the *Entities* form.

Data Synchronization: Manual Synchronization

Manual synchronization might be useful when you need to synchronize data during the initial configuration or when data has not been synchronized for some reason and manual troubleshooting is needed.

To manually start the data preparation process, you perform the following general steps:

1. You open the *Prepare Data* (BC501000) form.
2. In the Summary area of the form, in the **Store** box, you select the online store with which you are synchronizing data.
3. In the **Prepare Mode** box, you select one of the following options:
    - *Incremental*: You select this mode to prepare for processing only the synchronization records that have changed since the last successful data preparation.
    - *Full*: You select this mode to prepare for processing all records of the selected entity, even if they have been synchronized previously.

- *Incremental by Date*: You select this mode to prepare for processing only records that have been modified during the specified date range and that have not yet been processed.

  If you are starting the data preparation process for an entity for the first time, *Full* mode is used, regardless of the mode selected in the **Prepare Mode** box.

4. In the table, you select the unlabeled check box in the rows of the needed entities, and on the form toolbar, you click **Prepare**.

To manually start data processing, you perform the following general steps:

1. You open the *Process Data* (BC501500) form.
2. In the Summary area, in the **Store** box, you select the online store with which you are synchronizing data.

   The table shows only the synchronization records that require processing (that is, the synchronization records with the *Prepared* and *Failed* status).
3. In the **Entity** box, you select the entity for which you want to display synchronization records in the table.

   If you want to process out-of-sync synchronization records for all entities, leave the box empty.
4. In the table, you select the unlabeled check box in the rows of the synchronization records that you need to process.
5. On the form toolbar, you click **Process** to synchronize the selected synchronization records.

   If you want to process all synchronization records in the table, you click **Process All** on the form toolbar.

For an example with step-by-step instructions on how to synchronize data manually, see *Data Synchronization: To Perform the First Synchronization*.

Data Synchronization: To Perform the First Synchronization

The following activity will walk you through the process of manually exporting items from Acumatica ERP to the BigCommerce store. You will also perform the instructions to place a test order online in the BigCommerce store and then synchronize the order with Acumatica ERP. Finally, you will create a shipment for the order in Acumatica ERP and synchronize the created shipment with the BigCommerce store.

Story

Suppose that you are an implementation consultant helping the SweetLife Fruits & Jams company to set up an online store. You have completed the minimum initial configuration of the integration with BigCommerce and now want to explore how synchronization works. You will configure synchronization for and then synchronize a subset of stock items that are maintained in Acumatica ERP (stock items of the *Jam* item class) with the BigCommerce store, where the term *products* describes what are called *items* in Acumatica ERP. You will then perform a test purchase of one of the synchronized products and explore how the online order is processed in the BigCommerce store and in Acumatica ERP.

Process Overview

In this activity, you will perform the following steps:

1. On the *Stock Items* (IN202500) form of Acumatica ERP, review the stock items that need to be exported to the BigCommerce store.
2. On the *Entities* (BC202000) form, configure the filtering options for the *Stock Item* entity to include in the synchronization only the stock items of the *Jam* item class.
3. On the *Prepare Data* (BC501000) form, start the data preparation process for the *Stock Item* entity to prepare out-of-sync data for export.
4. On the *Sync History* (BC301000) form, review the result of the data preparation process.
5. On the *Process Data* (BC501500) form, start data processing for the *Stock Item* entity to save the synchronized product data in the BigCommerce store.
6. On the *Sync History* form, review the results of data processing.
7. In the BigCommerce store, review the products that have been imported from Acumatica ERP.
8. By using the storefront, place an order for one of the products that have been imported from Acumatica ERP (a jar of jam).
9. In the control panel of the store, review the order details.
10. On the *Prepare Data* form of Acumatica ERP, start the data preparation process for the *Sales Order* entity to prepare out-of-sync order data for import; on the *Process Data* form, synchronize the prepared sales order data.
11. On the *Sync History* form, review the results of data synchronization.
12. On the *Sales Orders* (SO301000) form, review the details of the imported sales order.
13. On the *Sales Orders* form, create a shipment for the imported order.
14. On the *Shipments* (SO302000) form, confirm the shipment.
15. On the *Prepare Data* form, start the data preparation process for the *Shipment* entity; on the *Process Data* form, synchronize the prepared shipment data.
16. In the control panel of the BigCommerce store, review the updated order details and the shipment exported from Acumatica ERP.

System Preparation

Do the following:

1. Make sure that the following prerequisites have been met:
    - The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.
    - The connection to the BigCommerce store has been established and the initial configuration has been performed, as described in *Initial Configuration: To Establish and Configure the Store Connection*.
2. Launch the Acumatica ERP website, and sign in as an administrator by using the following credentials:
    - Username: *gibbs*

- Password: *123*

Step 1: Finding and Reviewing the Stock Items to Be Sold Online

To find and review the stock items that will be sold online, do the following:

1. Open the Stock Items (IN2025PL) form.
2. Filter the stock items to display only the items of the *Jam* item class as follows:
   a. In the **Item Class** column, click the column header.
   b. In the menu that opens, select the *Equals* filter condition.
   c. In the box at the bottom of the menu, type `Jam`.
   d. Click **OK** to apply the filter.

   Now all stock items of the *Jam* item class are displayed. Notice how many items are in the class; scan the list so you are familiar with the stock items that you need to export to the BigCommerce store.

Step 2: Configuring the Export of a Subset of Stock Items

To configure the *Stock Item* entity to export to the BigCommerce store only stock items of the *Jam* item class, do the following:

1. Open the *Entities* (BC202000) form.
2. In the **Store** box, select *SweetStore*.
3. In the **Entity** box, select *Stock Item*.

   Notice that this entity can only be exported to the BigCommerce store (that is, **Sync Direction** is set to *Export*), and that only two tabs, **Export Mapping** and **Export Filtering**, are displayed.
4. To create a filtering condition for stock items, on the **Export Filtering** tab, click **Add Row** on the table toolbar, and specify the following settings in the row:
   - **Active**: Selected
   - **Field Name**: *Item Class*
   - **Condition**: *Equals*
   - **Value**: `Jam`
5. On the form toolbar, click **Save** to save your changes.

   Now when you prepare and process the *Stock Item* entity, only the stock items of the *Jam* item class that you reviewed in Step 1 will be exported to the BigCommerce store.

   > Filtering rules are not applied to data that has already been synchronized. For example, if you synchronize the *Stock Item* entity without filters (which will result in exporting all stock items to the online store), apply the filter described above, and prepare and process the *Stock Item* entity again, all previously synchronized stock items that no longer match the filtering conditions will remain synchronized.

Step 3: Preparing the Product Data for Synchronization

To prepare the stock item data that needs to be synchronized to the BigCommerce store, do the following:

1. Open the *Prepare Data* (BC501000) form.
2. In the **Store** box, select *SweetStore*.
3. In the **Prepare Mode** box, select *Incremental*.

   This setting controls which data will be loaded. *Incremental* indicates that the system will load only the data that has been modified since the previous data preparation. Because you start the preparation process for the first time, all data will be prepared.
4. In the table, select the unlabeled check box in the rows of the *Sales Category* and *Stock Item* entities, and on the form toolbar, click **Prepare**.
5. In the **Processing** dialog box, which opens, review the results of the processing and click **Close** to close the dialog box.

   Notice that the **Prepared Records** column shows the number of synchronization records that have been prepared and are ready to be processed. The **Processed Records** column shows the number of records that have been processed (which includes the records that have been filtered or excluded from synchronization).

   > You can click the link in the **Prepared Records** column to open the *Process Data* (BC501500) form with the store and the entity selected; you can click the link in the **Processed Records** column to open the *Sync History* (BC301000) form with the store and the entity selected.

Step 4: Reviewing the Results of Data Preparation

To review the results of the preparation of data for synchronization, do the following:

1. Open the *Sync History* (BC301000) form.
2. In the Summary area of the form, select the following settings:
   - **Store**: *SweetStore*
   - **Entity**: *Stock Item*

   Notice that on the **Prepared to Sync** tab, the table is displaying the list of stock item synchronization records with the *Prepared* status, which means that the data for these items has been prepared but not yet synchronized. For each of these items, the **ERP ID** column displays a link that you can click to open the item on the *Stock Items* (IN202500) form. The text of the link corresponds to the description of the stock item on the *Stock Items* form. The **External ID** column, which corresponds to the identifier of the product in the BigCommerce store, however, does not display any values because the stock items have not yet been exported to the BigCommerce store.

Step 5: Processing the Prepared Product Data

Before you can process product data (that is, export stock items to the BigCommerce store), you need to first synchronize item sales categories (that is, process the *Sales Category* entity, which is a prerequisite entity for *Stock Item*).

To process the *Sales Category* entity, do the following:

1. Open the *Process Data* (BC501500) form.
2. In the Summary area, select the following settings:
   - **Store**: *SweetStore*
   - **Entity**: *Sales Category*
3. In the table rows of the *Jams* and *Other* sales categories, select the unlabeled check box, and on the form toolbar, click **Process**.
4. In the **Processing** dialog box, which opens, review the results of the processing and click **Close** to close the dialog box.
5. In the **Entity** box, select *Stock Item*.

   The table displays only the list of the out-of-sync stock items (that is, the items with the *Prepared* status) that you reviewed in Step 4.
6. On the form toolbar, click **Process All** to process all synchronization records displayed on the form.
7. In the **Processing** dialog box, which opens, review the results of the processing and click **Close** to close the dialog box.

Step 6: Reviewing the Synchronization Status of the Product Data

To again review the synchronization status of the product data, do the following:

1. Open the *Sync History* (BC301000) form.
2. In the Summary area of the form, specify the following settings:
   - **Store**: *SweetStore*
   - **Entity**: *Stock Item*
3. Open the **Processed** tab.

   The tab shows the list of items that have been synchronized with the BigCommerce store. For each item, there is now a product identifier in the **External ID** column. You can click the link in this column to open the product in the control panel of your BigCommerce store. In the table, the **Last Operation** value has changed to *Inserted Externally* and the time stamp in the **Last Attempt** column has changed to the date and time when you ran data processing on the *Process Data* (BC501500) form in Step 5.

Step 7: Viewing an Exported Product in the BigCommerce Store

To view the *KIWIJAM96* stock item (which has the description *Kiwi jam 96 oz*), which has been exported, in the BigCommerce store, do the following:

1. While you are still viewing the *Sync History* (BC301000) form, click the link in the **External ID** column in the row of the synchronization record for the *Kiwi jam 96 oz* item.

The product management page for the *Kiwi jam 96 oz* item in the BigCommerce store opens in a new browser window.

2. Scan the product details that have been exported to the BigCommerce store (the product name, SKU, image, description, default price, and weight). You will explore the synchronization of products in more detail in subsequent activities.

Step 8: Purchasing a Jar of Kiwi Jam via the Storefront

To purchase a 96-ounce jar of kiwi jam by using the storefront, do the following:

1. While you are still viewing the product management page for the product with the *KIWIJAM96* SKU (that is, *Kiwi jam 96 oz*), click **View on Storefront** at the top.

   You will see the product detail page of the storefront as an anonymous visitor of your store would view it.

2. On the product detail page, specify the quantity of *3*, and click **Add to Cart**.
3. In the pop-up window that opens, click **Proceed to checkout**.
4. On the checkout page, complete the order as follows:

   a. In the **Customer** section, enter a fictitious email address, such as `danny.a.heady@example.com`, and click **Continue as Guest**.

   b. In the **Shipping** section, fill in the shipping address boxes as follows:

   - **First Name**: `Danny`
   - **Last Name**: `Heady`
   - **Address**: `2779 Cantebury Drive`
   - **City**: `New York`
   - **Country**: *United States*
   - **State/Province**: *New York*
   - **Postal Code**: `12345`
   - **My Billing address is the same as my Shipping address**: Selected

   c. In the **Shipping Method** section, leave the default value (which is *Free Shipping*), and click **Continue**.

   d. In the **Payment** section, select the **Pay in Store** option button, and click **Place Order**.

   Your order has been created, and on the confirmation page, the order number is displayed. You will process the order with this order number further in this activity.

   e. On the order confirmation page of the storefront, create a new customer account. For the purposes of this activity, you can set the following password:

   - **Password**: `!Q123456`
   - **Confirm Password**: `!Q123456`

f. Click **Create Account**.

Step 9: Reviewing the Order in the Control Panel of the Store

To review the order you have placed in Step 8, do the following:

1. Return to the control panel of the BigCommerce store.
2. In the left pane, click **Orders > View**.
3. On the **View Orders** page, which opens, find the order you created in Step 8 and click the plus sign in the row with this order to review its details.

   Notice that the order status is now *Awaiting Payment*.

Step 10: Importing the Sales Order Data to Acumatica ERP

To import sales orders from the BigCommerce store to Acumatica ERP, while you are signed in to Acumatica ERP as the *gibbs* user, do the following:

1. Open the *Prepare Data* (BC501000) form.
2. In the **Store** box, select *SweetStore*.
3. In the **Prepare Mode** box, select *Incremental*.
4. In the table, select the unlabeled check box in the row of the *Sales Order* entity, and on the form toolbar, click **Prepare**.
5. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.
6. In the row of the *Sales Order* entity, click the link with the number of prepared synchronization records in the **Prepared Records** column.
7. On the *Process Data* (BC501500) form, which opens with the store and the *Sales Order* entity selected, on the form toolbar, click **Process All**.
8. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

Step 11: Reviewing the Synchronization Status of the Imported Sales Order

To review the synchronization status of the order you imported in Step 10, do the following:

1. Open the *Sync History* (BC301000) form.
2. In the Summary area of the form, select the following settings:

   - **Store**: *SweetStore*
   - **Entity**: Leave *empty*

   On the **Processed** tab, notice that when the *Sales Order* entity was synchronized, the following data related to the order has been imported (that is, the following synchronization records were created and then processed):

   - Customer: *Danny Heady*

- Payment: The payment created based on the cash account and payment method defined on the *BigCommerce Stores* (BC201000) form

  In the **External ID** column, notice that the identifier of the payment consists of the two parts: the store order number and the payment number.

Step 12: Reviewing the Imported Sales Order

To review the details of the imported sales order, do the following:

1. While you are still viewing the synchronization results on the *Sync History* (BC301000) form, click the link in the **ERP ID** column for the sales order you imported.

2. On the *Sales Orders* (SO301000) form, which opens in a pop-up window, review the details of the order.

   In the Summary area, notice the following:

   - The imported order has the *EO* type, which is configured on the *BigCommerce Stores* (BC201000) form to be assigned to all sales orders imported from BigCommerce by default.
   - In the **External Reference** box, the number of the order in the online store and the name of the store are displayed.
   - The **Date** of the sales order is the same as the date on which the sales order was created in the BigCommerce store.
   - In the **Description** box, the store name, the order number and the payment status are displayed.
   - The **Customer** and **Location** boxes display the information about the customer and customer location that were created in Acumatica ERP during the import of the sales order in Step 10; both were created during the order placement in the BigCommerce store in Step 8.

   On the **Document Details** tab, review the only line in the table. Notice the following:

   - The **Branch** is set to *RETAIL*, which is the default branch configured for the BigCommerce store (that is, this branch was configured to appear on sales orders imported from the BigCommerce store on the *BigCommerce Stores* form).
   - The inventory ID, quantity, unit price, and extended price of the item are exactly the same as the values on the order in the BigCommerce store.

Step 13: Creating a Shipment for the Imported Order

To create a shipment for the order, do the following:

1. While you are still viewing the sales order that you imported from the BigCommerce store on the *Sales Orders* (SO301000) form, on the form toolbar, click **Create Shipment**.

2. In the **Specify Shipment Parameters** dialog box, which opens, make sure the current date and the *RETAIL* warehouse are selected, and click **OK**. The system creates a shipment and opens it on the *Shipments* (SO302000) form.

Step 14: Confirming the Shipment for the Imported Order

To confirm the shipment for the order, do the following:

1. While you are still viewing the shipment on the *Shipments* (SO302000) form, review the line on the **Details** tab. Make sure of the following:
   - The correct order line is included in the shipment.
   - The *RETAIL* warehouse is specified for the item.
   - The shipped quantity is equal to the ordered quantity.
2. On the form toolbar, click **Confirm Shipment**.

The shipment is assigned the *Confirmed* status.

Step 15: Synchronizing the Shipment with the BigCommerce Store

To synchronize with the BigCommerce store the shipment that you created and confirmed in Steps 13 and 14, do the following:

1. On the *Prepare Data* (BC501000) form, do the following:
   a. In the Summary area, select the following settings:
      - **Store**: *SweetStore*
      - **Prepare Mode**: *Incremental*
   b. In the table, select the unlabeled check box for the *Shipment* entity.
   c. On the form toolbar, click **Prepare**.
   d. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** when the processing has completed.
2. Click the link in the **Prepared Records** (which shows *1* because only one shipment has been created) in the row of the *Shipment* entity.
3. On the *Process Data* (BC501500) form, which opens with the BigCommerce store and the *Shipment* entity selected, in the only row of the table, select the unlabeled check box and on the form toolbar, click **Process**.
4. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

Step 16: Reviewing the Updated Order and Shipment in BigCommerce

To check whether the shipment and the updated order have been imported to the BigCommerce store correctly, do the following:

1. Sign in to the BigCommerce store as the store administrator.
2. In the left pane, select **Orders > View**.
3. On the **View Orders** page, which opens, find the order that you processed in the previous steps.
4. Notice that the status of the order has changed to *Shipped*.
5. In the left pane, click **Orders > Shipments**.

6. On the **View Shipments** page, which opens, open the shipment created for *Danny Heady*, and review its details.

You have now performed the first manual synchronization of products, sales orders, and shipments.

Part 2: Synchronization of Customers and Customer Locations

Synchronizing Customers: General Information

In Acumatica ERP Retail-Commerce Edition, you can synchronize customer records between Acumatica ERP and the BigCommerce store.

Learning Objectives

In this chapter, you will learn how to do the following:

- Activate the *Customer* and *Customer Location* entities so that customers and customer locations (addresses) are exported to the BigCommerce store and imported from the BigCommerce store to Acumatica ERP.
- Configure the filtering of customers based on various conditions.
- Synchronize customers that have multiple locations.

Applicable Scenarios

You configure the import of customers if you want to synchronize changes to customer information made in the BigCommerce store to Acumatica ERP. The synchronization of customers is a prerequisite for the synchronization of orders. So if you plan to import online orders placed in the BigCommerce store by new, existing, or guest customers and then further process these orders in Acumatica ERP, you need to synchronize customers first.

You configure the export of customers from Acumatica ERP to the BigCommerce store if you maintain records of customers in Acumatica ERP and want the details of these customers to be available in the BigCommerce store so that the up-to-date customer information, such as customer billing and address details, is available when registered customers place orders online.

Activation of the Customer Entity

Before you can start synchronizing customer records between Acumatica ERP and the BigCommerce store, you need to activate the *Customer* entity for the store. To do this, on the *BigCommerce Stores* (BC201000) form, you select the store, and on the **Entity Settings** tab, you select the **Active** check box for the *Customer* entity. Then on the **Customer Settings** tab, you need to also fill in the following boxes:

- **Customer Class**
- **Customer Auto-Numbering**
- **Location Auto-Numbering**
- **Generic Guest Customer**

If the *CUSTOMER* segmented key has more than one segment, you need to fill in the **Customer Numbering Template** box, and if the *LOCATION* segmented key has more than one segment, you need to fill in the **Location Numbering Template** box.

You can synchronize customers with or without customer locations (which are called addresses in BigCommerce) between Acumatica ERP and the BigCommerce store.

Synchronization of Customers Without Customer Locations

If the *Customer* entity is activated and the *Customer Location* entity is not activated on the *BigCommerce Stores* (BC201000) form, when the *Customer* entity is synchronized between the BigCommerce store and Acumatica ERP, the customer location (address) data is not copied from one system to the other.

When a sales order created in the BigCommerce store is imported, the address information (that is, the billing address and shipping address) specified in the order is imported to Acumatica ERP as part of sales order data; however, new locations are not created and existing locations are not updated with the imported data.

Synchronization of Customers with Customer Locations

To save shoppers time on entering address details with each purchase, BigCommerce provides the ability to store each customer's shipping addresses in the customer's address book. In Acumatica ERP, you can save more than one location for a customer account if the *Business Account Locations* feature is enabled on the *Enable/Disable Features* (CS100000) form.

With this feature activated, to turn on the synchronization of customer location data along with customer data, both the *Customer* entity and the *Customer Location* entity must be activated on the *BigCommerce Stores* (BC201000) form. In this case, when the *Customer* entity is synchronized between the BigCommerce store and Acumatica ERP, customer location (address) data is copied from one system to the other along with the customer data. The remaining sections of this topic describe what happens during the synchronization if a customer was created without an address or if an address was created, updated, or deleted in either system.

Creation of a Customer Without an Address

With the *Customer* and *Customer Location* entities activated on the *BigCommerce Stores* (BC201000) form, when a new customer is created in the BigCommerce store without an address, after the *Customer* entity is synchronized, a customer record is created in Acumatica ERP with the *MAIN* location. In the *MAIN* location, the system populates the **Country** and **Ship Via** values based on the customer class specified in the **Customer Class** box on the **Customer Settings** tab of the *BigCommerce Stores* (BC201000) form. However, the address lines are left blank.

In Acumatica ERP, whenever a new customer is created, the default *MAIN* location is created and specified for the customer. When the *Customer* entity is exported, in the BigCommerce store, this customer is created without an address record in the customer address book.

Creation of a Customer Address

If the *Customer* and *Customer Location* entities are activated on the *BigCommerce Stores* (BC201000) form and a new address was created for a customer in the BigCommerce store, during the import of the *Customer* entity, the e-commerce connector does one of the following:

- If the default *MAIN* location has empty address lines, the new address is used to populate the elements of the *MAIN* location.
- If the default location has been deleted in Acumatica ERP, and there is a corresponding synchronization record with the *Deleted* status on the *Sync History* (BC301000) form, the e-commerce connector creates a new location and makes it the default.

- If the default location exists and the address lines in it are filled in, the connector creates a new location.

If a new location was created for a customer in Acumatica ERP, when the *Customer* entity is exported, the corresponding new address is created for the customer in the BigCommerce store with the data of the new location.

Editing of a Customer Address

With the *Customer* and *Customer Location* entities activated on the *BigCommerce Stores* (BC201000) form, if an existing customer address synchronized with Acumatica ERP is edited in the BigCommerce store, during the import of the *Customer* entity, the corresponding customer location in Acumatica ERP is updated with the changes made to the customer address in the BigCommerce store.

If an existing customer location is edited in Acumatica ERP, during the export of the *Customer* entity, the e-commerce connector does one of the following:

1. If the customer location is active—that is, if the **Active** check box is selected for it on the *Customer Locations* (AR303020) form—the corresponding customer address in the BigCommerce store is updated based on the changes to the customer location.

2. If the customer location is inactive (that is, if the **Active** check box is cleared for it), the synchronization proceeds as follows:

   - If the location's synchronization record has a status other than *Deleted*, the corresponding customer address in the BigCommerce store is updated based on the changes to the customer location.

   - If the location's synchronization record has the *Deleted* status or the location has not been synchronized previously, the location is not synchronized with the BigCommerce store.

Deletion of a Customer Address

With the *Customer* and *Customer Location* entities activated on the *BigCommerce Stores* (BC201000) form, if a customer address is deleted in the BigCommerce store, the import of the *Customer* entity proceeds as follows:

- If the corresponding customer location in Acumatica ERP is not the default customer location, the system makes it inactive.

- If the corresponding customer location in Acumatica ERP is the default customer location, the connector does one of the following:

  - If the customer location is the only active location of a customer, the connector assigns the *Deleted* status to the location's synchronization record.

  - If other active locations exist for the customer, the connector makes this default location inactive, assigns the *Deleted* status to its synchronization record, and makes one of the other active locations the default one.

If an existing customer location is made inactive in Acumatica ERP, when the *Customer* entity is exported, the inactive customer location is not synchronized with the BigCommerce store.

Lesson 2.1: Bi-Directional Synchronization of Customers

Synchronizing Customers: To Perform Bidirectional Synchronization

The following activity will walk you through the process of setting up the bidirectional synchronization of customers and performing the synchronization of customers between Acumatica ERP and the BigCommerce store.

Story

Suppose that the SweetLife Fruits & Jams company has multiple corporate customers from the United States and Canada in the system. The company wants customer records for US customers (which are assigned to the *DEFAULT* customer class) to be synchronized between Acumatica ERP and the BigCommerce store. Acting as an implementation consultant helping SweetLife to set up the integration of Acumatica ERP with the BigCommerce store, you need to configure the bidirectional synchronization of customer records that belong to the *DEFAULT* customer class, test the synchronization and explore the synchronization results.

Configuration Overview

In the *U100* dataset, for the purposes of this activity, the following tasks have been performed:

- On the *Customer Classes* (AR201000) form, the *DEFAULT* and *ECCUSTOMER* customer classes have been configured.
- On the *Customers* (AR303000) form, the *ECOMGUEST* customer record has been created; also, multiple customer records assigned to the *DEFAULT* customer class have been created.
- On the *Numbering Sequences* (CS201010) form, the *ECCUSTOMER* and *ECLOCATION* numbering sequences have been defined.

Process Overview

In this activity, you will perform the following steps:

1. On the *BigCommerce Stores* (BC201000) form, review the settings of the *Customer* entity.
2. On the *Entities* (BC202000) form, configure the filtering condition for the export of customers from Acumatica ERP to the BigCommerce store.
3. On the *Prepare Data* (BC501000) form, start the data preparation process for the *Customer* entity to prepare out-of-sync data for export.
4. On the *Process Data* (BC501500) form, start data processing for the *Customer* entity to save the synchronized customer data in the BigCommerce store.
5. On the *Sync History* (BC301000) form, review the synchronization status of the processed synchronization records.
6. In the BigCommerce store, review the customers that have been imported from Acumatica ERP.

System Preparation

Before you complete the instructions in this activity, do the following:

1. Make sure that the following prerequisites have been met:
   - The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.
   - The connection to the BigCommerce store has been established and the initial configuration has been performed, as described in *Initial Configuration: To Establish and Configure the Store Connection*.
2. Launch the Acumatica ERP website with the *U100* dataset preloaded, and sign in with the following credentials:
   - Username: *gibbs*
   - Password: *123*

Step 1: Reviewing the Synchronization Settings of the Customer Entity

To review the synchronization settings of the *Customer* entity, do the following:

1. Open the *BigCommerce Stores* (BC201000) form.
2. In the **Store Name** box, select *SweetStore*.
3. On the **Entity Settings** tab, in the row with the *Customer* entity, make sure that the following settings have been specified:
   - **Active** Selected
   - **Sync Direction**: *Bidirectional*
   - **Primary System**: *External*
4. On the **Customer Settings** tab, make sure that the following settings have been specified:
   - **Customer Class**: *ECCUSTOMER*
   - **Customer Auto-Numbering**: *ECCUSTOMER*
   - **Location Auto-Numbering**: *ECLOCATION*
   - **Generic Guest Customer**: *ECOMGUEST*
5. If you have changed any of the settings, click **Save** on the form toolbar to save your changes.

Step 2: Configuring the Filtering Condition

To configure the export of only customer records that are assigned to the *DEFAULT* customer class, do the following:

1. Open the *Entities* (BC202000) form.
2. In the **Store** box of the Summary area, select *SweetStore*.

3. In the **Entity** box, select *Customer*.
4. To create a filtering condition for customers, on the **Export Filtering** tab, click **Add Row** on the table toolbar, and specify the following settings in the row:
   - **Active**: Selected
   - **Field Name**: *Customer Class*
   - **Condition**: *Equals*
   - **Value**: `DEFAULT`
5. On the form toolbar, click **Save** to save your changes.

   Now when you prepare the *Customer* entity for synchronization and process the prepared customer data, only the customers of the *DEFAULT* customer class will be exported to the BigCommerce store.

Step 3: Preparing the Customer Data for Synchronization

To prepare the customer data for synchronization, do the following:

1. Open the *Prepare Data* (BC501000) form.
2. In the **Store** box of the Summary area, select *SweetStore*.
3. In the **Prepare Mode** box, select *Full*.

   This setting controls which data will be loaded. *Full* indicates that all customer records that match the filtering conditions will be prepared for synchronization, regardless of whether they were synchronized previously.
4. Clear the **Start Date** box.
5. In the table, select the unlabeled check box in the row of the *Customer* entity, and on the form toolbar, click **Prepare**.
6. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

   Notice that the **Prepared Records** column shows the number of synchronization records that have been prepared and are ready to be processed.

Step 4: Processing the Prepared Customer Data

To process the customer data you have prepared for synchronization, do the following:

1. While you are still viewing the *Prepare Data* (BC501000) form, click the link in the **Prepared Records** column of the row with the *Customer* entity.

   The *Process Data* (BC501500) form opens with the *SweetStore* store and the *Customer* entity selected in the Summary area. The table displays all synchronization records of the *Customer* entity that you prepared in Step 3.
2. On the form toolbar, click **Process All** to process all synchronization records displayed in the table.

3. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

Step 5: Reviewing the Synchronization Status

To review the synchronization status of the synchronization records that you processed in Step 4, do the following:

1. Open the *Sync History* (BC301000) form.
2. In the Summary area of the form, specify the following settings:
   - **Store**: *SweetStore*
   - **Entity**: *Customer*
3. Open the **Processed** tab.

   The tab shows the items that have been synchronized with the BigCommerce store. For each customer of the *DEFAULT* customer class that you processed in Step 4, the system displays an identifier in the **External ID** column. You can click the link in this column to open the customer record in the control panel of your BigCommerce store. In the table, the **Last Operation** column is set to *Inserted Externally* and the time stamp in the **Last Attempt** column now shows the date and time when you ran data processing on the *Process Data* (BC501500) form in Step 4.

Step 6: Viewing Exported Customer Records

To view the *GOODFOOD* customer, which has been synchronized, in the BigCommerce store, do the following:

1. While you are still viewing the *Sync History* (BC301000) form, locate the row with *GOODFOOD, GoodFood One Restaurant* in the **ERP ID** column, and click the link in the **External ID** column of that row.

   The **Edit Customer** page of the control panel of the BigCommerce store opens for the *GoodFood One Restaurant* customer in a new browser tab.

   > You must be signed in to the BigCommerce store as the store administrator.

2. Review the details of the *GoodFood One Restaurant* customer. Notice that the boxes have been filled in based on the address data exported to the BigCommerce store from Acumatica ERP.

   On the **Customer Address Book**, note that the system has not imported the data from the *MAIN* customer location of the *GOODFOOD* customer record in Acumatica ERP to the BigCommerce because the *Customer Location* entity was not activated on the **Entity Settings** tab of the *BigCommerce Stores* (BC201000) form.

3. In the left pane of the control panel, click **Customers > View**.
4. On the **View Customers** page, which opens, review the list of customers that have been exported.

   Because you have configured the filtering condition so that the system exports from Acumatica ERP only the customers of the *DEFAULT* customer class, only the customers of that customer class are displayed on the **View Customers** page.

If other customers have been created in the control panel of the BigCommerce store or have been exported from Acumatica ERP previously, the list of customers displayed on this page may differ.

Lesson 2.2: Synchronization of Customer Locations

Synchronizing Customers: To Synchronize Customers with Multiple Locations

The following activity will walk you through the process of setting up the synchronization of customer locations and performing the synchronization of customers with locations between Acumatica ERP and the BigCommerce store.

Story

Suppose that the SweetLife Fruits & Jams company works with corporate customers that order items to be delivered to multiple locations. The company keeps track of customer addresses by using the customer address book functionality in the BigCommerce store and wants the addresses from the BigCommerce store to be in sync with customer locations in Acumatica ERP. Acting as an implementation consultant helping SweetLife to set up the integration of Acumatica ERP with the BigCommerce store, you need to set up the synchronization of customer locations between the two systems, as well as test it and explore how the synchronization works in both systems.

Configuration Overview

In the *U100* dataset, for the purposes of this activity, the following tasks have been performed:

- On the *Enable/Disable Features* (CS100000) form, the *Business Account Locations* feature has been enabled.
- On the *Customer Classes* (AR201000) form, the *DEFAULT* and *ECCUSTOMER* customer classes have been configured.
- On the *Customers* (AR303000) form, the *ECOMGUEST* customer record has been created; also, multiple customer records assigned to the *DEFAULT* customer class have been created.
- On the *Numbering Sequences* (CS201010) form, the *ECCUSTOMER* and *ECLOCATION* numbering sequences have been defined.

Process Overview

In this activity, you will do the following:

1. On the *BigCommerce Stores* (BC201000) form, review the settings of the *Customer* and *Customer Locations* entities.
2. In the control panel of the BigCommerce store, create a new customer with two addresses.
3. On the *Prepare Data* (BC501000) form, prepare the customer and customer address data for synchronization.

4. On the *Process Data* (BC501500) form, process the customer and customer address data prepared for synchronization.
5. On the *Customers* (AR203000) form, review the imported customer data.
6. On the *Customer Locations* (AR303020) form, review the imported customer address data and update one of the customer locations.
7. By using the *Sync History* (BC301000) form, synchronize the updated customer location with the BigCommerce store.
8. In the control panel of the BigCommerce store, review the updated customer address.

System Preparation

Before you perform the instructions in this activity, do the following:

1. Make sure that the following prerequisites have been met:
   - The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.
   - The connection to the BigCommerce store has been established and the initial configuration has been performed, as described in *Initial Configuration: To Establish and Configure the Store Connection*.
2. Launch the Acumatica ERP website with the *U100* dataset preloaded, and sign in with the following credentials:
   - Username: *gibbs*
   - Password: *123*

Step 1: Reviewing the Synchronization Settings of the Customer and Customer Location Entities

To review the synchronization settings of the *Customer* and *Customer Locations* entities, do the following:

1. Open the *BigCommerce Stores* (BC201000) form.
2. In the **Store Name** box of the Summary area, select *SweetStore*.
3. On the **Entity Settings** tab, do the following:
   a. Make sure that the **Active** check box is selected in the rows of the *Customer* and *Customer Location* entities.
   b. In the row of the *Customer* entity, make sure that **Sync Direction** is set to *Bidirectional*.

      Notice that the settings of the *Customer Location* entity are the same as those of the *Customer* entity and cannot be edited.
4. On the **Customer Settings** tab, make sure that the following settings have been specified:
   - **Customer Class**: *ECCUSTOMER*

- **Customer Auto-Numbering**: *ECCUSTOMER*
- **Location Auto-Numbering**: *ECLOCATION*
- **Generic Guest Customer**: *ECOMGUEST*

5. On the form toolbar, click **Save** to save your changes.

Step 2: Creating a Customer in the BigCommerce Store

To create a customer with two addresses in the control panel of the BigCommerce store, do the following:

1. Sign in to the control panel of the BigCommerce store as the store administrator.
2. In the left pane, click **Customers > Add**.
3. On the **Add Customer** page, which opens, in the **Customer Details** section of the **Customer Details** tab, specify the following details:
   - **First Name**: `Isabelle`
   - **Last Name**: `Bober`
   - **Company Name**: `Hoppy Place Coffee and Cakes`
   - **Email Address**: `hoppy_info@example.com`
4. In the **Customer Password** section, specify the following settings:
   - **Password**: `!Q123456`
   - **Confirm Password**: `!Q123456`
5. At the bottom of the page, click **Save & Exit** to save the new customer record.

Step 3: Adding Two Addresses for the Customer

To add the first address for the customer record that you created in Step 2, do the following in the BigCommerce store:

1. While you are still signed in to the control panel of the BigCommerce store as the store administrator, on the **View Customers** page, find the *Isabelle Bober* customer that you created in Step 2 in the **Name** column and click the link with the customer's name.
2. On the **Edit Customer** page, which opens with the details of the *Isabelle Bober* customer, on the **Customer Address Book** tab, click **Add an Address**.
3. On the **Add Customer Address** page, which opens, in the **Customer Address Details** section, specify the following settings:
   - **First Name**: `Isabelle`
   - **Last Name**: `Bober`
   - **Company Name**: `Hoppy Place Coffee and Cakes`
   - **Phone Number**: `212-555-0143`

- **Address Line 1**: `3690 Taylor Street`
- **Suburb/City**: `New York`
- **Country**: *United States*
- **State/Province**: *New York*
- **Postal Code**: `10007`

4. At the bottom of the page, click **Save & Add Another**.
5. To add a second address for the customer, on the **Add Customer Address** page, which opens, specify the following settings:

   -
     - **First Name**: `William`
     - **Last Name**: `Duncan`
     - **Company Name**: `Hoppy Wellby`
     - **Phone Number**: `212-555-0164`
     - **Address Line 1**: `2671 Simons Hollow Road`
     - **Suburb/City**: `New York`
     - **Country**: *United States*
     - **State/Province**: *New York*
     - **Postal Code**: `10001`
6. At the bottom of the page, click **Save & Exit**.

   The system saves the second address and displays the list of addresses in the customer's address book.

Step 4: Preparing the Customer and Customer Location Data for Synchronization

To prepare the customer and customer location data for synchronization, do the following:

1. Sign in to the Acumatica ERP website as an administrator by using the *gibbs* username.
2. Open the *Prepare Data* (BC501000) form.
3. In the **Store** box of the Summary area, select *SweetStore*.
4. In the **Prepare Mode** box, select *Incremental*.

   This setting controls which data will be loaded. *Incremental* indicates that only the customer records that match the filtering conditions and have been modified since the previous processing of the data was prepared for synchronization.
5. In the table, select the unlabeled check box in the row of the *Customer* entity, and on the form toolbar, click **Prepare**.

6. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

   Notice that the **Prepared Records** column shows the number of synchronization records that have been prepared and are ready to be processed.

Step 5: Processing the Prepared Customer and Customer Location Data

To process the customer and customer location data you have prepared for synchronization, do the following:

1. While you are still viewing the *Prepare Data* (BC501000) form, click the link in the **Prepared Records** column of the row with the *Customer* entity.

   The *Process Data* (BC501500) form opens with the BigCommerce store and the *Customer* entity selected in the Summary area. The table displays all synchronization records of the *Customer* entity that you prepared in Step 4.

2. In the table, select the unlabeled check box in the row that has a number in the **External ID** column but does not have any value in the **ERP ID** column.

   The missing ERP ID indicates that the record has been created in the BigCommerce store but has not yet been synchronized with Acumatica ERP.

3. On the form toolbar, click **Process** to process only the selected synchronization record.

4. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

Step 6: Reviewing the Imported Customers and Customer Locations

Perform the following instructions to review the customers and customer locations that have been imported to Acumatica ERP:

1. Open the Customers (AR2030PL) form.

2. In the list of customers, in the **Customer Name** column, locate the *Hoppy Place Coffee and Cakes* customer, which you created in the BigCommerce store in Step 2, and click the link for this customer in the **Customer ID** column.

3. On the *Customers* (AR203000) form, which opens for *Hoppy Place Coffee and Cakes*, on the **Locations** tab, review the locations the system created when the customer record was synchronized. Notice that the table displays the following locations:

   - The location with the *MAIN* identifier, which was created for the customer first in the BigCommerce store. This location is also marked as the default (that is, the **Default** check box is selected for this location).

   - The location with the identifier that the system assigned to it based on the numbering sequence selected for locations in the store settings on the *BigCommerce Stores* (BC201000) form.

4. Click the *MAIN* link in the **Location ID** column.

5. On the *Customer Locations* (AR303020) form, which the system has opened in a pop-up window, on the **General** tab, review the location details that have been imported from the BigCommerce store.

Step 7: Updating the Customer Location

Suppose that you need to update the contact and address details of the *MAIN* customer location of the *Hoppy Place Coffee and Cakes* customer. You do the following:

1. While you are still viewing the *Customer Locations* (AR303020) form, on the **General** tab, in the **Additional Location Info** box, specify the following information:
   - **Attention**: `Gail Anderson`
   - **Address Line 1**: `3650 Taylor Street`
2. On the form toolbar, click **Save & Close** to save your changes.

Step 8: Synchronizing the Updated Location with the BigCommerce Store

To synchronize the updated customer location with the BigCommerce store in order to update the address there, do the following:

1. On the *Sync History* (BC301000) form, in the Selection area, specify the following settings:
   - **Store**: *SweetStore*
   - **Entity**: *Customer Location*
2. On the **Processed** tab, select the unlabeled check box in the row of the *MAIN, Hoppy Place Coffee and Cakes* location (which you can find in the **ERP ID** column), and on the form toolbar, click **Sync**.

> When you change a location of a customer, the e-commerce connector recognizes the customer record as having been modified as well. So in this step, you could have selected the synchronization record for the *Hoppy Place Coffee and Cakes* customer and clicked **Sync**, and the updated customer location would have been synchronized as part of the customer synchronization process. Alternatively, you could have prepared the *Customer* entity for synchronization on the *Prepare Data* (BC501000) form and then processed the prepared synchronization records on the *Process Data* (BC501500) form.

Step 9: Reviewing the Updated Customer Address in the BigCommerce Store

To review the updated customer address in the BigCommerce store, do the following:

1. While you are still viewing the *Sync History* (BC301000) form, in the row of the *MAIN, Hoppy Place Coffee and Cakes*, click the link in the **External ID** column.

   The **Edit Customer Address** page of the control panel of the BigCommerce store opens for the corresponding address of the *Hoppy Place Coffee and Cakes* customer.

   > You must be signed in to the BigCommerce store as the store administrator.

2. In the **Customer Address Details** section, review the updated details of the customer address.

   Notice that the **First Name**, **Last Name**, and **Address Line 1** boxes have been updated to reflect the changes that you made to the customer location in Step 7.

Part 3: Synchronization of Products

Synchronizing Products: General Information

Acumatica ERP Retail-Commerce Edition provides you with the ability to export product data (that is, data of stock items, non-stock items, and template items) from Acumatica ERP to the BigCommerce store.

Learning Objectives

In this chapter, you will learn how to do the following:

- Export items with custom fields to the BigCommerce store.
- Export products with variants (template items) to the BigCommerce store.
- Export item images to the BigCommerce store.

Applicable Scenarios

You export items from Acumatica ERP to the BigCommerce store in the following cases:

- When you are initially configuring the BigCommerce store and need to transfer stock, non-stock, and template items that have already been defined in Acumatica ERP
- After you have updated any of the item settings in Acumatica ERP after the item was synchronized with the BigCommerce store so that the changes are reflected in the product settings in the store

Synchronization of Item Sales Categories

Sales item categories are exported during the synchronization of the *Sales Category* entity. To synchronize the *Sales Category* entity with a BigCommerce store, it should be activated for the store on the **Entity Settings** tab of the *BigCommerce Stores* (BC201000) form.

The *Sales Category* entity is a prerequisite entity for the *Stock Item*, *Non-Stock Item*, and *Template Item* entity. This means that before a stock item, non-stock item, or template item can be synchronized between Acumatica ERP and the BigCommerce store, sales categories assigned to the item must be synchronized with the store or be created in the store.

If an item is assigned no item sales category, during the synchronization of the item, the system assigns the default sales category or categories selected in the **Default Stock Categories** box (for stock items) or in the **Default Non-Stock Categories** box (for non-stock items) on the **Inventory Settings** tab of the *BigCommerce Stores* form.

If no sales category is assigned to an item and no sales category is selected in these boxes, the system does not synchronize the item.

Synchronization of Stock Items

To export stock items defined in Acumatica ERP to the BigCommerce store, you need to first activate the *Stock Item* entity on the **Entity Settings** tab of the *BigCommerce Stores* (BC201000) form.

For a stock item to be synchronized, item sales categories assigned to it must be synchronized or the default item sales category (or categories) must be selected in the **Default Stock Categories** box on the **Inventory Settings** tab of the *BigCommerce Stores* form.

For details about creating stock items, see *Creating Stock Items*. For information about the mapping of fields of a stock item, see *Stock Item Entity*.

Synchronization of Non-Stock Items

Before you can export non-stock items defined in Acumatica ERP to the BigCommerce store, you need to activate the *Non-Stock Item* entity on the **Entity Settings** tab of the *BigCommerce Stores* (BC201000) form.

For a non-stock item to be synchronized, item sales categories assigned to it must be synchronized or the default item sales category (or categories) must be selected in the **Default Non-Stock Categories** box on the **Inventory Settings** tab of the *BigCommerce Stores* form.

For details about creating non-stock items, see *Creating Non-Stock Items*. For information about the mapping of fields of a stock item, see *Non-Stock Item Entity*.

Synchronization of Template Items

Before you can export template items defined in Acumatica ERP to the BigCommerce store, you need to activate the *Template Item* entity on the **Entity Settings** tab of the *BigCommerce Stores* (BC201000) form.

Matrix items generated based on a template item (both stock items and non-stock items) are synchronized during the synchronization of the *Template Item* entity. For a template item to be synchronized, item sales categories assigned to it must be synchronized or the default item sales category (or categories) must be selected in the **Default Non-Stock Categories** box (if the template item is a non-stock item) or in the **Default Stock Categories** box (if the template item is a stock item) on the **Inventory Settings** tab of the *BigCommerce Stores* form.

For details about managing template items in Acumatica ERP, see *Managing Matrix Items*. For information about the mapping of fields of a template item, see *Template Item Entity*.

Synchronization of Item Images and Videos

In Acumatica ERP, you can save images for stock, non-stock, and template items in two ways:

- As attachments to an item: On the **Attributes** tab of the *Stock Items* (IN202500) and *Non-Stock Items* (IN202000) forms
- As links to an external storage: In the **Media URLs** table on the **eCommerce** tab of the *Stock Items*, *Non-Stock Items*, and *Template Items* (IN203000) forms

Images that have been attached to an item on the *Stock Items* or *Non-Stock Items* form are exported to the BigCommerce store during the synchronization of the *Product Image* entity. The item they belong to must be exported to the BigCommerce store or created in the BigCommerce store before images attached to it are exported. Of all files attached to the item the *Stock Items* or *Non-Stock Items* form, the system exports only the files with extensions for which the **Image** check box is selected on the *File Upload Preferences* (SM202550) form.

Images specified as links in the **Media URLs** table on the **eCommerce** tab are exported together with the item (that is, during the synchronization of the *Stock Item*, *Non-Stock Item* and *Template Item* entities). When the item is exported to the BigCommerce store, the images are added to the product management page of the exported item in the control panel of the BigCommerce store. For successful synchronization, images must be publicly accessible (that is, access to them should not require authentication or authorization).

In the **Media URLs** table, you can also specify links to YouTube videos for an item. These videos are added to the product page in the BigCommerce store during the synchronization of the item (that is, during the synchronization of the *Stock Item*, *Non-Stock Item* and *Template Item* entities). You can specify the full URL or the Share URL (that is, a short URL generated when you click the **Share** button under the video) of a publicly accessible video.

Lesson 3.1: Synchronization of Stock Items and Non-Stock Items with Custom Fields

Synchronizing Products: To Sync Items with Custom Fields

The following activity will walk you through the processes of creating an attribute for a stock item and a custom field for a non-stock item and synchronizing these items with the BigCommerce store.

Story

Suppose that the SweetLife Fruits & Jams company is going to start selling training courses in a few months. However, it wants to let the shoppers of its online store know when the courses will be available for purchase. Further suppose that you want to display the sugar levels of jams the company sells in the online store on the product detail pages on the storefront. Acting as an implementation consultant helping SweetLife to set up the integration of Acumatica ERP with the BigCommerce store, you need to define an attribute for the course availability date and an attribute for the sugar level and then export these dates and sugar levels to the BigCommerce store.

Configuration Overview

In the *U100* dataset, for the purposes of this activity, the following tasks have been performed:

- On the *Item Classes* (IN201000) form, the *TRAINING* and *JAM* item classes have been defined.
- On the *Non-Stock Items* (IN202000), the *ONLCOURSE* non-stock item of the *TRAINING* item class has been created.
- On the *Stock Items* (IN202500) form, the *CHERJAM96* stock item of the *JAM* item class has been created.

Process Overview

In this activity, you will perform the following:

1. On the *Attributes* (CS205000) form, create an attribute for the course release date.
2. On the *Item Classes* (IN201000) form, add the attribute to the *TRAINING* item class.
3. On the *Non-Stock Items* (IN202000) form, assign a value to the created attribute.
4. On the *Entities* (BC202000) form, map the attribute field with a product field in the BigCommerce store.

5. On the *Attributes* form, create an attribute for the sugar level of the products.
6. On the *Item Classes* form, add the attribute to the *JAM* item class.
7. On the *Stock Items* (IN202500) form, assign a value to the created attribute.
8. On the *Entities* form, map the attribute field with a product field in the BigCommerce store.
9. On the *Prepare Data* (BC501000) form, prepare product data for synchronization.
10. On the *Process Data* (BC501500) form, process the product data prepared for synchronization.
11. In the control panel of the BigCommerce store, review the exported products.

System Preparation

Do the following:

1. Make sure that the following prerequisites have been met:
   - The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.
   - The connection to the BigCommerce store has been established and the initial configuration has been performed, as described in *Initial Configuration: To Establish and Configure the Store Connection*.
2. Launch the Acumatica ERP website with the *U100* dataset preloaded, and sign in with the following credentials:
   - Username: *gibbs*
   - Password: *123*

Step 1: Creating an Attribute

To create an attribute for the release date of a product that is a non-stock item, do the following:

1. Open the *Attributes* (CS205000) form.
2. On the form toolbar, click **Add New Record**.
3. In the Summary area, specify the following settings:
   - **Attribute ID**: `RELDATE`
   - **Description**: `Pre-Order Release Date`
   - **Control Type**: *Datetime*
4. On the form toolbar, click **Save**.

Step 2: Adding the Attribute to the Needed Item Class

To add the *Pre-Order Release Date* attribute that you created in Step 1 to the *TRAINING* item class, do the following:

1. Open the *Item Classes* (IN201000) form.

2. In the **Item Class Tree** pane, select the *TRAINING* item class.
3. In the right pane, on the **Attributes** tab, click **Add Row** on the table toolbar.
4. In the added row, in the **Attribute ID** column, select *RELDATE*.
5. On the form toolbar, click **Save**.

Step 3: Assigning a Value to the Added Attribute

To assign a specific value to the created attribute for the *ONLCOURSE* non-stock item, do the following:

1. Open the *Non-Stock Items* (IN202000) form.
2. In the Summary area, in the **Inventory ID** box, select *ONLCOURSE*.
3. On the **Attributes** tab, in the row of the **Attributes** table with the *Pre-Order Release Date* attribute, set **Value** to *9/1/2021*.
4. On the **eCommerce** tab, in the **Availability** box, select *Pre-Order*.
5. On the form toolbar, click **Save**.

Step 4: Mapping the Attribute to a Field in the BigCommerce Store

To map the release date attribute with the BigCommerce field, do the following:

1. Open the *Entities* (BC202000) form.
2. In the Summary area, specify the following settings:
   - **Store**: *SweetStore*
   - **Entity**: *Non-Stock Item*
3. On the **Export Mapping** tab, click **Add Row**.
4. In the row you have added to the table, specify the following settings:
   - **Active**: Selected
   - **Target Object**: *Product*
   - **Target Field**: *Pre-Order Release Date*
   - **Source Object**: *Non-Stock Item → Attributes*
   - **Source Field / Value**: `=Year(CDate([NonStockItem -> Attributes.Pre-Order Release Date]))+'-'+Month(CDate([NonStockItem -> Attributes.Pre-Order Release Date]))+'-'+Day(CDate([NonStockItem -> Attributes.Pre-Order Release Date]))+'T00:00:00+00:00'`
5. On the form toolbar, click **Save**.
6. To restrict the export of non-stock items to only items of the *TRAINING* item class, on the **Export Filtering** tab, add a row and specify the following settings:
   - **Active**: Selected

- **Field Name**: *Item Class*
- **Condition**: *Equals*
- **Value**: `Training`
- On the form toolbar, click **Save**.

Step 5: Creating an Attribute

In this step, you will create an attribute to indicate the sugar level of products (stock items that are jams). To create this attribute, do the following:

1. Open the *Attributes* (CS205000) form.
2. On the form toolbar, click **Add New Record**.
3. In the Summary area, specify the following settings:
   - **Attribute ID**: `SUGARLEVEL`
   - **Description**: `Sugar Level`
   - **Control Type**: *Text*
4. On the form toolbar, click **Save**.

Step 6: Adding the Attribute to the Needed Item Class

To add the *Sugar Level* attribute that you created in Step 5 to the *JAM* item class, do the following:

1. Open the *Item Classes* (IN201000) form.
2. In the **Item Class Tree** pane, select the *JAM* item class.
3. In the right pane, on the **Attributes** tab, click **Add Row** on the table toolbar.
4. In the added row, in the **Attribute ID** column, select *SUGARLEVEL*.
5. On the form toolbar, click **Save**.

Step 7: Assigning a Value to the Added Attribute

To assign a specific value to the created attribute for the *CHERJAM96* stock item, do the following:

1. Open the *Stock Items* (IN202500) form.
2. In the Summary area, in the **Inventory ID** box, select *CHERJAM96*.
3. On the **Attributes** tab, in row of the **Attributes** table with the *Sugar Level* attribute, set **Value** to *Sugar-free*.
4. On the form toolbar, click **Save**.

Step 8: Mapping the Attribute to a Field in the BigCommerce Store

To map the *Sugar Level* attribute with the BigCommerce field, do the following:

1. Open the *Entities* (BC202000) form.
2. In the Summary area, specify the following settings:
   - **Store**: *SweetStore*
   - **Entity**: *Stock Item*
3. On the **Export Mapping** tab, click **Add Row**.
4. In the row you have added, specify the following settings:
   - **Active**: Selected
   - **Target Object**: *Product → Custom Fields*
   - **Target Field**: *<<Auto_Mapping>>*
   - **Source Object**: *Stock Item → Attributes*
   - **Source Field / Value**: *Sugar Level*
5. On the form toolbar, click **Save**.

Step 9: Preparing Product Data for Synchronization

To prepare the product data for synchronization, do the following:

1. Open the *Prepare Data* (BC501000) form.
2. In the **Store** box of the Summary area, select *SweetStore*.
3. In the **Prepare Mode** box, select *Full*.

   This setting controls which data will be loaded. *Full* indicates that all customer records that match the filtering conditions will be prepared for synchronization, regardless of whether they were previously synchronized.
4. Clear the **Start Date** box.
5. In the table, select the unlabeled check boxes in the rows of the *Stock Item* and *Non-Stock Item* entities, and on the form toolbar, click **Prepare**.
6. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

   Notice that for each entity, the **Prepared Records** column shows the number of synchronization records that have been prepared and are ready to be processed.

Step 10: Processing the Prepared Product Data

To process the product data that has been prepared for synchronization, do the following:

1. While you are still viewing the *Prepare Data* (BC501000) form, click the link in the **Prepared Records** column in the row of the *Non-Stock Item* entity.

The *Process Data* (BC501500) form opens with the BigCommerce store and the *Non-Stock Item* entity selected in the Selection area. The table displays all synchronization records of the *Non-Stock Item* entity that the system prepared in the previous step.

2. In the row of the *Home canning courses online (website session)* non-stock item, select the unlabeled check box, and on the form toolbar, click **Process**.
3. On the form toolbar, click **Process All** to process all synchronization records displayed in the table.
4. In the **Processing** dialog box, review the results of the processing, and click **Close** to close the dialog box.
5. In the **Entity** box, select *Stock Item*.
6. In the row of the *Cherry jam 96 oz* stock item, select the unlabeled check box, and on the form toolbar, click **Process**.
7. In the **Processing** dialog box, review the results of the processing, and click **Close** to close the dialog box.

Step 11: Viewing the Exported Products

To view the product data that has been synchronized in the BigCommerce store, do the following:

1. Sign in to the control panel of the BigCommerce store as the store administrator.
2. In the left pane, click **Products > View**.
3. On the **View Products** page, which opens, locate the *ONLCOURSE* non-stock item (whose inventory ID you can see in the **Product SKU** column), and click the link for this item in the **Product Name** column.
4. On the **View Products** page, which opens for the *Home canning courses online (website session)* product (the *ONLCOURSE* non-stock item in Acumatica ERP), review the details of the exported item.

   Notice that in the **Purchasability** section, the **This product is coming soon but I want to take pre-orders** option button is selected, and in the **Release Date** box, the pre-order release date that you specified for the *ONLCOURSE* non-stock item has been inserted.
5. In the left pane, click **View Store**.
6. On the storefront, in the list of categories, click **Other**.
7. On the page that lists products of the **Other** category, click the link of the *Home canning courses online (website session)* product.

   On the page for the *Home canning courses online (website session)* product, notice that it is only available for pre-order, and that the message to customers indicates that the product will be available starting *1 March 2021*, which is the date that was specified as an attribute value in Acumatica ERP and exported during the synchronization of the *Non-Stock Item* entity.
8. In the control panel, on the **View Products** page, locate the *CHERJAM96* stock item (whose inventory ID you can see in the **Product SKU** column), and click the link for this item in the **Product Name** column.

9. On the **View Products** page, which opens for the *Cherry jam 96 oz* product (the *CHERJAM96* stock item in Acumatica ERP), review the details of the exported item.

   Notice that in the **Custom Fields** section, the **Sugar Level** custom field has been created and set to *Sugar-free*.

10. In the left pane, click **View Store**.

11. On the storefront, in the list of categories, click **Jams**.

12. On the page that lists products of the **Jams** category, click the link of the *Cherry jam 96 oz* product.

    On the page for the *Cherry jam 96 oz* product, notice that the custom field (**Sugar Level**) and its value (*Sugar-free*) are displayed under the SKU number.

Lesson 3.2: Synchronization of Template Items

Synchronizing Products: To Sync Items with Variants

The following activity will walk you through the process of synchronizing products with variants (called *matrix items* in Acumatica ERP).

Story

Suppose that SweetLife Fruits & Jams company is going to sell juices in its BigCommerce online store. Acting as an implementation consultant helping SweetLife to set up the integration of Acumatica ERP with the BigCommerce store, you need to export the *JUICE* template item to the BigCommerce store.

Configuration Overview

In the *U100* dataset, for the purposes of this activity, the following items have been created:

- On the *Item Classes* (IN201000) form, the *MJUICE* item class
- On the *Template Items* (IN203000) form, the *JUICE* template item
- On the *Stock Items* (IN202500) form, the following matrix items:
  - *APL-16OZ-GBT* (the matrix item for apple juice in glass bottles of 16 fluid ounces)
  - *APL-32OZ-GBT* (the matrix item for apple juice in glass bottles of 32 fluid ounces)
  - *CHR-32OZ-GBT* (the matrix item for cherry juice in glass bottles of 32 fluid ounces)
  - *ORG-16OZ-GBT* (the matrix item for orange juice in glass bottles of 16 fluid ounces)
  - *ORG-32OZ-GBT* (the matrix item for orange juice in glass bottles of 32 fluid ounces)
  - *PCH-32OZ-GBT* (the matrix item for peach juice in glass bottles of 32 fluid ounces)
  - *PNL-16OZ-GBT* (the matrix item for pineapple juice in glass bottles of 16 fluid ounces)
  - *SWB-32OZ-GBT* (the matrix item for strawberry juice in glass bottles of 32 fluid ounces)

- *TMT-16OZ-GBT* (the matrix item for tomato juice in glass bottles of 16 fluid ounces)

Process Overview

In this activity, you will do the following:

1. On the *Template Items* (IN203000) form, review the *JUICE* template item.
2. On the *BigCommerce Stores* (BC201000) form, activate the *Template Item* entity.
3. On the *Prepare Data* (BC501000) form, prepare the template item data for synchronization.
4. On the *Process Data* (BC501500) form, process the template item data prepared for synchronization.
5. In the control panel of the BigCommerce store, review the exported item.

System Preparation

Before you complete the instructions in this activity, do the following:

1. Make sure that the following prerequisites have been met:
    - The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.
    - The connection to the BigCommerce store has been established and the initial configuration has been performed, as described in *Initial Configuration: To Establish and Configure the Store Connection*.
2. Launch the Acumatica ERP website with the *U100* dataset preloaded, and sign in with the following credentials:
    - Username: *gibbs*
    - Password: *123*
3. Make sure that the *Matrix Items* feature is enabled as follows:
    a. Open the *Enable/Disable Features* (CS100000) form.
    b. On the form toolbar, click **Modify**, and select the **Matrix Items** check box under **Inventory and Order Management**.
    c. On the form toolbar, click **Enable**.

Step 1: Reviewing the Template Item and the Matrix Items

To review the *JUICE* template item and the matrix items that have been generated based on it, do the following:

1. Open the *Template Items* (IN203000) form.
2. In the **Template ID** box, select *JUICE*.
3. On the **Configuration** tab, review the attribute settings specified for the template item.

   In the **Attributes** table, notice that three attributes of the *Variant* type have been added:

- *Ingredient*
- *Package*
- *Volume*

These attributes have been created on the *Attributes* (CS205000) form. The following values (with their descriptions) have been predefined for the attributes:

- *Ingredient*: *APL* (*Apple*), *CHR* (*Cherry*), *ORG* (*Orange*), *PCH* (*Peach*), *PNL* (*Pineapple*), *SWB* (*Strawberry*), and *TMT* (*Tomato*)
- *Package*: *BOX* (*Box*), *GBT* (*Glass bottle*), *JAR* (*Jar*), *PBT* (*Plastic bottle*), and *TIN* (*Tin*)
- *Volume*: *08OZ* (*08 fl oz*), *12OZ* (*12 fl oz*), *16OZ* (*16 fl oz*), *32OZ* (*32 fl oz*), and *96OZ* (*96 fl oz*)

4. In the **Inventory ID Segment Settings** table, notice the settings for the automatic generation of identifiers assigned to matrix items. The segments are generated based on the attribute values (**Segment Type** is set to *Attribute Value* for all segments), and the length of each segment is determined by the value in the **Number of Characters** column.

5. On the **Matrix Items** tab, review the list of matrix items that have been generated based on the attributes configured for the *Juice* template item.

   In the subsequent steps of this activity, you will export these items to the BigCommerce store.

Step 2: Activating the Template Item Entity

To activate the *Template Item* entity, do the following:

1. Open the *BigCommerce Stores* (BC201000) form.
2. In the **Store Name** box of the Summary area, select *SweetStore*.
3. In the table of the **Entity Settings** tab, select the **Active** check box in the row of the *Template Item* entity.
4. On the form toolbar, click **Save**.

Step 3: Preparing the Template Item Data for Synchronization

To prepare the template item data, which includes matrix item data, for synchronization, do the following:

1. Open the *Prepare Data* (BC501000) form.
2. In the **Store** box, select *SweetStore*.
3. In the **Prepare Mode** box, select *Full*.

   This setting controls which data will be loaded. *Full* indicates that all records that match the filtering conditions will be prepared for synchronization, regardless of whether they were previously synchronized.

4. Clear the **Start Date** box.

5. In the table, select the unlabeled check box in the row of the *Template Item* entity, and on the form toolbar, click **Prepare**.

6. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

   The **Prepared Records** column shows the number of synchronization records that have been prepared and are ready to be processed. Because there is only one template item configured in the system, *1* (which is also a link) is displayed for the *Template Item* entity.

Step 4: Processing the Prepared Template Item Data

To process the prepared template item data, do the following:

1. While you are still viewing the *Prepare Data* (BC501000) form, in the row of the *Template Item* entity, click the *1* link in the **Prepared Records** column.

2. On the *Process Data* (BC501500) form, which opens with the BigCommerce store and the *Template Item* entity selected, select the unlabeled check box in the row of the *JUICE* template item (for which the **ERP ID** column shows *Juice*), and on the form toolbar, click **Process**.

3. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

Step 5: Viewing the Exported Item

To view the template item, which has been exported, do the following:

1. Sign in to the control panel of the BigCommerce store as the store administrator.

2. In the left pane, click **Products > View**.

3. On the **View Products** page, which opens, locate the *Juice* product, and click the link in the **Product Name** column.

4. On the product management page of the *Juice* product, review the exported settings.

   In the **Product Options** section, notice that in the **Variant Options** table, the option names (which correspond to the attributes that were configured and added for the template item in Acumatica ERP), and their values are displayed.

   In the **Variants** table, the variants of the product (which are the matrix items that were generated in the Acumatica ERP) are displayed.

Lesson 3.3: Synchronization of Images

Synchronizing Products: To Sync Product Images

The following activity will walk you through the process of synchronizing product images.

Story

Suppose that the SweetLife Fruits & Jams company wants to store some images of the products they sell in the online store in an external storage. Some of the images, however, are attached to items in the Acumatica ERP instance. Acting as an implementation consultant helping SweetLife to set up the integration of Acumatica ERP with the BigCommerce store, you want to test how images stored in Acumatica ERP and externally are exported to the BigCommerce store.

Configuration Overview

In the *U100* dataset, for the purposes of this activity, on the *Stock Items* (IN202500) form, the *APJAM08* stock item of the *JAM* item class been created.

Process Overview

In this activity, you will do the following:

1. On the *Stock Items* (IN202500) form, add images to the *APJAM08* stock item.
2. On the *Prepare Data* (BC501000) form, prepare the stock item data for synchronization.
3. On the *Process Data* (BC501500) form, process the stock item data prepared for synchronization.
4. In the control panel of the BigCommerce store, review the exported stock item.
5. On the *BigCommerce Stores* (BC201000) form, activate the *Product Image* entity.
6. On the *Prepare Data* form, prepare the product image data for synchronization.
7. On the *Process Data* form, process the product image data prepared for synchronization.
8. In the control panel of the BigCommerce store, review the exported images.

System Preparation

Before you complete the instructions in this activity, do the following:

1. Make sure that the following prerequisites have been met:
   - The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.
   - The connection to the BigCommerce store has been established and the initial configuration has been performed, as described in *Initial Configuration: To Establish and Configure the Store Connection*.
2. Launch the Acumatica ERP website with the *U100* dataset preloaded, and sign in with the following credentials:
   - Username: *gibbs*
   - Password: *123*

Step 1: Adding an Image to the Stock Item

To add an image to the *APJAM08* stock item, do the following:

1. Download the following files to your local computer:
   - http://acumatica-builds.s3.amazonaws.com/builds/2020R2/Images/AppleJam1.png
   - http://acumatica-builds.s3.amazonaws.com/builds/2020R2/Images/AppleJam2.png

2. Open the *Stock Items* (IN202500) form.

3. In the Summary area, in the **Inventory ID** box, select *APJAM08*.

4. On the **Attributes** tab, drag the files you downloaded to the Image area.

   The files are attached to the form, and you can browse them in the Image area or access them by clicking **Files** in the form title bar.

5. On the **eCommerce** tab, in the **Media URLs** table, add the image URLs as shown in the following table:

URL	Type
`http://acumatica-builds.s3.amazonaws.com/builds/2020R2/Images/ApcpleJam3.png`	*Image*

6. On the form toolbar, click **Save**.

Step 2: Preparing the Stock Item Data for Synchronization

Before you can synchronize images for a stock item, you need to synchronize the stock item itself. To prepare the stock item data for synchronization, do the following:

1. Open the *Prepare Data* (BC501000) form.

2. In the **Store** box of the Summary area, select *SweetStore*.

3. In the **Prepare Mode** box, select *Full*.

   This setting controls which data will be loaded. *Full* indicates that all records that match the filtering conditions will be prepared for synchronization, regardless of whether they were previously synchronized.

4. Clear the **Start Date** box.

5. In the table, select the unlabeled check box in the row of the *Stock Item* entity, and on the form toolbar, click **Prepare**.

6. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

   Notice that the **Prepared Records** column shows the number of synchronization records that have been prepared and are ready to be processed.

Step 3: Processing the Prepared Stock Item Data

To process the stock item data prepared for synchronization, do the following:

1. While you are still viewing the *Prepare Data* (BC501000) form, click the link in the **Prepared Records** column in the row of the *Stock Item* entity.

   The *Process Data* (BC501500) form opens with the BigCommerce store and the *Stock Item* entity selected in the Selection area. The table displays all synchronization records of the *Stock Item* entity that the system prepared in Step 2.

2. Select the unlabeled check box in the row of the *Apple jam 8 oz.* item (which can be located by the description in the **ERP ID** column), and on the form toolbar, click **Process**.

3. In the **Processing** dialog box, review the results of the processing, and click **Close** to close the dialog box.

Step 4: Reviewing the Synchronized Stock Item

To review the *Apple jam 8 oz.* stock item, which has been synchronized, in the BigCommerce store, do the following:

1. Sign in to the control panel of the BigCommerce store as the store administrator.

2. In the left pane, click **Products > View** .

3. On the **View Products** page, which opens, click the *Apple jam 8 oz.* link in the **Product Name** column.

4. On the product management page for the *Apple jam 8 oz.* product, which opens, review the **Images & Videos** section.

   Notice that the **Images** subsection contains only one image. In Step 1, you added it as an external link in the **Media URLs** table on the **eCommerce** tab of the *Stock Items* (IN202500) form. Images and videos added to this table are synchronized as part of the synchronization of the *Stock Item* entity.

   In the next steps, you will synchronize the images that you uploaded on the **Attributes** tab of the *Stock Items* form.

Step 5: Activating the Product Image Entity

To activate the *Product Image* entity, do the following:

1. Open the *BigCommerce Stores* (BC201000) form.

2. In the **Store Name** box of the Summary area, select *SweetStore*.

3. On the **Entity Settings** tab, select the unlabeled check box in the row of the *Product Image* entity.

4. On the form toolbar, click **Save**.

Step 5: Preparing the Image Data for Synchronization

To prepare the image data for synchronization, do the following:

1. Open the *Prepare Data* (BC501000) form.

2. In the **Store** box of the Summary area, select *SweetStore*.

3. In the **Prepare Mode** box, select *Full*.

   This setting controls which data will be loaded. *Full* indicates that all images will be prepared for synchronization, regardless of whether they were previously synchronized.

Note that images are synchronized only for stock, non-stock, and template items that have been synchronized with the BigCommerce store. If an item has not been synchronized, images added to it will not be synchronized during the synchronization of the *Product Image* entity.

4. Clear the **Start Date** box.

5. In the table, select the unlabeled check box in the row of the *Product Image* entity, and on the form toolbar, click **Prepare**.

6. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

   Notice that the **Prepared Records** column shows the number of synchronization records that have been prepared and are ready to be processed.

Step 6: Processing the Prepared Image Data

To process the image data prepared for synchronization, do the following:

1. While you are still viewing the *Prepare Data* (BC501000) form, click the link in the **Prepared Records** column in the row of the *Product Image* entity.

   The *Process Data* (BC501500) form opens with the *SweetStore* store and the *Product Image* entity selected in the Selection area. The table displays all the synchronization records of the *Product Image* entity that the system prepared in Step 5.

2. On the form toolbar, click **Process All** to process all synchronization records displayed in the table.

3. In the **Processing** dialog box, review the results of the processing, and click **Close** to close the dialog box.

Step 7: Reviewing the Synchronized Images

To review the images that have been exported for the *Apple jam 8 oz.* product, do the following:

1. While you are signed in to the BigCommerce store as the store administrator, in the left pane, click **Products > View** .

2. On the **View Products** page, which opens, click the *Apple jam 8 oz.* link in the **Product Name** column.

3. On the product management page for the *Apple jam 8 oz.* product, which opens, review the **Images & Videos** section.

   Notice that the **Images** subsection contains three images. One was added as an external link in the **Media URLs** table on the **eCommerce** tab of the *Stock Items* (IN202500) form, and exported as part of the synchronization of the *Stock Item* entity. The other two were uploaded on the **Attributes** tab of the *Stock Items* form, and exported as part of the synchronization of the *Product Image* entity.

4. In the left pane, click **View Store**.

5. On the storefront, in the list of categories, select **Jams**.

6. On the page of products of the *Jams* category, click the image of *Apple jam 8 oz.*. Notice that a thumbnail image is displayed for this product.

7. On the product detail page, review how the images are displayed.

> The display of images may differ depending on the theme applied to the store.

Lesson 3.4: Synchronization of Product Availability

Synchronizing Product Availability: General Information

Acumatica ERP Retail-Commerce Edition provides you with the ability to track the availability of stock items that you sell via the BigCommerce store and maintain in Acumatica ERP. You have the flexibility to configure which quantities of a stock item should be included in calculations of the quantity available for sale in the online store.

Learning Objectives

In this chapter, you will learn how to do the following:

- Define the availability settings to be applied by default to stock items, non-stock items, and template items exported to the BigCommerce store
- Define the availability settings for a particular stock item, non-stock item, or template item exported to the BigCommerce store
- Synchronize the availability of stock items, non-stock items, and template items between Acumatica ERP and the BigCommerce store

Applicable Scenarios

You define availability settings (which include the item purchasability settings in the online store and item availability settings in the inventory) and synchronize the availability of stock items, non-stock items and template items maintained in Acumatica ERP with the BigCommerce stores for the following purposes:

- To define whether a stock item, a non-stock item or a template item exported to the BigCommerce store should be made available for purchase
- To define whether the quantities of a stock item or a template item should be tracked and synchronized between Acumatica ERP and BigCommerce
- For stock items and template items with tracked quantities, to define whether a stock item or a template item should still be available for purchase if its available quantity becomes zero

Default Product Availability Settings

When you initially configure Acumatica ERP Retail-Commerce Edition, on the **Inventory Settings** tab of the *BigCommerce Stores* (BC201000) form, you specify the availability settings that are applied by default to non-stock, stock items, and template items when they are exported to the BigCommerce store.

You first define the default availability status that is assigned to items exported from Acumatica ERP. This status determines whether the exported item can be purchased in the BigCommerce store. To define the default availability status, you select one of the following options in the **Default Availability** box:

- *Set as Available (Track Qty)*: The stock items and template items exported to the BigCommerce store are available for purchase via the storefront, and their quantities are tracked, meaning that the items can be purchased only if their quantities are greater than zero. In BigCommerce, on the product management page for each of these items, the **This product can be purchased in my online store** option button (in the **Purchasability** section) and the **Track inventory** check box (in the **Inventory** section) are selected.

  For stock items, the available quantities are tracked on the product level (that is, the **On the product level** option button is selected under the **Track Inventory** check box). For template items, the available quantities are tracked on the level of matrix items (that is, the **On the variant level** option button is selected under the **Track Inventory** check box).

  The non-stock items exported to the BigCommerce store are available for purchase via the storefront, and their quantities are not tracked (that is, the **Track inventory** check box is cleared).
- *Set as Available (Don't Track Qty)*: The non-stock and stock items exported to the BigCommerce store are available for purchase via the storefront, and their quantities are not tracked. In BigCommerce, on the product management page for each of these items, the **This product can be purchased in my online store** option button (in the **Purchasability** section) is selected and the **Track inventory** check box (in the **Inventory** section) is cleared.
- *Set as Pre-Order*: The non-stock and stock items exported to the BigCommerce store are not available for purchase but customers can pre-order them. In BigCommerce, on the product management page for each of these items, the **This product is coming soon but I want to take pre-orders** option button (in the **Purchasability** section) is selected.
- *Set as Unavailable*: The non-stock and stock items exported to the BigCommerce store are not available for purchase. In BigCommerce, on the product management page for each of these items, the **This product cannot be purchased in my online store** option button (in the **Purchasability** section) is selected.

If you select the *Set as Available (Track Qty)* option in the **Default Availability** box, you need to also specify what action the system should perform with out-of-stock items (that is, with stock items whose quantities become zero). To do so, in the **When Qty Unavailable** box, you select one of the following options:

- *Do Nothing*: The system does not change the availability settings of the item. In BigCommerce, in the **Purchasability** section of the product management page, the **This product can be purchased in my online store** option button remains selected. However, the item cannot be included in sales orders.
- *Set as Disabled*: The system makes the item unavailable for purchase via the storefront. In BigCommerce, in the **Purchasability** section of the product management page, the **This product cannot be purchased in my online store** option button becomes selected.
- *Set as Pre-Order*: The system makes the item unavailable for purchase but available for pre-order. In BigCommerce, in the **Purchasability** section of the product management page, the **This product is coming soon but I want to take pre-orders** option button becomes selected.

If you have synchronized the *Product Availability* entity, when you modify any of the settings described in this section, the system resets the availability synchronization status for all synchronized items in the BigCommerce store, and you need to perform the full synchronization of the *Product Availability* entity again.

Availability Calculation

During the configuration of Acumatica ERP Retail-Commerce Edition, you can specify which item quantity in Acumatica ERP you want to be synchronized with the BigCommerce store for the items whose quantities are tracked. To do so, you select one of the following options in the **Availability Mode** box:

- *On Hand*: The system synchronizes the on-hand quantity stored at particular warehouses or warehouse locations.
- *Available for Shipping*: The system synchronizes the quantity available for shipping, which is calculated as the on-hand quantity minus the quantity on issues that have not been released yet, minus the quantity allocated for shipping, and minus the shipped quantity.
- *Available*: The system synchronizes the available quantity. You can configure the way the available quantity is calculated by using an availability calculation rule. For more information, see *Availability Calculation Rules: General Information*.

You also select whether quantity calculations should include available quantities from all warehouses or from only the specified warehouses or warehouse locations. To do so, in the **Warehouse Mode** box on the **Inventory Settings** tab of the *BigCommerce Stores* (BC201000) form, you select one of the following options:

- *All Warehouses*: To use for calculation the available quantities of the item from all warehouses
- *Specific Warehouses*: To use for calculation the available quantities from only the specified warehouses or warehouse locations.

  When you select this option, the system displays a table in which you should specify the needed warehouses and warehouse locations. If you specify a warehouse but do not specify any of its locations, quantities available from the entire warehouse are used for quantity calculations. If you specify multiple warehouses and warehouse locations, the quantities available from all specified warehouses and warehouse locations are used for quantity calculations.

  Multiple warehouses and warehouse locations require that the following features be enabled on the *Enable/Disable Features* (CS100000) form:

  - The *Multiple Warehouses* feature, which provides the functionality of working with multiple warehouses (including virtual warehouses)
  - The *Multiple Warehouse Locations* feature, which supports multiple locations for each warehouse

If you have synchronized the *Product Availability* entity, when you modify any of the settings described in this section, the system resets the availability synchronization status for all synchronized items in the BigCommerce store, and you need to perform the full synchronization of the *Product Availability* entity again.

Product-Specific Availability Settings

By default, the availability settings defined for the store on the *BigCommerce Stores* (BC201000) form are applied to all stock and non-stock items exported to the BigCommerce store. However, you can override the default values for a particular stock item on the **eCommerce** tab of the *Stock Items* (IN202500) form, for a particular non-stock item on the same tab of the *Non-Stock Items* (IN202000) form, and for a particular template item on the same tab of the *Template Items* (IN203000) form.

The options available for selection in the **Availability** box on the **eCommerce** tab are similar to the options of the **Default Availability** box on the *BigCommerce Stores* form with the following exceptions:

- The *Set as Available (Track Qty)* option does not appear in the **Availability** box for non-stock items.
- The *Store Default* option (which is not in the **Default Availability** box) is available in the **Availability** box for both stock and non-stock items. When this option is selected, the system applies the setting selected in the **Default Availability** box on the **Inventory Settings** tab of the *BigCommerce Stores* form.

  Because the tracking of quantities is not applicable to non-stock items, if **Default Availability** in the store settings is set to *Set as Available (Track Qty)* and **Availability** of a non-stock item is set to *Store Default*, after the non-stock item is exported to the BigCommerce store, it is available for purchase but its quantity is not tracked.

Additionally, for a stock item, if the *Set as Available (Track Qty)* option is selected in the **Availability** box on the **eCommerce** tab, you can also specify the action that the system should perform if after the synchronization of the *Product Availability* entity, the item has an available quantity of zero. The available options include all options of the **When Qty Unavailable** box on the **Inventory Settings** tab of the *BigCommerce Stores* form, as well as the *Store Default* option, which (if selected) indicates that the setting specified in the box of the same name on the *BigCommerce Stores* form should be applied. For information about the store's default settings, see *Default Product Availability Settings*.

Synchronization of Product Availability

Depending on the item type, data about the product purchasability of an item in the online store is exported from Acumatica ERP to the BigCommerce store as part of the synchronization of the *Stock Item*, *Non-Stock Item*, or *Template Item* entity. During the export, the system updates the availability settings of each item exported to BigCommerce based on the option selected in the **Availability** box on the **eCommerce** tab of the *Non-Stock Items* form (if the item is a non-stock item), the *Stock Items* form (if the item is a stock item), or the *Template Items* form (if the item is a template item). If the *Store Default* option is selected, the system uses the value specified in the **Default Availability** box on the **Inventory Settings** tab of the *BigCommerce Stores* (BC201000) form.

The status of an item in Acumatica ERP affects the purchasability status of the item in BigCommerce. If the item's status in Acumatica ERP is *Inactive*, *No Sales*, or *Marked for Deletion*—that is, if any of these options is selected in the **Status** box in the Summary area of the *Non-Stock Items* form, the *Stock Items* form, or the *Template Items* form—after the synchronization of the relevant entity, in the **Purchasability** section of the product management page of the item in the BigCommerce store, the **This product cannot be purchased in my online store** option button is selected, regardless of the **Availability** setting of this item in Acumatica ERP.

Data about the product availability in the inventory is exported from Acumatica ERP to the BigCommerce store when the *Product Availability* entity is synchronized. The synchronization process affects only the items that have **Availability** set to *Set as Available (Track Qty)* or *Set as Available (Don't Track Qty)*. For stock items and template items whose quantities are configured to be tracked, the system also exports the item quantities calculated based on the settings specified in the **Availability Mode** and **Warehouse Mode** boxes on the **Inventory Settings** tab of the *BigCommerce Stores* form. For more information about the calculation of available quantities, see *Availability Calculation*.

Synchronizing Product Availability: Activity

In this activity, you will specify the default availability settings for the BigCommerce store, specify item-specific availability settings for particular stock items, export product availability data to the BigCommerce store, and review the results of the export.

Story

Suppose that the SweetLife Fruits & Jams company sells several kinds of jams in its online store. Some jams need to always be available for purchase online, while the others are made available for purchase online only when there is enough stock. Acting as an implementation consultant helping SweetLife to set up the integration of Acumatica ERP with the BigCommerce store, you want to explore how various availability settings specified for stock items affect the results of the synchronization of the *Product Availability* entity between Acumatica ERP and BigCommerce.

Configuration Overview

For the purposes of this activity, the following features have been enabled on the *Enable/Disable Features* (CS100000) form:

- *Multiple Warehouses*, which provides the functionality of working with several warehouses (including virtual warehouses)
- *Multiple Warehouse Locations*, which supports multiple locations for each warehouse

On the *Warehouses* (IN204000) form, the *RETAIL* warehouse and the *JS1* warehouse location have been configured.

On the *Stock Items* (IN202500) form, the following stock items have been configured in the system and added to the appropriate locations: *BANJAM08*, *BANJAM96*, *PEARJAM08*, *PEARJAM96*, *PLUMJAM08*, *PLUMJAM96*, and *CHERJAM96*.

Process Overview

You will update the default availability settings for the BigCommerce store on the *BigCommerce Stores* (BC201000) form. Then you will review and update the availability settings specific to particular stock items on the *Stock Items* (IN202500) form. On the Storage Details by Item Warehouse Location (IN408055) form, you will review the quantities of stock items available in the *RETAIL* warehouse. After that, on the *Prepare Data* (BC501000) form, you will synchronize the *Product Availability* entity with the BigCommerce store. Once the synchronization is complete, you will review the availability settings and quantities of the exported stock items in the BigCommerce store.

System Preparation

Before you complete the instructions in this activity, do the following:

1. Make sure that the following prerequisites have been met:
    - The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.

- The connection to the BigCommerce store has been established and the initial configuration has been performed, as described in *Initial Configuration: To Establish and Configure the Store Connection*.
- The entities have been prepared for synchronization, as described in *Preparing Entities for Synchronization: Implementation Activity*.

2. Launch the Acumatica ERP website with the *U100* dataset preloaded, and sign in with the following credentials:

- Username: *gibbs*
- Password: *123*

Step 1: Updating the Default Availability Settings

To specify the availability settings that the system will apply by default to stock items and non-stock items exported from Acumatica ERP to the BigCommerce store, do the following:

1. Open the *BigCommerce Stores* (BC201000) form.

2. On the **Entity Settings** tab, select the unlabeled check box in the row of the *Product Availability* entity.

3. On the **Inventory Settings** tab, specify the following settings:

- **Default Availability**: *Set as Available (Track Qty)*
- **When Qty Unavailable**: *Set as Pre-Order*
- **Availability Mode**: *Available for Shipping*
- **Warehouse Mode**: *Specific Warehouses*
- **Warehouse**: *RETAIL*
- **Location ID**: *JS1*

With these settings, by default, a stock item exported to the BigCommerce store will be available for purchase through the storefront, and its quantity will be tracked. For each item, only its quantity available for shipping at the *F1J1* location in the *RETAIL* warehouse is synchronized with the BigCommerce store. After the synchronization of the *Product Availability* entity, if the stock item's quantity becomes zero, the stock item will no longer be available for purchase in the BigCommerce store, but customers will be able to place pre-orders.

4. On the form toolbar, click **Save** to save the settings.

Step 2: Reviewing Availability Settings and Available Quantities of Items

To review the availability settings specific to the stock items, do the following:

1. Open the *Stock Items* (IN202500) form.

2. In the Summary area of the form, in the **Inventory ID** box, select *BANJAM96*.

3. On the **eCommerce** tab, make sure the following settings are specified:

- **Availability**: *Store Default*

- **When Qty Unavailable**: *Store Default*

  With these settings specified, when you synchronize the *Product Availability* entity with the BigCommerce store, the system will apply the availability settings that you specified on the *BigCommerce Stores* (BC201000) form in Step 1.

4. Repeat Instructions 2 and 3 for each of the stock items listed in the following table, and specify the **Availability** and **When Qty Unavailable** settings as indicated.

Stock Item	Availability	When Qty Unavailable
BANJAM08	*Store Default*	*Store Default*
PEARJAM96	*Set as Available (Track Qty)*	*Set as Disabled*
PEARJAM08	*Set as Available (Track Qty)*	*Set as Disabled*
PLUMJAM96	*Set as Available (Track Qty)*	*Do Nothing*
PLUMJAM08	*Set as Available (Track Qty)*	*Do Nothing*
CHERJAM96	*Set as Pre-Order*	N/A

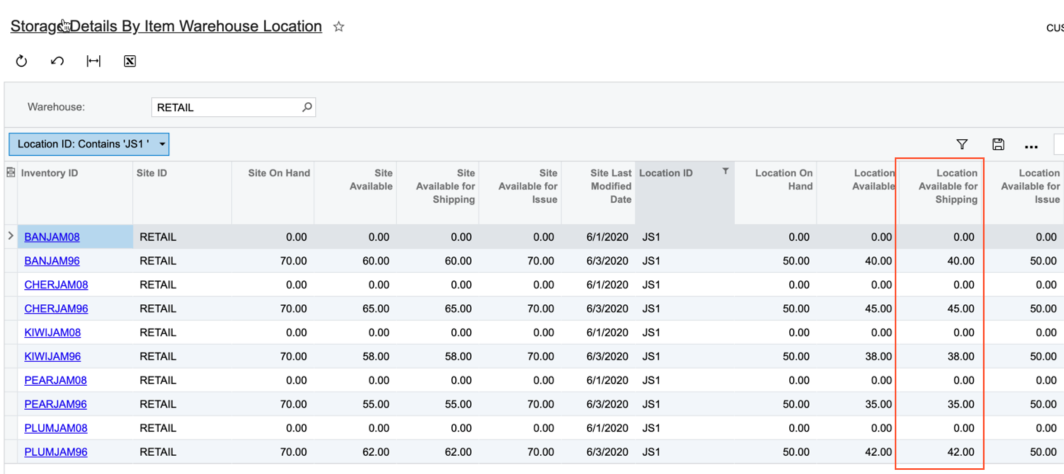
5. Open the Storage Details by Item Warehouse Location (IN408055) form.

6. In the Selection area, in the **Warehouse** box, select *RETAIL*.

The system displays the quantities of all items stored in the *RETAIL* warehouse.

7. Click the header of the **Location ID** column, and in the dialog box that opens, select *Equals*, type `JS1` in the text box, and click **OK**.

The system now displays only the items that are stored in the *JS1* warehouse location. Because in Step 1 you have set the **Availability Mode** setting to *Available for Shipping*, the quantities of the items displayed in the **Location Available for Shipping** column (which is shown in the following screenshot) will be synchronized with the BigCommerce store. Notice that the *BANJAM96*, *PEARJAM96*, and *PLUMJAM96* stock items are available at the *JS1* location (a nonzero quantity is displayed for each of these items in the **Location Available for Shipping** column), whereas the *BANJAM08*, *PEARJAM08*, and *PLUMJAM08* stock items have zero quantities.


Storage Details By Item Warehouse Location

Warehouse: RETAIL

Location ID: Contains 'JS1'

Inventory ID	Site ID	Site On Hand	Site Available	Site Available for Shipping	Site Available for Issue	Site Last Modified Date	Location ID	Location On Hand	Location Available	Location Available for Shipping	Location Available for Issue
BANJAM08	RETAIL	0.00	0.00	0.00	0.00	6/1/2020	JS1	0.00	0.00	0.00	0.00
BANJAM96	RETAIL	70.00	60.00	60.00	70.00	6/3/2020	JS1	50.00	40.00	40.00	50.00
CHERJAM08	RETAIL	0.00	0.00	0.00	0.00	6/1/2020	JS1	0.00	0.00	0.00	0.00
CHERJAM96	RETAIL	70.00	65.00	65.00	70.00	6/3/2020	JS1	50.00	45.00	45.00	50.00
KIWIJAM08	RETAIL	0.00	0.00	0.00	0.00	6/1/2020	JS1	0.00	0.00	0.00	0.00
KIWIJAM96	RETAIL	70.00	58.00	58.00	70.00	6/3/2020	JS1	50.00	38.00	38.00	50.00
PEARJAM08	RETAIL	0.00	0.00	0.00	0.00	6/1/2020	JS1	0.00	0.00	0.00	0.00
PEARJAM96	RETAIL	70.00	55.00	55.00	70.00	6/3/2020	JS1	50.00	35.00	35.00	50.00
PLUMJAM08	RETAIL	0.00	0.00	0.00	0.00	6/1/2020	JS1	0.00	0.00	0.00	0.00
PLUMJAM96	RETAIL	70.00	62.00	62.00	70.00	6/3/2020	JS1	50.00	42.00	42.00	50.00

Figure: Quantities available for shipping at the JS1 location of the RETAIL warehouse

Step3: Synchronizing the Product Availability Entity

To synchronize the availability settings and the quantities of the stock items you reviewed in Step 2, do the following:

1. Open the *Prepare Data* (BC501000) form.
2. In the Summary area, make sure the following settings are specified:
   - **Store**: *SweetStore*
   - **Prepare Mode**: *Full*
3. In the table, select the unlabeled check box in the rows of the *Stock Item* entity and the *Product Availability* entity.

   Before the quantity of a stock item and its availability settings can be exported, the stock item itself must be synchronized. If you have previously synchronized the stock items that you reviewed in Step 2, you can select the check box for only the *Product Availability* entity.
4. On the form toolbar, click **Prepare**.
5. In the **Processing** dialog box, which opens, review the results and click **Close**
6. On the *Process Data* (BC501500) form, on the form toolbar, click **Process All** to process all out-of-sync synchronization records.
7. In the **Processing** dialog box, which opens, review the results of the processing and click **Close** to close the dialog box.

Step 4: Reviewing the Synchronized Data

To review the synchronized availability data in the BigCommerce store, do the following:

1. Sign in to the BigCommerce store as an administrator.
2. In the left pane of the control panel, click **Products > View**.
3. On the **View Products** page, which opens, review the *BANJAM96* and *BANJAM08* stock items.

   In the **Stock Level** column, notice that for the *BANJAM96* stock item, the green bar is displayed, which indicates that the quantity of this item is tracked and the item is in stock. For *BANJAM08*, the bar in the **Stock Level** column is gray, meaning that the item's quantity is tracked and the item is currently out of stock, and *Pre-Order* is displayed right of the product name.
4. Click the *Banana jam 96 oz.* link in the **Product Name** column.
5. On the product management page for the *BANJAM96* stock item, notice the following:
   - In the **Inventory** section, the **Track Inventory** check box is selected, the **On the product level** option button is selected, and *40* is displayed in the **Stock** box.
   - In the **Purchasability** section, the **This product can be purchased in my online store** option button is selected.
6. On the **View Products** page, click the *Banana jam 8 oz.* link in the **Product Name** column.
7. On the product management page for the *BANJAM08* stock item, notice the following:

- In the **Inventory** section, the **Track Inventory** check box is selected, the **On the product level** option button is selected, and *0* is displayed in the **Stock** box.
- In the **Purchasability** section, the **This product is coming soon but I want to take pre-orders** option button is selected.

8. Repeat Instructions 6 and 7 to review the *PEARJAM96*, *PEARJAM08*, *PLUMJAM96*, *PLUMJAM08*, and *CHERJAM08* stock items.

The following table summarizes the settings and available quantities that have been set for the exported stock items.

Item Name	Inventory	Stock	Purchasability
PEARJAM96	**Track inventory** check box selected	*35*	**This product can be purchased in my online store**option button selected
PEARJAM08	**Track inventory** check box selected	*0*	**This product cannot be purchased in my online store** option button selected
PLUMJAM96	**Track inventory** check box selected	*42*	**This product can be purchased in my online store** option button selected
PLUMJAM08	**Track inventory** check box selected	*0*	**This product can be purchased in my online store** option button selected
CHERJAM96	**Track inventory** check box cleared	N/A	**This product is coming soon but I want to take pre-orders** option button selected

Lesson 3.5: Synchronization of Sales Prices

Synchronizing Sales Prices: General Information

Acumatica ERP Retail-Commerce Edition provides flexible ways of managing sales prices. You can assign prices to stock and non-stock items, maintain specific prices for particular customers or groups of customers with similar buying habits, or assign discounted prices for customers buying in bulk. For more information about the types of prices supported in Acumatica ERP, see *Sales Prices: General Information*.

Learning Objectives

In this section, you will learn how to synchronize sales price lists between Acumatica ERP and the BigCommerce store.

Applicable Scenarios

You might want to synchronize sales prices from Acumatica ERP with the BigCommerce store in the following cases:

- You maintain base prices of non-stock and stock items in Acumatica ERP and want to quickly update sales prices of the corresponding products in BigCommerce.
- You offer special prices to customers that are assigned to a particular customer price class and want to continue offering the same prices in the BigCommerce store.

Types of Sales Prices Synchronized with BigCommerce

The following basic types of prices that you maintain in Acumatica ERP can be synchronized with the BigCommerce store:

- *Default prices*: The default price of a particular stock item is specified on the *Stock Items* (IN202500) form and is exported to the BigCommerce store during the synchronization of the stock item. Similarly, the default price of a non-stock item is maintained on the *Non-Stock Items* (IN202000) form and is exported to the BigCommerce store when the non-stock item is synchronized.

  In the BigCommerce store, the default prices of stock and non-stock items are displayed in the **Default Price** box in the **Pricing** subsection of the **Product Information** section on the **View Products** page for a particular stock or non-stock item.

- *Base prices*: Base prices—that is, the prices that are not specific to any customer—are maintained on the *Sales Prices* (AR202000) form or the *Sales Price Worksheets* (AR202010) form and are exported to the BigCommerce store as a separate entity, *Base Sales Price*.

  Sales prices of the *Base* type imported from Acumatica ERP are saved in BigCommerce in the **Sale Price** box in the **Pricing** subsection of the **Product Information** section on the **View Products** page for a particular stock or non-stock item.

  In BigCommerce, the sales price has a higher priority than the default price. Therefore, when the **Sale Price** box is populated for an item, the price specified in this box is the effective price of the item.

- *Prices specific to a customer price class*: Prices that are effective for a particular group of customers—that is, prices that have the *Customer Price Class* type—are defined on the *Sales Prices* (AR202000) form or the *Sales Price Worksheets* (AR202010) form and are exported to the BigCommerce store as a separate entity, *Price List*.

  Customer Price Classes maintained in Acumatica ERP correspond to customer groups on the **Customer Groups** page, which you open by clicking **Customers > Customer Groups** in the left pane. Prices of the *Customer Price Class* type defined for a particular price class imported from Acumatica ERP are saved in the BigCommerce store as a price list for the corresponding customer group on the **View Price Lists** page.

  Prices in a price list are similar to sales prices but are created to be specific to a customer group in BigCommerce. The price of a product defined in a price list for a customer group has a higher priority than the default price or the sales price of the product specified on the product page. The price specific to a customer group is displayed to a customer on the product listing page on the storefront if the customer belongs to the customer group and is signed in.

Synchronization of Volume-Based Prices

In Acumatica ERP, if the *Volume Pricing* feature is enabled on the *Enable/Disable Features* (CS100000) form, you can define prices that are dependent on the quantity of the products being purchased by a customer. These prices can be defined for all customers (that is, they have the *Base* type) or for particular customer classes (that is, they have the *Customer Price Class* type). For more information on how volume-based pricing works in Acumatica ERP, see *Automatic Price Selection: To Explore Volume-Based Prices*.

Volume prices are exported to the BigCommerce store according to their type, as described in the previous section.

Imported volume-dependent prices of the *Base* type defined for a product appear in BigCommerce as a table under **Bulk Pricing** in the **Pricing** subsection on the **View Products** page of a particular product. This table contains the **Min Quantity** column (which corresponds to a quantity break point in Acumatica ERP) and the **Unit Price** column. These prices override the sales price when the quantity of the purchase is higher than the minimum quantity specified for the unit price in the table.

Imported volume-dependent prices of the *Customer Price Class* defined for a product appear in BigCommerce in a price list for a particular customer group. To open the price list, you select **Products > Price Lists** in the left pane to open the **Price Lists** page, and then click the name of the price list that corresponds to the customer group. To bring up a table for volume-dependent prices for a particular product, you click the cell in the **New Bulk Pricing** column for this product. The volume-dependent prices defined for a product in a price list for a particular group override all other prices when the right combination of the customer, product, and quantity is met (that is, when the customer belonging to the customer group is signed in, and buys the product in quantities corresponding to one of the quantity tiers for which volume-based prices have been defined).

Limitations of Sales Price Synchronization

You can export price lists from Acumatica ERP only to BigCommerce stores on the *Enterprise* subscription plan. For information about BigCommerce subscription plans and available features, see the *Pricing* page.

The following price types maintained in Acumatica ERP can be exported to BigCommerce:

- *Prices specific to a customer price class*: Before you can export the list of prices specific to a customer price class (that is, to synchronize the *Price List* entity) from Acumatica ERP, you must first synchronize the *Customer Price Class* entity. For the price list specific to a customer group to be functional in BigCommerce, you must export customers (that is, synchronize the *Customer* entity) assigned to the corresponding customer price class in Acumatica ERP.
- *Customer-specific prices*: Prices defined in Acumatica ERP for a particular customer—that is, prices that have the *Customer* type—cannot be exported to the BigCommerce store. If you want to provide a particular customer with the ability to purchase products at individual prices, create a separate customer price class for this customer. This way, the prices that you define for this customer price class will be available for only the customer that you add to this customer price class.
- *UOM-specific prices*: In Acumatica ERP, if the *Multiple Units of Measure* feature is enabled on the *Enable/Disable Features* (CS100000) form, you can define a sales price of an item for each of the units of measure in which your company sells this item. However, only prices defined for the base UOM can be exported to BigCommerce.

- *Warehouse-specific prices*: If the *Multiple Warehouses* feature is enabled on the *Enable/Disable Features* form, prices that are defined to apply only when products are sold from a particular warehouse—that is, when a specific warehouse ID is selected in the **Warehouse** column for a particular price—are not exported to the BigCommerce store.

> Only prices that are effective on the date of the synchronization are exported; historical prices and prices with an effective date in the future are not synchronized. If an item has multiple prices of the same type that are effective on the date of the synchronization, the price of the highest priority is imported. For example, if a regular base price of $5 and a promotional base price of $4.50 for the same item are effective on January 31, 2020, which is the date when you synchronize the *Base Sales Price* entity, the promotional price of $4.50 will be exported to the BigCommerce store. For more information about price priorities, see *Automatic Price Selection: Rules of Price Selection* and *Automatic Price Selection: To Explore Regular and Promotional Prices*.

Synchronizing Sales Prices: Process Activity

In this activity, you will explore how sales prices maintained in Acumatica ERP are exported to and saved in the BigCommerce store.

Story

Suppose that SweetLife Fruits & Jams wants to maintain all of its sales prices, including the prices of products sold in the BigCommerce online store, in Acumatica ERP. As an implementation consultant, you want to test how different types of prices are exported from Acumatica ERP to the BigCommerce store.

Configuration Overview

For the purposes of this activity, the following features have been enabled on the *Enable/Disable Features* (CS100000) form:

- *Volume Pricing*
- *Matrix Items*

The following entities, which you will use in this activity, have been predefined in the system:

- The following stock items on the *Stock Items* (IN202500) form: *APJAM32*, *BANJAM08*. *PEARJAM96*, and *BANJAM96*
- The *LOCAL* customer price class on the *Customer Price Classes* (AR208000) form
- The *COFFEESHOP* customer, to which the *LOCAL* customer price class is assigned, on the *Customers* (AR303000) form
- The *JUICE* template item on the *Template Items* (IN203000) form
- The following matrix items on the *Stock Items* form: *APL-16OZ-GBT*, *CHR-32OZ-GBT*. and *ORG-16OZ-GBT*

The following prices have been defined for the listed stock items on the *Stock Items* form:

Inventory ID	Default Price	MSRP
APJAM32	16.6	0
BANJAM08	4.10	4.15
PEARJAM96	45.15	0

The following prices have been defined for the listed stock items on the *Sales Prices* (AR202000) form:

Inventory ID	Price Type	Price Code	UOM	Break Qty	Price
PEARJAM96	*Base*		PIECE	0	45.00
PEARJAM96	*Customer Price Class*	*LOCAL*	PIECE	0	43.70
BANJAM96	*Base*		*PIECE*	0	45.00
BANJAM96	*Base*		*PIECE*	5	43
BANJAM96	*Base*		*PIECE*	10	40

Process Overview

First, you will review the default prices and MSRP that have been specified for particular stock items on the *Stock Items* (IN202500) form. After that, you will review the sales prices of the *Base* and *Customer Price Class* types, including volume-dependent prices and prices assigned to some matrix items based on the *JUICE* template item, defined for particular items on the *Sales Prices* (AR202000) form. Then you will activate the needed entities for synchronization and synchronize stock items, template items, base sales prices, and price lists with the BigCommerce store by using the *Prepare Data* (BC501000) and *Process Data* (BC501500) forms. Once the synchronization is complete, you will review the prices of the items in the control panel of the BigCommerce store.

System Preparation

Before you start this activity, do the following:

1. Make sure that the following prerequisites have been met:

- The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.
- The connection to the BigCommerce store is established and the initial configuration has been performed, based on the steps described in *Initial Configuration: To Establish and Configure the Store Connection*.

2. Sign in to the Acumatica ERP instance with the *U100* dataset preloaded by using the following credentials:

- Username: *gibbs*
- Password: *123*

Step 1: Reviewing the MSRP and Default Prices of Stock Items

To review the MSRP and default prices defined for *BANJAM08*, *APJAM32*, and *PEARJAM96* stock items in Acumatica ERP, do the following:

1. Open the *Stock Items* (IN202500) form.
2. In the Summary area, in the **Inventory ID** box, select *BANJAM08*.
3. On the **Price/Cost** tab, in the **Price Management** section, notice the default price defined for the *BANJAM08* item, which is $4.10, and the MSRP, which is $4.15.
4. In the Summary area, in the **Inventory ID** box, select *APJAM32*.
5. On the **Price/Cost** tab, in the **Price Management** section, notice that for this stock item, only the default price is defined ($16.60), and the MSRP is zero.
6. In the Summary area, in the **Inventory ID** box, select *PEARJAM96*.
7. On the **Price/Cost** tab, in the **Price Management** section, notice that for the *PEARJAM96* stock item, only the default price is defined ($45.15), and the MSRP is zero.

Step 2: Reviewing and Adding the Sales Prices Defined for Stock Items

To review the sales prices defined for stock items in Acumatica ERP, do the following:

1. Open the *Sales Prices* (AR202000) form.
2. In the Selection area, in the **Inventory ID** box, select *PEARJAM96*.

   This is the stock item that you reviewed last in Step 1. In the **Price** column of the table, notice that there are two effective prices for this stock item. The first price, $45.00, has the *Base* type and thus is effective for all customers. The other price, $43.7, has the *Customer Price Class* type and the *LOCAL* code, which indicates that this price applies only for customers that belong to the *LOCAL* customer price class.
3. In the Selection area, in the **Inventory ID** box, select *BANJAM96*.

   Notice that for the *BANJAM96* stock item, the table contains three different prices of the *Base* type, which depend on the value in the **Break Qty** column. When a customer buys 1 to 4 jars of banana jam, each jar will cost $45; for the purchase of 5 to 9 jars, the effective price will be $43, and if a customer buys 10 or more jars, each will cost $40.
4. In the Selection area, clear the **Inventory ID** box, and in the **Item Class ID** box, select *MJUICE*.
5. In the table, click **Add Row** and add three price records as indicated in the following table.

Price Type	Inventory ID	UOM	Price	Effective Date
Base	*APL-16OZ-GBT*	*EA*	18	*3/2/2020*
Base	*CHR-32OZ-GBT*	*EA*	30	*3/2/2020*
Base	*ORG-16OZ-GBT*	*EA*	20	*3/2/2020*

   These stock items are matrix items that were generated in Acumatica ERP based on the *JUICE* template item. You can maintain individual sales prices for each of the matrix items.

Step 3: Activating the Needed Entities

To activate the *Customer Price Class*. *Base Sales Price* and *Price List* entities, do the following:

1. Open the *BigCommerce Stores* (BC201000) form.

2. On the **Entity Settings** tab, select the unlabeled check box in the rows of the *Customer Price Class*. *Base Sales Price* and *Price List* entities.

3. On the form toolbar, click **Save**.

Step 3: Synchronizing the Prices of Stock Items

To synchronize the *JUICE* template item (including matrix items that have been generated based on this item), the default prices, the MSRP, and the sales prices of the stock items, do the following:

1. Open the *Prepare Data* (BC501000) form.

2. In the Selection area, specify the following settings:

    - **Store**: *SweetStore*

    - **Prepare Mode**: *Full*

3. In the table, select the unlabeled check box for each of the following entities:

    - *Customer Price Class*

      You select this entity because one of the sales prices you reviewed in Step 2 is defined for the *LOCAL* customer price class, so you need to export the customer price class before syncing price lists that belong to this customer price class.

    - *Price List*

      The price lists that belong to the *LOCAL* customer price class are synchronized when you run the process for the *Price List* entity.

    - *Customer*

      This entity is included in this synchronization process so that the customers assigned to the *LOCAL* customer price class are exported to the BigCommerce store. You will use a customer of this customer price class (*FourStar Coffee & Sweets Shop*) later in this activity.

    - *Stock Item*

      You select this entity for inclusion because the default prices and MSRP are exported as part of the stock item data.

    - *Template Item*

      Matrix items, for which you created the prices in Step 2, are exported as part of the synchronization of the *Template Item* entity.

    - *Base Sales Price*

      When you process this entity, the sales prices of the *Base* type defined on the *Sales Prices* (AR202000) form are exported.

4. On the form toolbar, click **Prepare**.

5. In the **Processing** dialog box, which opens, review the results of the processing, and if the entities have been processed successfully, click **Close** to close the dialog box.

6. On the *Process Data* (BC501500) form, on the form toolbar, click **Process All** to process all out-of-sync synchronization records.

7. In the **Processing** dialog box, which opens, review the results of the processing and click **Close** to close the dialog box.

Step 4: Reviewing the Exported Default Price of a Stock Item

To view the default price of the *APJAM32* in the BigCommerce store, do the following:

1. Sign in to the BigCommerce store as an administrator.

2. In the left pane, click **Products > View**.

3. On the **View Products** page, which opens, locate the *APJAM32* item in the list of products, and in the row of this item, click the link in the **Product Name** column.

4. On the product management page, which opens, in the **Pricing** subsection of the **Product Information** section, click the **Show Advanced Pricing** link.

   Notice that for this product, only the default price, $16.60, is specified.

5. At the top of the page, click **View on Storefront**.

6. On the product listing page on the storefront, which opens, notice that the default price, $16.60, is the price at which the product is sold.

Step 5: Reviewing the Exported Default Price and the MSRP of a Stock Item

To view the default price and the MSRP of the *BANJAM08* in the BigCommerce store and explore how these prices appear on the product listing page, do the following:

1. On the **View Products** page, in the list of products, locate the *BANJAM08* item, and in the row of this item, click the link in the **Product Name** column.

2. On the product management page, which opens, in the **Pricing** subsection of the **Product Information** section, click the **Show Advanced Pricing** link.

   Notice that the default price of the item is $4.10 and the MSRP is $4.15.

3. At the top of the page, click **View on Storefront**.

4. On the product listing page, which opens, notice that both the MSRP and the default price are displayed.

   > The MSRP is displayed for the item and appears struck through because it is higher than the other effective price of the item.

Step 6: Reviewing the Exported Volume-Based Prices of an Item in the BigCommerce Store

To view the sales prices of the *BANJAM96* item that depend on the quantity being purchased, do the following:

1. On the **View Products** page, in the list of products, locate the *BANJAM96* item, and in the row of this item, click the link in the **Product Name** column.

2. On the product management page, which opens, in the **Pricing** subsection of the **Product Information** section, click the **Show Advanced Pricing** link.

   Notice the price in the **Sale Price** box, $45, which corresponds to the price with a break quantity of 0 defined on the *Sales Prices* (AR202000) form of Acumatica ERP. In the **Bulk Pricing** section, view the two rows of bulk pricing options, which correspond to the two sales prices with break quantities of 5 and 10 defined for the item on the *Sales Prices* form.

3. At the top of the page, click **View on Storefront**.

4. On the product listing page, which opens, notice that $45 is displayed as the item's price.

5. Click the link **Buy in bulk and save** under **Bulk Pricing**.

6. In the **Bulk Discount Rates** dialog box, which opens, review the description and the following bulk discount options:

   - *Buy 5 - 9 and pay only $43.00 each*
   - *Buy 10 or above and pay only $40.00 each*

Step 7: Reviewing the Exported Prices for Matrix Items Based on the Template Item

To view the sales prices defined for matrix items that are variants of the *JUICE* template item in the BigCommerce store, do the following:

1. On the **View Products** page, in the list of products, locate the *JUICE* template item, and in the row of this item, click the link in the **Product Name** column.

2. On the product management page, which opens, in the **Variations** subsection of the **Product Options** section, review the matrix items that have been exported along with the *JUICE* template item, and notice that only three SKUs—*APL-16OZ-GBT*, *CHR-32OZ-GBT*, and *ORG-16OZ-GBT* (which are the stock items for which you created the sales prices in Step 2)—have nonzero values in the **Sales Prices** column and have the **Purchasable** check box selected.

3. At the top of the page, click **View on Storefront**.

4. On the product listing page, which opens, notice that the price is displayed as a price range between the cheapest and most expensive variants, $18.00 to $30.00.

5. Select the following variant options from the drop-down lists:

   - **Ingredients**: *Orange*
   - **Package**: *Glass bottle*
   - **Volume**: *16 fl oz*

   Notice that as soon as you have selected the options, the price changes to $20, which is the price of the item that matches all three criteria (*ORG-16OZ-GBT*).

Step 8: Reviewing the Exported Prices Specific to a Particular Customer Price Class

To review the prices of the *PEARJAM96* stock item in the BigCommerce store, do the following:

1. On the **View Products** page, in the list of products, locate the *PEARJAM96* stock item, and in the row of this item, click the link in the **Product Name** column.
2. On the product management page, which opens, in the **Pricing** subsection of the **Product Information** section, click the **Show Advanced Pricing** link.

   Notice that two prices are displayed in this section: the default price, which is the default price of the stock item maintained on the *Stock Items* (IN202500) form; and the sales price, which is the sales price of the *Base* type defined for the stock item on the *Sales Prices* (AR202000) form.
3. At the top of the page, click **View on Storefront**.
4. On the product listing page, which opens, notice that the sales price of $45 is displayed as the item's price, and the default price is displayed as the previous price.
5. In the control panel of the store, in the left pane, click **Customers > Customer Groups**.
6. On the **Customer Groups** page, find the row of the *LOCAL* customer group.

   Customer price classes defined in Acumatica ERP are mapped to customer groups in the BigCommerce store. The **Discount** column contains the link to the price list whose prices override the prices specified on the product page. In the **Customers in Group** column, notice the number of customers that have been assigned to the customer group (or customer price class).
7. In the row of the *LOCAL* customer group, click the *LOCAL* link in the **Discount** column.

   > You can view the price lists by clicking **Products > Price Lists** in the left pane.
8. On the **View Price Lists / LOCAL (USD)** page, which opens, review the prices on the **Prices** tab.

   Notice that for the *PEARJAM96* item, the **New Sale Price** column contains a value of $43.70, which is the price of the item defined for the *LOCAL* customer price class on the *Sales Prices* form.
9. On the **Customer Groups** page, in the row of the *LOCAL* customer group, click the *View* link in the **Customers in Group** column.
10. On the **View Customers** page, which opens, click the link with the name of the *FourStar Coffee & Sweets Shop* customer.
11. On the **Edit Customer** page, which opens, in the **Customer Password** section, specify the customer password of `!Q123456` in both the **Password** box and the **Confirm Password** box.
12. At the bottom of the page, click **Save & Exit** to save your changes.
13. On the storefront, sign in as the *FourStar Coffee & Sweets Shop* customer by using the following credentials:
    - **Email Address**: `salesperson@fourstars.example.com`
    - **Password**: `!Q123456`
14. Open the product listing page for the *PEARJAM96* stock item, and review the price of the item.

    Notice that the item is available for purchase at $43.7, which is the price specific to the *LOCAL* customer price class (or customer group) to which the *FourStar Coffee & Sweets Shop* is assigned.

15. Sign out of the *FourStar Coffee & Sweets Shop* account.

Part 4: Synchronization of Orders

Synchronizing Orders: General Information

You can import sales orders placed in the BigCommerce store to Acumatica ERP for further processing.

Learning Objectives

In this chapter, you will learn how to do the following:

- Import sales orders from the BigCommerce store.
- Configure gift certificates to be used as payment methods.
- Import sales orders with discounts from the BigCommerce store.
- Configure the synchronization of taxes between Acumatica ERP and the BigCommerce store.

Applicable Scenarios

The synchronization of orders is the main scenario for the integration between an ERP system and an external e-commerce system. You set up the import of orders from the BigCommerce store to Acumatica ERP so that you can process the imported orders further, for example, create a shipment for it, invoice the customer, and process the payment.

Configuration of Order Synchronization

To configure the minimal settings for sales order synchronization between Acumatica ERP and the BigCommerce store, you do the following:

1. On the *BigCommerce Stores* (BC201000) form, on the **Entity Settings** tab, you activate the *Sales Order* entity by selecting the **Active** check box in its row.
2. On the **Order Settings** tab, you select the branch that will appear on imported sales orders in the **Branch** box, and the order type to be used for creating orders on order import in the **Order Type for Import** box.
3. To accept returns and import them to Acumatica ERP, you specify the order type for return orders in the **Return Order Type** box.
4. In the **Order Time Zone** box, you specify the time zone that the system will use for each sales order imported from the BigCommerce store when it is created in Acumatica ERP. The order time zone is needed to determine the correct date and time of the order if Acumatica ERP and the BigCommerce store are located in different time zones.

Synchronization of Sales Orders

Orders are imported from an external e-commerce system during the synchronization of the *Order* entity. For a sales order to be synchronized successfully, the following conditions must be met:

- The customer that placed an online sales order exists in Acumatica ERP. That is, if the order is placed by a registered customer, the customer must be synchronized; if the sales order is a guest order, the guest customer record must be defined. For more information about the synchronization of customers, see *Synchronizing Customers: General Information*.

- Products (that is, stock and non-stock items) included in the sales order have been synchronized with or created in Acumatica ERP. During the import of a sales order, the system searches for an inventory ID of an inventory item in Acumatica ERP that matches the product's SKU in the BigCommerce store. If no matching inventory ID has been found, the system continues to search for a matching alternate ID (that is, an additional identifier of the item, which can be an identifier used by your company's customer or vendor, that is specified on the **Cross-Reference** tab of the *Stock Items* (IN202500) form for a stock item and of the *Non-Stock Items* (IN202000) form for a non-stock item). If the matching alternate ID has been found, the system inserts in the imported order an inventory item associated with this alternate ID. For more information about managing alternate IDs in Acumatica ERP, see *Managing Item Cross-References*. For more information about the synchronization of products, see *Synchronizing Products: General Information*.
- The shipping option selected during the order placement has been mapped with a ship via code in the **Shipping Option Mapping** table on the **Order Settings** tab of the *BigCommerce Stores* (BC201000) form.
- If taxes should be imported, taxes applied to the order or to the order lines have been configured in Acumatica ERP. For more information about the configuration of taxes, see *Synchronizing Orders: Setup of Tax Synchronization*.

Configuration of Gift Certificates

You can sell gift certificates in the BigCommerce store and then accept them as full or partial payments. To turn on this functionality, you perform the following steps:

1. In the control panel of the BigCommerce store, you enable the gift certificate functionality and define gift certificates that will be available to shoppers online.
2. On the **Order Settings** tab of the *BigCommerce Stores* (BC201000) form, in the **Gift Certificate Item** box, you specify the non-stock item that will represent sold gift certificates in imported sales orders.
3. On the **Payment Settings** tab, in the **Base Currency Payment Methods** table, you map the store payment method representing a gift certificate with a payment method defined in Acumatica ERP.

For step-by-step instructions for implementing gift certificates, see *Synchronizing Orders: To Sell and Accept Gift Certificates*.

Configuration of Discount Synchronization

When you configure the order synchronization settings, you have the option to select the level at which discounts that have been applied to an online sales order will be displayed in the order after it is imported to Acumatica ERP from the BigCommerce store. On the **Order Settings** tab of the *BigCommerce Stores* (BC201000) form, you can select in the **Show Discounts In** box one of the following options:

- *Line Discount*: Discounts applied to the order are distributed between the sales order lines and appear in the **Discount Amount** column on the **Details** tab of the *Sales Orders* (SO301000) form.
- *Document Discount*: Discounts applied to the order are aggregated and displayed on the **Discounts** tab of the *Sales Orders* form.

> This option can be selected only if the *Customer Discounts* feature is enabled on the *Enable/Disable Features* (CS100000) form.

For an example of configuring discounts in the BigCommerce store and importing an order with the discounts, see *Synchronizing Orders: To Import Orders with Discounts*.

Lesson 4.1: Import of Card Payments (Authorize.Net)

Synchronizing Orders: Import of Card Payments

In Acumatica ERP Retail-Commerce Edition, users can import and, if necessary, process debit and credit card payments from external e-commerce systems through integration with the Authorize.Net payment gateway.

Learning Objectives

In this chapter, you will learn how to do the following:

- Configure the mapping of card-based payment methods in Acumatica ERP with store payment methods.
- Import payments based on the card-based payment methods from the external e-commerce system
- Process credit card payments imported to Acumatica ERP

Applicable Scenarios

You import payments based on credit card payment methods if you want to accept payments by card in the online store as well as track and, if necessary, process the imported payments in Acumatica ERP.

Configuration of Credit Card Payment Processing for E-commerce Systems

Authorize.Net is a processing center that accepts transactions through an application programming interface and processes payments online. Before credit card payments can be imported from an external e-commerce system, you need to configure payment processing via Authorize.Net as follows:

1. *Configure the Authorize.Net processing center*. You set up the processing center on the *Processing Centers* (CA205000) form. Before you proceed with the configuration, you need to obtain the API login, signature key, and transaction key that you will use to connect to the Authorize.Net server. For instructions on setting up a processing center in Acumatica ERP, see *Integration with Authorize.Net Through the API Plug-in* and *To Configure the Authorize.Net Processing Center with the API Plug-in*.
2. *Configure a card-based payment method*. After you have configured the processing center, on the *Payment Methods* (CA204000) form, you need to create a payment method that will be associated with the processing center. If saving payment profiles is allowed for a customer class to which a particular customer belongs, the payment method will be used as a template for creating new customer payment methods. For more information about creating card-based payment methods, see *To Add a Payment Method for Payment Processing*.
3. *Configure the Authorize.Net payment gateway in the e-commerce system*. You set up the Authorize.Net payment provider in the e-commerce system using the same API login, signature key, and transaction key that you have used to configure the processing center in Step 1. For information about configuring payment providers in the external-system, refer to the e-commerce system's documentation.

4. *Map the card-based payment method with the payment methods configured in the e-commerce system.* You map payment methods between Acumatica ERP and the BigCommerce e-commerce system on the *BigCommerce Stores* (BC201000) form. When a payment is imported from the e-commerce system to Acumatica ERP, a prepayment is created on the *Payments and Applications* (AR302000) form based on the payment method from Acumatica ERP that was mapped to the payment method used for payment in the e-commerce system.

Mapping of Card-Based Payment Methods

During the configuration of a connection to an e-commerce system, one of the steps you perform is the mapping of payment methods configured in Acumatica ERP with payment methods configured in the e-commerce system. For BigCommerce, you define payment method mapping in the **Base Currency Payment Methods** table on the **Payment Settings** tab of the *BigCommerce Stores* (BC201000) form.

For the Authorize.Net store payment method, you specify the following:

- **Payment Method ID**: The identifier of the payment method in Acumatica ERP that was configured to use the same processing center as was used for setting up the payment provider in the online store.
- **Cash Account**: A cash account that was specified for the payment method on the **Allowed Cash Accounts** tab on the *Payment Methods* (CA204000) form.
- **Proc. Center ID**: The identifier of the processing center configured for the payment method on the **Processing Centers** tab of the *Processing Centers* (CA205000) form.
- **Active**: A check box that you select for a payment method to indicate that payments made in the e-commerce system that are based on should be imported to Acumatica ERP.
- **Release Payments**: A check box that you select to indicate that the payment should be immediately released after it is imported to Acumatica ERP. If this check box is selected for a card-based payment method associated with a credit card processing center in Acumatica ERP (that is, for the payment method for which a processing center is selected in the **Proc. Center ID** column), only payments that have been captured in the store will be automatically released on import. Payments that have been authorized but not captured in the store need to be processed after import and then released manually or by using the *Release AR Documents* (AR501000) form.

Import of Payments Based on Credit Cards

A customer who has signed in to the BigCommerce store can save credit card details during checkout. When this customer selects the *Authorize.Net* payment method, enters the details of a new card, selects the **Save this card for future transactions** check box, and then places an order, the details of the credit card are saved in the processing center configured in the BigCommerce store.

When the payment is imported from BigCommerce to Acumatica ERP (as part of the synchronization of the *Sales Order* entity or the *Payment* entity), on the *Payments and Applications* (AR302000) form, the system creates a document of the *Prepayment* type with the *Pending Processing* status. In the Summary area of the created document, the system inserts the following information:

- **Payment Method**: The payment method that has been mapped to the store payment method in the **Base Currency Payment Methods** table on the **Payment Settings** tab of the *BigCommerce Stores* form
- **Cash Account**: The cash account selected for the mapped payment method
- **Payment Ref.**: The number of the related credit card transaction in the processing center

- **Processing Status**: The processing status of the credit card transaction. Depending on the last successful operation with the transaction, the processing status can be one of the following:
  - *Pre-Authorized*: The payment has been authorized but the funds have not been captured. The last successful operation was *Authorize Only*.
  - *Captured*: The funds have been captured. The last successful operation with the credit card transaction was either *Authorize and Capture* or *Capture Authorized*.
  - *Unknown*: The last successful operation with the credit card transaction is unknown. To get the correct processing status of the credit card transaction, you can use the **Validate Card Payment** action on the *Payments and Applications* form.

On the **Credit Card Processing Info** tab, the system creates a row for the last successful operation with the credit card transaction. In the **PC Response Reason** box, *Imported External Transaction* indicates that the information about the credit card transaction operation has been imported from the external e-commerce system. The transaction operation can have one of the following types:

- *Authorize Only*: The payment was authorized when the order was placed but has not yet been captured.
- *Authorize and Capture*: The payment was captured when the order was placed.
- *Capture Authorized*: The payment was authorized when the order was placed, and then the funds were captured in the control panel of the store.
- *Unknown*: The status of the operation with the credit card transaction is unknown.

Deferred Processing of Imported Credit Card Payments

Credit card transactions created in Acumatica ERP during the import of payments based on credit card payment methods require validation in the following cases:

- If the customer used a previously saved credit card
- If the customer entered the details of a new card and selected the **Save this card for future transactions** check box during checkout
- If the last operation on the credit card transaction has the *Unknown* status

External credit card transactions that meet these conditions are displayed on the **Deferred Processing Required** tab of the *Validate Card Payments* (AR513000) form with the **Load Payment Profile** check box selected.

When the validation process is started, the system performs the following actions:

1. On the *Customer Payment Methods* (AR303010) form, creates a customer payment method based on the payment profile from the processing center.
2. Links the customer payment method to the credit card transaction.
3. Links the customer payment method to the imported payment.
4. Requests the status of the credit card transaction, and updates the processing status of the transaction and the status of the prepayment, if necessary.

If the updated processing status of the transaction is *Captured*, the status of the prepayment changes to *Balanced*. If on the **General Settings** tab of the *Accounts Receivable Preferences* (AR101000) form, the **Enable Integrated CC Processing** check box is selected, the system releases the prepayment.

Customizations may support forced validation of all imported credit card transactions. In this case, all credit card transactions imported from external systems will be displayed on the **Deferred Processing Required** tab of the *Validate Card Payments* form and will need to be validated.

A sales order can be fulfilled only if the credit card payment imported for it from an external e-commerce system has been validated. To streamline shipping of orders, you can set up an automation schedule on the *Validate Card Payments* form to regularly process imported card transactions that require validation. For information about automation schedules, see *Scheduled Processing*.

Synchronizing Orders: To Configure and Import Card Payments

The following activity will walk you through the process of configuring the system so that you can import card payments from the BigCommerce store to Acumatica ERP and then further process them, if necessary.

Story

Suppose that the SweetLife Fruits & Jams company wants to accept card payments in the BigCommerce store. The company already has the Authorize.Net account for processing card payments. Acting as an implementation consultant helping SweetLife to set up the integration of Acumatica ERP with the BigCommerce store, you need to configure Authorize.Net as a card payment provider in the BigCommerce store, configure the card payment processing in Acumatica ERP, and then configure the import of card payments from the BigCommerce store to Acumatica ERP.

Configuration Overview

In the *U100* dataset, for the purposes of this activity, on the *Cash Accounts* (CA202000) form, the *10250ST* cash account has been created.

Process Overview

In this activity, you will do the following:

1. On the *Processing Centers* (CA205000) form, define a processing center.
2. On the *Processing Centers* form, connect the processing center to the Authorize.Net payment gateway.
3. On the *Payment Methods* (CA204000) form, define a payment method that will represent all card payments in the BigCommerce store.
4. In the control panel of the BigCommerce store, enable the Authorize.Net payment gateway for accepting card payments.
5. On the *BigCommerce Stores* (BC201000) form, map the Authorize.Net store payment method with the payment method defined in Acumatica ERP for all card payments.

6. On the storefront of the BigCommerce store, create a test sales order paid by card,
7. In the control panel of the BigCommerce store, review the created test sales order.
8. On the *Prepare Data* (BC501000) form, prepare the sales order for synchronization; on the *Process Data* (BC501500) form, process the sales order data prepared for synchronization.
9. On the *Sales Orders* (SO301000) form, review the imported sales order.

System Preparation

Before you complete the instructions in this activity, do the following:

1. Make sure that the following prerequisites have been met:
   - The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.
   - The connection to the BigCommerce store has been established and the initial configuration has been performed, as described in *Initial Configuration: To Establish and Configure the Store Connection*.
2. Sign up for an Authorize.Net sandbox account at *https://developer.authorize.net/hello_world/sandbox.html*. After you create an account, you will get the credentials to use in payment processing (API Login ID and Transaction Key). You will use these credentials in this activity.
3. Configure Acumatica ERP to use HTTPS. A secure connection with a Secure Socket Layer (SSL) certificate is required for making transactions to the Authorize.Net payment gateway through the Acumatica ERP website.
4. Launch the Acumatica ERP website with the *U100* dataset preloaded, and sign in with the following credentials:
   - Username: *gibbs*
   - Password: *123*

Step 1: Creating the Processing Center

To create the processing center that will be connected to the Authorize.Net payment gateway, do the following:

1. Open the *Processing Centers* (CA205000) form.
2. On the form toolbar, click **Add New Record**, and in the Summary area, specify the following settings:
   - **Proc. Center ID**: `AUTHNETCOM`

     This processing center represents the connection to the Authorize.Net payment gateway for the credit card processing transactions from the online store.
   - **Name**: `Authorize.Net Commerce`
   - **Cash Account**: *10250ST - Company Merchant Account*

This cash account specifies the currency in which the system will make the authorization and capture credit card transactions.

- **Active**: Selected
- **Payment Plug-In (Type)**: *Authorize.Net API plug-in*

  The selected payment plug-in is a card processing plug-in supplied with Acumatica ERP that interacts with the payment gateway in PCI DSS-compliant mode. The sensitive information of the card is neither stored in Acumatica ERP nor transferred between the system and the payment gateway.
- **Allow Saving Payment Profiles**: Selected (default state)
- **Synchronize Deletion**: Selected (default state)
- **Accept Payments from New Cards**: Selected (default state)

3. On the form toolbar, click **Save**.

Step 2: Specifying the Connection Settings for the Processing Center

To configure the connection to the payment gateway (so that you can use the payment gateway in test mode), do the following:

1. While you are still viewing the *Processing Centers* (CA205000) form, on the **Plug-In Parameters** tab, specify the values as listed in the following table.

ID	Value
MERCNAME	The API Login ID of your sandbox account
SIGNKEY	Leave empty
TESTMODE	1
TRANKEY	The Transaction Key of your sandbox account
VALIDATION	*Test Mode*

2. To test that the connection settings, on the form toolbar, click **Test Credentials**.

   If the test connection is successful, the system will display the following confirmation message: *The credentials were accepted by the processing center.*

Step 3: Configuring a Payment Method That Represents Payments by Card

You can create one payment method for all credit cards, which is the approach you will take in this step. (Alternatively, to categorize payments in Acumatica ERP by card payment systems, you could create a payment method for each payment system supported by the gateway and specify the same merchant account for all payment methods.)

To create the *ALLCARDS* payment method for all payments by credit card, do the following:

1. Open the *Payment Methods* (CA204000) form.
2. On the form toolbar, click **Add New Record**.

3. In the Summary area, specify the following settings:
    - **Payment Method ID**: `ALLCARDS`
    - **Active**: Selected
    - **Means of Payment**: *Credit Card*
    - **Description**: `All card payments`
    - **Use in AP**: Cleared
    - **Use in AR**: Selected
    - **Require Remittance Information for Cash Account**: Cleared
4. On the **Allowed Cash Accounts** tab, do the following:
    a. On the table toolbar, click **Add Row**.
    b. In the new row, select the *10250ST* cash account in the **Cash Account** column.
    c. Select the **Use in AR** check box.
5. On the **Settings for Use in AR** tab, select the **Integrated Processing** check box. The **Processing Centers** tab appears.
6. On the **Processing Centers** tab, add a row, and specify the following settings in the row:
    - **Proc. Center ID**: *AUTHNETCOM*
    - **Active**: Selected
    - **Default**: Selected
7. On the form toolbar, click **Save** to save your changes.

Step 4: Defining the Authorize.Net Payment Gateway in the BigCommerce Store

To define the Authorize.Net payment method that the store will accept for the United States Dollar (USD) currency, do the following:

1. Sign in to the BigCommerce store as the store administrator.
2. In the left pane of the control panel, click **Store Setup > Payments**.
3. On the **Payment Methods** page, which opens, in the **Show payment methods for** box, select *USD (US Dollar).*

    > ⚠ This box is displayed if multiple currencies are defined in the store.

    The system displays the **Checkout Payment Settings** tab and a tab for each payment method.
4. On the **Checkout Payment Settings** tab, expand the **Online Payment Methods** group.

5. In the **Online Payment Methods** group, in the row of **Authorize.Net**, click **Set up**.

6. On the **Authorize.Net Settings** tab, which appears, specify the following settings:

   - **API Login ID**: The API Login ID of your Authorize.Net sandbox account
   - **Transaction Key**: The Transaction Key of your Authorize.Net sandbox account

     You should use **API Login ID** and **Transaction Key** that you used in Step 2 when you configured the connection to Authorize.Net payment gateway.
   - **Transaction Type**: *Authorize Only*
   - **Test Mode**: *Yes*

7. In the **Stored Credit Cards** section, turn on the **Enable stored credit cards with Authorize.net** switch.

8. At the bottom right, click **Save** to save your changes.

Step 5: Creating the Mapping for the Authorize.Net Store Payment Method

To configure the mapping for the Authorize.Net store payment method in Acumatica ERP, do the following:

1. Open the *BigCommerce Stores* (BC201000) form.

2. In the **Store Name** box of the Summary area, select *SweetStore*.

3. On the **Payment Settings** tab, in the **Base Currency Payment Methods**table of the **Payment Method Mapping** section, map the Authorize.Net payment method set up in the BigCommerce store with the payment method configured in Acumatica ERP by adding a row and specifying the following settings:

   - **Active**: Selected
   - **Store Payment Method**: `AUTHORIZENET (CREDIT_CARD)`
   - **Payment Method ID**: *ALLCARDS*
   - **Cash Account**: *10250ST*
   - **Proc. Center ID**: *AUTHNETCOM*

Step 6: Creating an Order Through the Storefront

To purchase a jar of jam, so that you can later import the order and review the credit card payment, do the following:

1. Sign in to the BigCommerce store as the store administrator.

2. In the left pane of the control panel, click **View Store**.

3. On the storefront, in the list of product categories, click **Jams**.

4. On the page of products of the **Jams** category, click the tile of the *Apple jam 8 oz* product.

5. On the page for the *Apple jam 8 oz.* product, which opens, select a quantity of 30, and click **Add to Cart**.
6. In the pop-up window that opens, click **Proceed to checkout**.
7. On the checkout page, specify the needed settings as follows:
    a. In the **Customer** section, in the **Email Address** box, specify *guest@example.com*, and click **Continue as guest**.
    b. In the **Shipping** section, fill in the shipping address boxes as follows:
        - **First Name**: `Melody`
        - **Last Name**: `Keys`
        - **Address**: `3402 Angus Road`
        - **City**: `New York`
        - **Country**: *United States*
        - **State/Province**: *New York*
        - **Postal Code**: `10003`
        - **My billing address is the same as my shipping address**: Selected
    c. In the **Shipping Method** section, make sure that the *Free Shipping* option is selected, and click **Continue**.
8. In the **Payment Method** section, select the **Authorize.Net** option button, and specify the following card settings:
    - **Credit Card Number**: `4111 1111 1111 1111`
    - **Expiration**: `12/22`
    - **Name on Card**: *Melody Keys*
9. Click **Place Order** to place your order.

    Your order has been created, and on the confirmation page, the order number is displayed. You will process the order with this order number further in this activity.

    For the purposes of this activity, you can skip creating a store account.

Step 7: Reviewing the Sales Order in the Control Panel

To review the sales order that you placed in the previous step, do the following:

1. While you are signed in to the control panel of the BigCommerce store, in the left pane, click **Orders > View**.
2. On the **View Orders** page, which opens, expand the order of the *Melody Keys* customer, and review the order details.

Notice that the **Status** of the order is set to *Awaiting Payment* and in the **Billing Section**, the *Capture Funds* link is displayed. Because you have configured the *Authorize.Net* payment option to only authorize the payment amount when the order is placed, the payment funds have not yet been captured.

Step 8: Importing the Sales Order

To prepare the sales order data for synchronization and then process it, do the following:

1. Open the *Prepare Data* (BC501000) form.
2. In the **Store** box of the Summary area, select *SweetStore*.
3. In the **Prepare Mode** box, select *Incremental*.
4. In the table, select the unlabeled check box in the row of the *Sales Order* entity, and on the form toolbar, click **Prepare**.
5. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.
6. In the row of the *Sales Order* entity, click the link with the number of prepared synchronization records in the **Prepared Records** column.
7. On the *Process Data* (BC501500) form, which opens with the store and the *Sales Order* entity selected, click **Process All** on the form toolbar.
8. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

Step 9: Reviewing the Imported Sales Order

To review the settings of the imported sales order, do the following:

1. Open the *Sync History* (BC301000) form.
2. In the Summary area, specify the following settings:
   - **Store**: *SweetStore*
   - **Entity**: *Sales Order*
3. On the **Processed** tab, in the row of the sales order that you have just imported (which you can locate by its external ID), click the link in the **ERP ID** column.
4. On the *Sales Orders* (SO301000) form, which opens for the imported order, review the settings of the order.

   In the Summary area, notice that the **External Reference** and **Description** boxes include the order number from BigCommerce. In the **Customer** box, the system has inserted the ID and name of the generic guest customer that you have selected on the *BigCommerce Stores* (BC201000) form.
5. On the **Payments** tab, review the details of the created payment document.

   Notice that the payment document has the *Prepayment* type. It includes the external credit card transaction associated with the purchase. The number of the transaction is displayed in the

Payment Ref. column and its status, which is *Pre-Authorized*, is displayed in the **Proc. Status** column.

6. On the table toolbar, click **Capture CC Payment**.

   After the capture operation is successfully completed, **Proc. Status** is changed to *Captured*, and the status of the prepayment document is changed from *Pending Processing* to *Balanced*, which means that the prepayment document can now be released.

   Next you would proceed to create and confirm the related shipment, prepare the related invoice, and release the payment. For the purposes of this activity, you do not have to perform any of these operations.

Lesson 4.2: Payments with Gift Certificates

Synchronizing Orders: To Sell and Accept Gift Certificates

In this activity, you will learn how to implement gift certificates in the BigCommerce store and explore how gift certificates can be used to pay, in full or in part, for an online purchase in the BigCommerce store.

Story

SweetLife wants to give its online customers the ability to purchase gift certificates and use these certificates when purchasing goods in the SweetLife online store. As an implementation consultant, you need to configure the gift certificate functionality—that is, the ability to sell gift certificates as items and use the certificates as payment methods—and test it.

Configuration Overview

In the *U100* dataset, for the purposes of this activity, on the *Non-Stock Items* (IN202000) form, the *GIFTCERT* non-stock item has been created.

Process Overview

You will do the following:

1. On the *BigCommerce Stores* (BC201000) form, review the gift certificate settings.
2. In the control panel of the BigCommerce store, enable the gift certificate functionality and create gift certificates in various amounts to be sold in the online store.
3. On the storefront, purchase a gift certificate.
4. In the control panel of the BigCommerce store, capture the payment and complete the order (after which the system will send the certificate to its recipient).
5. On the *Prepare Data* (BC501000) form, prepare the sales order data for synchronization, and on the *Process Data* (BC501500) form, you will process the prepared data.
6. On the *Sales Orders* (SO301000) form, review the imported sales order.
7. On the storefront, you will create an order and pay part of it with the purchased gift certificate.

8. On the *Prepare Data* form, prepare the sales order data for synchronization, and on the *Process Data* form, you will process the prepared data.
9. On the *Sales Orders* form, review the imported sales order corresponding to your order on the storefront that was partially paid for with the gift certificate.

System Preparation

Before you start configuring the gift certificates, do the following:

- Make sure the connection to the BigCommerce store is established and the minimum configuration is performed as described in *Initial Configuration: To Establish and Configure the Store Connection*.
- Make sure that the *PLUMJAM08* stock item has been exported to the BigCommerce store during the synchronization of the *Stock Item* entity (as described in *Synchronizing Products: To Sync Items with Custom Fields*).
- Make sure that integration with Authorize.Net was implemented.
- Sign in to the Acumatica ERP instance with the *U100* dataset preloaded by using the following credentials:
  - Username: *gibbs*
  - Password: *123*

Step 1: Reviewing the Settings

To review the gift certificate settings in Acumatica ERP, perform the following instructions:

1. Open the *BigCommerce Stores* (BC201000) form.
2. On the **Order Settings** tab (**Order** section), in the **Gift Certificate Item** box, select *GIFTCERT*.

   The *GIFTCERT* non-stock item has been created in the *U100* dataset to represent gift certificates sold in the online store. All purchases of gift certificates in the online store will be recorded in Acumatica ERP as purchases of this item.
3. On the **Payment Settings** tab, in the **Base Currency Payment Methods** table, in the row of the *GIFTCERTIFICATE (GIFT_CERTIFICATE)* store payment method, specify the following settings:
   - **Active**: Selected
   - **Payment Method ID**: *ONLINE*
   - **Cash Account**: *10250ST*
4. On the form toolbar, click **Save**.

Step 2: Configuring Gift Certificates in the Store

To enable the gift certificate functionality in the BigCommerce store, do the following:

1. Sign in to the control panel of the BigCommerce store as the store administrator.
2. In the left pane of the control panel, click **Marketing > Gift Certificates**.

3. On the **Gift Certificates** page (**Gift Certificate Settings** section), in the **Select a currency** box, select *US Dollar (USD)*.

4. Right of **Enable Gift Certificates?**, select the **Yes, enable gift certificate system** check box.

5. Right of **Gift Certificate Values**, select the **Specify a list of allowed gift certificate amounts** option button, and in the box that appears, specify the following values:

   - $10.00
   - $25.00

6. At the bottom right, click **Save** to save your changes.

Step 3: Purchasing a Gift Certificate

To create an order in which you purchase a $25 gift certificate in the BigCommerce store, do the following:

1. In the left pane of the control panel, click **View Store**.

2. On the storefront, at the top right, click **Gift Certificates**.

3. On the **Gift Certificates** page, on the **Purchase Gift Certificate** tab, specify the following information:

   - **Your Name**: Your name
   - **Your Email**: Your email address
   - **Recipient's Name**: The name of a test recipient
   - **Recipient's Email**: The recipient's email address

     For the purposes of this activity, you can specify the same email address as both your email and recipient's email address.

     You must specify a real email address to which you have access. The gift certificate code will be sent to this email when the order is complete.

   - **Amount**: *$25.00*
   - **I agree that Gift Certificates are nonrefundable**: Selected
   - **Gift Certificate Theme**: *Celebration*

4. Click **Add Gift Certificate to Cart**.

5. In the cart, click **Check out**.

6. On the checkout page, complete the process of creating the order as follows:

   a. In the **Customer** section, in the **Email Address** box, specify *guest@example.com*, and click **Continue as guest**.

   b. In the **Billing** section, fill in the shipping address boxes as follows:

- **First Name**: `Melody`
- **Last Name**: `Keys`
- **Address**: `3402 Angus Road`
- **City**: `New York`
- **Country**: *United States*
- **State/Province**: *New York*
- **Postal Code**: `10003`

c. Click **Continue**

d. In the **Payment** section, select the **Authorize.Net** option button, and specify the following card details:

- **Credit Card Number**: `4111 1111 1111 1111`
- **Expiration**: `12/22`
- **Name on Card**: *Melody Keys*

e. Click **Place Order** to place your order.

Your order has been created, and on the confirmation page, the order number is displayed. Note the number because you will process the order with this number further in this activity.

Step 4: Completing the Order

To capture the payment and complete the order in the BigCommerce store, do the following:

1. While you are signed in to the control panel of the BigCommerce store, in the left pane, click **Orders > View**.

2. On the **View Orders** page, which opens, expand the order of the *Melody Keys* customer, and review the order details.

   Notice that the **Status** of the order is set to *Awaiting Payment* and that in the **Billing** section, the *Capture Funds* link is displayed. This happens because the *Authorize.Net* payment option is configured in the BigCommerce store to only authorize the payment amount when the order is placed, so the payment funds have not yet been captured.

3. In the **Billing** section, click *Capture Funds*.

   > ⚠ If the system displays the **Fraud Status Warning** dialog box, select the **Yes, I understand and would like to proceed** check box, and click **Capture Payment**.

4. In the order summary line, change the order status to *Completed*.

   An email with the gift certificate code is sent to the gift certificate recipient's email address (**Recipient's Email**) that you specified in Step 3.

Step 5: Importing the Order with the Gift Certificate

To import the order that you created in Step 3 to Acumatica ERP, do the following:

1. Sign in to Acumatica ERP by using the *gibbs* username.
2. Open the *Prepare Data* (BC501000) form.
3. In the **Store** box of the Summary area, select *SweetStore*.
4. In the **Prepare Mode** box, select *Incremental*.
5. In the table, select the unlabeled check box in the row of the *Sales Order* entity, and on the form toolbar, click **Prepare**.
6. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.
7. In the row of the *Sales Order* entity, click the link with the number of prepared synchronization records in the **Prepared Records** column.
8. On the *Process Data* (BC501500) form, which opens with the store and the *Sales Order* entity selected, in the row of the order that you created in Step 3, select the unlabeled check box.
9. On the form toolbar, click **Process**.
10. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

Step 6: Reviewing the Imported Order

To review the details of the imported sales order in Acumatica ERP, do the following:

1. Open the *Sync History* (BC301000) form.
2. In the Summary area, specify the following settings:
   - **Store**: *SweetStore*
   - **Entity**: *Sales Order*
3. On the **Processed** tab, in the row of the sales order that you have just imported (which you can locate by its external ID), click the link in the **ERP ID** column.
4. On the *Sales Orders* (SO301000) form, which opens for the imported order, review the order details.

   On the **Details** tab, notice one line that corresponds to the *GIFTCERT* non-stock item, which you specified as the **Gift Certificate Item** box on the **Order Settings** tab of the *BigCommerce Stores* (BC201000) form.

Step 7: Paying for the Order with a Gift Certificate

To create an order and pay for part of it with the gift certificate, do the following:

1. While you are signed in to the control panel of the BigCommerce store as the store administrator, in the left pane, click **View Store**.
2. On the storefront, in the list of product categories, click **Jams**.

3. On the page that lists products of the **Jams** category, click the tile of the *Plum jam 8 oz* product.

4. On the page for the *Plum jam 8 oz.* product, which opens, select a quantity of 30, and click **Add to Cart**.

5. In the pop-up window that opens, click **Proceed to checkout**.

6. On the checkout page, in the **Order Summary** section, click **Coupon/Gift Certificate**. In the box that appears, enter the gift certificate code that was sent to your recipient email address when you completed the order in Step 4; click **Apply**.

   Notice that the order amount has been decreased by the gift certificate amount ($25).

7. Complete the order settings as follows:

   a. In the **Customer** section, in the **Email Address** box, specify *guest@example.com*, and click **Continue as guest**.

   b. In the **Shipping** section, fill in the shipping address boxes as follows:

      - **First Name**: `Melody`
      - **Last Name**: `Keys`
      - **Address**: `3402 Angus Road`
      - **City**: `New York`
      - **Country**: *United States*
      - **State/Province**: *New York*
      - **Postal Code**: `10003`
      - **My billing address is the same as my shipping address**: Selected

   c. In the **Shipping Method** section, make sure that the *Free Shipping* option is selected, and click **Continue**.

8. In the **Payment Method** section, select the **Authorize.Net** option button, and specify the following card settings:

   - **Credit Card Number**: `4111 1111 1111 1111`
   - **Expiration**: `12/22`
   - **Name on Card**: *Melody Keys*

9. Click **Place Order** to place your order.

   Your order has been created, and on the confirmation page, the order number is displayed. You will process the order with this order number further in this activity.

Step 8: Importing the Sales Order Paid with the Gift Certificate

To import the sales order that you created in Step 7 to Acumatica ERP, do the following:

1. Sign in to Acumatica ERP by using the *gibbs* username.

2. Open the *Prepare Data* (BC501000) form.
3. In the **Store** box of the Summary area, select *SweetStore*.
4. In the **Prepare Mode** box, select *Incremental*.
5. In the table, select the unlabeled check box in the row of the *Sales Order* entity, and on the form toolbar, click **Prepare**.
6. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.
7. In the row of the *Sales Order* entity, click the link with the number of prepared synchronization records in the **Prepared Records** column.
8. On the *Process Data* (BC501500) form, which opens with the store and the *Sales Order* entity selected, in the row of the order that you created in Step 7, select the unlabeled check box; on the form toolbar, click **Process**.
9. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

Step 9: Reviewing the Imported Sales Order

To review the settings of the imported sales order, do the following:

1. On the Sales Orders (SO3010PL) form, select the order that you imported in Step 8.

   This is the last order of the *EO* type for the *ECOMGUEST* customer that was created in the system.
2. On the *Sales Orders* (SO301000) form, review the settings of the order.

   On the **Payments** tab, notice that two prepayments have been applied to the order: a credit card payment (mapped to the *ALLCARDS* payment method) and a gift card payment (mapped to the *ONLINE* payment method).
3. In the row of the gift card payment, which has an applied amount of $25, click the link in the **Reference Nbr.** box.
4. On the *Payments and Applications* (AR302000) form, review the payment details.

   Notice that in the **Payment Reference** box of the Summary area, the order number assigned to the order in the BigCommerce store is displayed. The **Description** box contains the store payment method, the code of the gift certificate that was applied to the order, the order number, and the payment ID.

   The prepayment has the *Balanced* status because the **Release Payments** check box was cleared for the payment method in the **Base Currency Payment Methods** table on the **Payment Settings** tab of the *BigCommerce Stores* (BC201000) form. For the purposes of this activity, you do not have to release the prepayment.

Lesson 4.3: Synchronization of Taxes

Synchronizing Orders: Setup of Tax Synchronization

During the implementation of the integration between Acumatica ERP and the BigCommerce store, you decide if taxes should be synchronized during the export or import of sales orders.

Configuration of Tax Synchronization for Manual Tax Setup

If you plan to use only Acumatica ERP (without a dedicated tax calculation provider) for tax calculation and reporting, you perform the following general steps:

1. Configure manual tax calculation rules in the BigCommerce store. For information, see *Manual Tax Setup* in the BigCommerce documentation.
2. Implement the tax functionality by configuring a tax agency, tax zones, tax categories, and sales taxes.

   For detailed information about configuring sales taxes in Acumatica ERP, see the *F330 Sales Taxes* course available in Partner University.

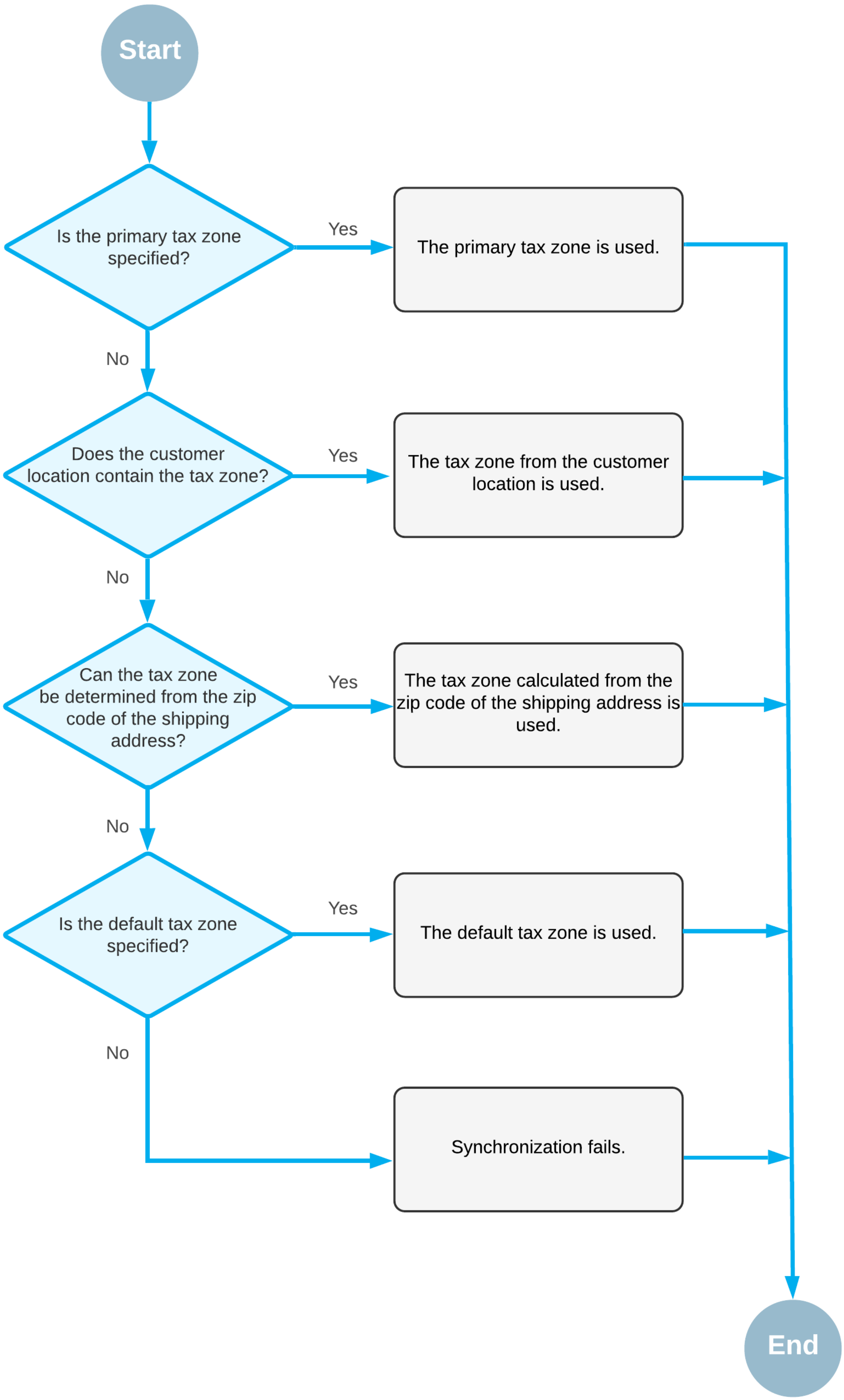
   The manual tax configuration should match in the BigCommerce store and in Acumatica ERP, otherwise issues might occur during the synchronization of entities. Tax categories and taxes in Acumatica ERP should be configured in the same way as tax classes and tax rates in BigCommerce. If you use different names for a tax or a tax category in both systems, you should map tax IDs in the substitution list specified in the **Tax List** box and tax categories in the substitution list specified in the **Tax Category List** box on the **Order Settings** tab of the *BigCommerce Stores* (BC201000) form. If during the import of a sales order, the system cannot find the tax ID or tax category specified in the order, it will check to see if there is a mapping defined for the tax ID or tax category in these substitution lists.

   Taxes that have the same name in the BigCommerce store and Acumatica ERP (or that have been mapped via the substitution list) should be defined with exactly the same rates. Although an order for which the taxes have different rates will be imported successfully, when an invoice is prepared for this imported sales order, the taxes are recalculated based on the tax settings configured in Acumatica ERP. If the tax rates differ, there will be a discrepancy between the amount of the invoice created in Acumatica ERP and the amount of the order created in the BigCommerce store.
3. Specify the tax synchronization settings on the **Order Settings** tab of the *BigCommerce Stores* (BC201000) form as follows:
   - **Tax Synchronization**: Selected
   - **Default Tax Zone**: The tax zone that the system will assign to the order if no tax zone has been identified during the order import.
   - **Use as Primary Tax Zone**: Cleared

During the import of an order, the system searches for the tax zone that should be used for tax calculation as follows, stopping the search when it finds a qualifying tax zone:

1. The system searches for the primary tax zone.
2. The system searches for the tax zone of the customer location.
3. The system tries to determine the tax zone based on the zip code of the shipping address.
4. The system searches for the default tax zone.

This process is illustrated in the following diagram.


Start
Is the primary tax zone specified?
Yes
The primary tax zone is used.
No
Does the customer location contain the tax zone?
Yes
The tax zone from the customer location is used.
No
Can the tax zone be determined from the zip code of the shipping address?
Yes
The tax zone calculated from the zip code of the shipping address is used.
No
Is the default tax zone specified?
Yes
The default tax zone is used.
No
Synchronization fails.
End

Configuration of Tax Synchronization for the External Tax Service

If you want to use an external tax provider for automatic tax calculation, you need to perform the following general steps:

1. Configure automatic tax calculation in the BigCommerce store. For information, see *Automatic Tax Setup* in the BigCommerce documentation.

2. Configure the integration of Acumatica ERP with the external tax provider by using the same account as was used in the previous step. For instructions on how to integrate Acumatica ERP with Avalara AvaTax or Vertex, see *Integrating Acumatica ERP with External Tax Providers*.

3. Specify the tax synchronization settings on the **Order Settings** of the *BigCommerce Stores* (BC201000) form as follows:

    - **Tax Synchronization**: Selected
    - **Default Tax Zone**: The tax zone that you have configured for the external tax provider
    - **Use as Primary Tax Zone**: Selected

    Because the primary tax zone has the highest priority for tax calculation, if the tax zone configured for the external tax provider is specified in this box, it will always be used for tax calculation regardless of whether the system has identified any other tax zone during the order import.

Synchronizing Orders: To Configure Tax Synchronization

The following activity will walk you through the process of configuring the synchronization of taxes between the BigCommerce store and Acumatica ERP.

Story

Suppose that SweetLife is using only Acumatica ERP (without an external tax provider) for calculating and reporting taxes on the goods and services it sells. As an implementation consultant helping SweetLife to set up a BigCommerce store, you need to set up taxes in the store and then make sure that the taxes on online sales orders are correctly passed to Acumatica ERP when the orders are imported.

Configuration Overview

In the *U100* dataset, for the purposes of this activity, the following tasks have been performed:

- On the *Tax Zones* (TX206000) form, the *NYSTATE* tax zone has been configured.
- On the *Tax Categories* (TX205500) form, the *TAXABLE* and *EXEMPT* tax categories have been configured. These tax categories have been assigned to item classes on the *Item Classes* (IN201000) form, and to individual stock, non-stock, and template items on the *Stock Items* (IN202500), *Non-Stock Items* (IN202000), and *Template Items* (IN203000) forms, respectively.
- On the *Taxes* (TX205000) form, the *NYSTATETAX* tax has been set up.

Process Overview

In this activity, you will do the following:

1. In the control panel of the BigCommerce store, define a sales tax that you will collect on products sold to customers in New York State.
2. On the *Tax Categories* (TX205500), *Tax Zones* (TX206000), and *Taxes* (TX205000) forms, review some of the tax-related entities that have been predefined in the *U100* dataset.
3. On the *BigCommerce Stores* (BC201000) form, specify the tax synchronization settings for your BigCommerce store.
4. On the *Substitution Lists* (SM206026) form, map tax categories in Acumatica ERP to tax classes in the BigCommerce store.
5. Also on the *Substitution Lists* form, map the sales tax defined in Acumatica ERP to the sales tax defined in the BigCommerce store.
6. To make sure that stock items exported to the BigCommerce store are assigned the correct tax class, export some of the stock items to the BigCommerce store by using the *Prepare Data* (BC501000) and *Process Data* (BC501500) forms.
7. Review the exported items in the control panel of the BigCommerce store.
8. To make sure that the tax applied to a sales order in the BigCommerce store is imported to Acumatica ERP correctly, create an online order in the control panel of the BigCommerce store.
9. Import the sales order to Acumatica ERP by using the *Prepare Data* and *Process Data* forms.
10. On the *Sales Orders* (SO301000) form, review the imported sales order.

System Preparation

Do the following:

- Make sure the connection to the BigCommerce store is established and the minimum configuration is performed as described in the prerequisite activity, *Initial Configuration: To Establish and Configure the Store Connection*.
- Sign in to the control panel of the BigCommerce store as the store administrator.

Step 1: Configuring the Sales Tax in BigCommerce

To configure the sales tax for New York in the BigCommerce store, do the following:

1. In the left pane of the control panel, click **Store Setup > Tax**.
2. On the **Tax** page, which opens, in the **Set up your own tax rules** section, click **Edit**.
3. On the **General** tab, read the information about setting up manual taxes.
4. On the **Tax Classes** tab, review the default tax classes.

   Tax classes in BigCommerce correspond to tax categories in Acumatica ERP. You should not delete any of the default classes, even though you do not collect tax on shipping or gift wrapping.
5. On the **Tax Rates & Zones** tab, click **Add a Tax Zone**.
6. On the **Add a Tax Zone (Step 1 of 2)** page, specify the following settings:
   - **Tax Zone Name**: *New York State*

- **Tax Zone Type**: *This tax zone is based on one or more states*
- **Country**: *United States*
- **States**: *New York*
- **All customers in my store** (under **Tax Zone Applies to**): Selected
- **Enable this tax zone**: Selected

7. At the bottom right, click **Save**.
8. On the **Tax Rates** tab, which opens, click **Add a Tax Rate**.
9. On the **Edit New York State** page, which opens, in the **Add new tax rate** section, specify the following settings:
   - **Tax Rate Name**: `New York State Tax`
   - **% for products marked as Default Tax Class**: `8.875`
   - **% for products marked as Non-Taxable Products**: `0`
   - **% for products marked as Shipping**: `0`
   - **% for products marked as Gift Wrapping**: 0
   - **Enable this tax rate**: Selected
10. At the bottom right, click **Save**.

    For the purposes of this activity, you do not need to add any other tax rates.

Step 2: Reviewing the Tax Configuration in Acumatica ERP

To review the taxes that have been predefined in Acumatica ERP, do the following:

1. Sign in to Acumatica ERP by using the *gibbs* username and *123* password.
2. Open the Tax Categories (TX2050PL) form.

   Tax categories in Acumatica ERP correspond to tax classes in BigCommerce. Notice that there are only two tax categories on the form (*TAXABLE* and *EXEMPT*).
3. Open the *Tax Zones* (TX206000) form.
4. In the **Tax Zone ID** box, select *NYSTATE*.
5. On the **Applicable Taxes** tab, in the row of *NYSTATETAX*, click the link in the **Tax ID** column.
6. On the *Taxes* (TX205000) form, which opens in a pop-up window, review the settings of the *NYSTATETAX* tax.

   On the **Tax Schedule** tab, notice the current tax rate (effective starting *1/1/2020*).

   On the **Categories** tab, notice that the *TAXABLE* category has been added for this tax. On the **Zones** tab, notice that the *NYSTATE* tax zone has been added for the tax. With these settings, the *NYSTATETAX* tax is applied to all taxable items (that is, items assigned to the *TAXABLE* tax category) sold to customers assigned to the *NYSTATE* tax zone.

Step 3: Configuring Tax Synchronization

To configure the synchronization of taxes between Acumatica ERP and the BigCommerce store, do the following:

1. Open the *BigCommerce Stores* (BC201000) form.
2. In the **Store Name** box of the Summary area, select *SweetStore*.
3. On the **Order Settings** tab (**Taxes** section), specify the following settings:
   - **Tax Synchronization**: Selected
   - **Default Tax Zone**: *NYSTATE*

   With these settings specified, if a tax zone cannot be determined during the import of an order from the BigCommerce store, the tax zone selected in the **Default Tax Zone** box will be used.
4. In the **Substitution Lists** section, note the substitution lists used for taxes (*BCCTAXCODES*) and tax categories (BCCTAXCLASSES). These substitution lists are predefined and are inserted as the default values in these boxes. For the purposes of this activity, you do not need to change the selected values; you will instead update these substitution lists. However, in a production environment, you can create other substitution lists on the *Substitution Lists* (SM206026) form and specify them in these boxes.

Step 4: Updating the Substitution List for Tax Categories

As you may have noticed while completing Steps 1 and 2, in Acumatica ERP, two tax categories (*TAXABLE* and *EXEMPT*) have been defined, whereas in the BigCommerce store, there are four tax classes—*Default Tax Class*, *Non-Taxable Products*, *Shipping*, and *Gift Wrapping*. To make sure that stock, non-stock, and template items exported from Acumatica ERP are assigned the correct tax class in the BigCommerce store, do the following:

1. Open the *Substitution Lists* (SM206026) form.
2. In the **Substitution List** box, select *BCCTAXCLASSES*.

   Notice that the table contains a row with **Original Value** set to *Default Tax Class* and **Substitution Value** set to *TAXABLE*. This mapping does not affect the results of this activity and can be deleted to avoid confusion.
3. In the table, add two rows with the following values.

Original Value	Substitution Value
`TAXABLE`	`Default Tax Class`
`EXEMPT`	`Non-Taxable Products`

   With these settings, non-stock, stock, and template items that have the *TAXABLE* tax category in Acumatica ERP will be assigned the *Default Tax Class* tax class in the BigCommerce store when they are exported. Non-stock, stock, and template items of the *EXEMPT* category will be assigned the *Non-Taxable Products* tax class.
4. On the form toolbar, click **Save**.

Step 5: Updating the Substitution List for Taxes

For smooth import of online orders on which you collect taxes from the BigCommerce store to Acumatica ERP, the tax names defined in both systems must be the same. In Step 1, you created the *New York State Tax* tax rate in the BigCommerce store. (A tax rate is defined in BigCommerce; in Acumatica ERP, a tax is the entity you define.). The same tax has the name *NYSTATETAX* in Acumatica ERP. To make the import of sales orders work, you can either update the tax names (in either system or both systems) so that they match, or map the different tax names in a substitution list. The mappings of tax names between a BigCommerce store and Acumatica ERP are specified in the predefined *BCCTAXCODES* substitution list, which by default is specified on the *BigCommerce Stores* (BC201000) form as the tax substitution list to be used for synchronization with the store.

To map tax names in a substitution list, do the following:

1. While you are still viewing the *Substitution Lists* (SM206026) form, in the **Substitution List** box, select *BCCTAXCODES*.
2. On the table toolbar, click **Add Row**, and in the added row, specify the following values:
   - **Original Value**: `New York State Tax`
   - **Substitution Value**: `NYSTATETAX`

   With this mapping, when *New York State Tax* is applied to products in an online order in the BigCommerce store, its name will be replaced with *NYSTATETAX* in the order imported from the BigCommerce store to Acumatica ERP.

   - During the import of an order to Acumatica ERP, if the system cannot find any tax applied to the order in the BigCommerce store or a tax mapped to this order in the substitution list, the import will fail.
   - Taxes that have the same name in the BigCommerce store and Acumatica ERP (or that have been mapped via the substitution list) should be defined with exactly the same rates. Although an order for which the taxes have different rates will be imported successfully, when an invoice is prepared for this imported sales order, the taxes are recalculated based on the tax settings configured in Acumatica ERP. If the tax rates differ, there will be a discrepancy between the amount of the invoice created in Acumatica ERP and the amount of the order created in the BigCommerce store.

3. On the form toolbar, click **Save** to save your changes.

Step 6: Synchronizing Stock Items

To verify that stock items are exported to the BigCommerce store with the correct tax category, you need to synchronize (or resynchronize) them between the two systems. Before you do it, you need to update the filter for stock items so that more stock items are synchronized with the BigCommerce store (in this step, you will add stock items of the *JUICER* item class). Do the following:

1. Open the *Entities* (BC202000) form.
2. In the Summary area, specify the following settings:
   - **Store**: *SweetStore*

- **Entity**: *Stock Item*

3. On the **Export Filtering** tab, update the filter as follows:

Active	Brackets	Field Name	Condition	Value	Brackets	Operator
Selected	*(*	*Item Class*	*Equals*	`Jam`	-	*Or*
Selected	-	*Item Class*	*Equals*	`Juicer`	)	*And*

4. On the form toolbar, click **Save**.

5. Open the *Prepare Data* (BC501000) form.

6. In the Summary area, specify the following settings:

   - **Store**: *SweetStore*
   - **Prepare Mode**: *Full*
   - **Start Date**: Cleared

7. In the table, select the check box in the row of the *Stock Item* entity.

8. On the form toolbar, click **Prepare**.

9. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

10. In the row of the *Stock Item* entity, click the link in the **Prepared Records** column.

11. On the *Process Data* (BC501500) form, which opens with the BigCommerce store and the *Stock Item* entity selected, click **Process All** on the form toolbar.

12. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

Step 7: Viewing the Synchronized Stock Items in the Store

To review the items that have been synchronized between Acumatica ERP and the BigCommerce store and verify that they have been exported to the BigCommerce store with the correct tax category, do the following:

1. Sign in to the control panel of the BigCommerce store as the store administrator.

2. In the left pane, click **Products > View**.

3. In the list of exported products, for the *JUICER20C* product (whose inventory ID you can see in the **Product SKU** column), click the link in the **Product Name** column (which is the description of the item on the *Stock Items* (IN202500) form in Acumatica ERP).

4. On the product management page, which opens for the *JUICER20C* product, review the product details.

   Notice that in the **Pricing** section, the **Tax Class** is set to *Non-Taxable Products*. The system assigned this tax class to the product because the *JUICER20C* stock item has the *EXEMPT* tax category in Acumatica ERP.

5. In the left pane, click **Products > View**.
6. In the list of products, for the *KIWIJAM96* product, click the link in the **Product Name** column.
7. On the product management page, which opens, review the details of the *KIWIJAM96* product.

   Notice that in the **Pricing** section, the **Tax Class** is set to *Default Tax Class*. The system assigned this tax class to the product because the *KIWIJAM96* stock item has the *TAXABLE* tax category in Acumatica ERP.

   You can verify that the tax category is assigned correctly to non-stock and template items by completing instructions similar to those described in Steps 6 and 7.

Step 8: Creating an Online Order

To make sure that the taxes applied to taxable products in an online order are imported correctly during the order synchronization, you need to create an order in the BigCommerce store and import it to Acumatica ERP. To create an order with the taxable and non-taxable products you reviewed in Step 7, do the following:

1. While you are signed in to the control panel of the BigCommerce store, in the left pane, click **Orders > Add**.
2. On the **Add an Order - Customer Info** page, create the order as follows:
   a. In the **Customer Information** section, select the **Existing Customer** option button right of **Order for**.
   b. In the **Search** box, start typing the customer name, `GOODFOOD`, and select the *GoodFood One Restaurant* customer in the list of search results.
   c. Near the top of the **Billing Information** section, click *Use this address* to use the existing customer address as a billing address.

      The billing address elements are filled with the settings from the previously saved address of this customer.
   d. At the bottom of the page, click **Next**.
3. On the **Add an Order - Items** page, under **Add Products**, do the following:
   a. In the **Search** box, start typing `juicer`, and in the list of search results, select *JUICER20C*.
   b. In the **Search** box, start typing `kiwi`, and in the list of search results, select *KIWIJAM96*.

      For the purposes of this activity, you can leave the quantity of 1 for both products.
   c. At the bottom right, click **Next**.
4. On the **Add an Order - Shipping** page, in the **Shipping Method** section, click the *Fetch Shipping Quotes* link.
5. In the box with the list of shipping options, select *Free Shipping*.

   For the purposes of this activity, you can assume that the billing address and shipping address are the same.
6. At the bottom of the page, click **Next**.

7. On the **Add an Order - Finalize** page, do the following:
   - Review the information in the **Customer Billing Details**, **Shipping Details**, and **Summary** sections
   - In the **Finalize** section, select the *Manual Payment* payment method.
8. At the bottom of the page, click **Save & Process Payment**.
9. On the **View Orders** page, which opens, make a note of the number of the created order.

   In the order details, make a note of the amount of the tax applied to the order.

Step 9: Importing the Sales Order

To import the sales order you created in Step 8 to Acumatica ERP, do the following:

1. Sign in to Acumatica ERP by using the *gibbs* username.
2. Open the *Prepare Data* (BC501000) form.
3. In the Summary area, specify the following settings:
   - **Store**: The name of your BigCommerce store
   - **Prepare Mode**: *Incremental*
4. In the table, in the row of the *Sales Order* entity, select the unlabeled check box.
5. On the form toolbar, click **Prepare**.
6. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.
7. In the row of the *Sales Order* entity, click the link in the **Prepared Records** column.
8. On the *Process Data* (BC501500) form, which opens with the BigCommerce store and the *Sales Order* entity selected, select the unlabeled check box in the row of the sales order that you created in Step 8, and on the form toolbar, click **Process**.
9. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

Step 10: Reviewing the Taxes in the Imported Sales Order

To review how the taxes are displayed in the imported sales order, do the following:

1. Open the Sales Orders (SO3010PL) form.
2. In the list of orders, click the order number link of the sales order that you created in Step 8 and imported in Step 9 (which is the last sales order of the *EO* type for the *GOODFOOD* customer.
3. On the *Sales Orders* (SO301000) form, which opens, review the settings of the order.

   In the Summary area, notice that the **Tax Total** amount matches the tax amount of the order in the BigCommerce store. On the **Taxes** tab, which lists all taxes applied to individual order lines, notice that the *NYSTATETAX* is displayed.

On the **Details** tab, notice that for the *JUICER20C* item, **Tax Category** is set to *EXEMPT*, and for the *KIWIJAM96* item, **Tax Category** is set to *TAXABLE*. The tax category that appears in the sales order is copied from the **Tax Category** box of the **General** tab of the *Stock Items* (IN202500) form and does not correspond to the tax class assigned to the item in the BigCommerce store.

> To avoid discrepancies between the tax amount calculated in the BigCommerce store when an order is placed and the tax amount calculated in Acumatica ERP when an invoice is generated for an imported order, make sure that product data (which includes the information about the product's tax category) is in sync between the two systems before the order is created.

Lesson 4.4: Purchase of a Product with Variants

Synchronizing Orders: To Import Orders Containing Products with Variants

The following activity will walk you through the processes of purchasing products with variants in the online store and importing the order containing these products to Acumatica ERP.

Story

Suppose that SweetLife Fruits and Jams sells juices (which are matrix items based on the *JUICE* template item) in its BigCommerce store. Acting as an implementation consultant helping SweetLife to set up the integration between Acumatica ERP and the BigCommerce store, you want to explore how online orders containing matrix items (items with variants) are imported to Acumatica ERP and review the results of the import.

Configuration Overview

This activity uses the results of performing the following activities:

- *Synchronizing Products: To Sync Items with Variants*
- *Synchronizing Sales Prices: Process Activity*

Process Overview

In this activity, you will do the following:

1. In the control panel of the BigCommerce store, review the *JUICE* product.
2. On the storefront of the BigCommerce store, place an order with two items of the *JUICE* product with different attributes.
3. On the *Prepare Data* (BC501000) form, prepare the sales order data for synchronization; on the *Process Data* (BC501500) form, process the prepared data.
4. On the *Sales Orders* (SO301000) form, review the imported sales order.

System Preparation

Before you complete the instructions in this activity, do the following:

1. Make sure that the following prerequisites have been met:

    - The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.

    - The connection to the BigCommerce store has been established and the initial configuration has been performed, as described in *Initial Configuration: To Establish and Configure the Store Connection*.

    - The template items have been exported to the BigCommerce store, as described in *Synchronizing Products: To Sync Items with Variants*, and the prices have been exported, as described in *Synchronizing Sales Prices: Process Activity*.

2. Sign in to the control panel of the BigCommerce store as the store administrator.

Step 1: Reviewing the Product

To review the *JUICE* template item, which was previously exported to the BigCommerce store, do the following:

1. While you are signed in to the control panel of the BigCommerce store, in the left pane, click **Products > View**.

2. On the **View Products** page, which opens, in the row of the *JUICE* product, click the link in the **Product Name** column.

3. On the product management page, review the details of the *JUICE* product, which was imported from Acumatica ERP.

    In the **Variations** section, review the variant options (*Ingredients*, *Package*, and *Volume*) and the SKUs.

Step 2: Creating an Order for Variants of a Product

To create an order for a 32 fluid ounce bottle of peach juice and a 16 fluid ounce bottle of pineapple juice, do the following:

1. In the left pane of the control panel, click **View Store**.

2. On the storefront, select the **Other** category in the list at the top of the page.

3. On the page that lists the products in the *Other* category, click *Juice*.

4. On the page for *Juice*, select the following options:

    - **Ingredients**: *Peach*

    - **Package**: *Glass bottle*

    - **Volume**: *32 fl oz*

5. Click **Add to Cart**.

6. In the pop-up window that opens, click **Close**.

7. On the listing page of *Juice*, select the following options:

    - **Ingredients**: *Pineapple*

- **Package**: *Glass bottle*
- **Volume**: *16 fl oz*

8. Click **Add to Cart**.
9. In the confirmation pop-up window that opens, click **Proceed to checkout**.
10. On the checkout page, specify the needed settings as follows:
    a. In the **Customer** section, in the **Email Address** box, specify *guest@example.com*, and click **Continue as guest**.
    b. In the **Shipping** section, fill in the shipping address boxes as follows, and click **Continue**:
        - **First Name**: `Melody`
        - **Last Name**: `Keys`
        - **Address**: `3402 Angus Road`
        - **City**: `New York`
        - **Country**: *United States*
        - **State/Province**: *New York*
        - **Postal Code**: `10003`
    c. In the **Payment** section, select the **Authorize.Net** option button, and specify the following card settings:
        - **Credit Card Number**: `4111 1111 1111 1111`
        - **Expiration**: `12/22`
        - **Name on Card**: *Melody Keys*
11. Click **Place Order** to place your order.

    Your order has been created, and on the confirmation page, the order number is displayed. You will process the order with this order number further in this activity.

Step 3: Importing the Sales Order

To import the order that you created in Step 2 to Acumatica ERP, do the following:

1. Sign in to Acumatica ERP by using the *gibbs* username and *123* password.
2. Open the *Prepare Data* (BC501000) form.
3. In the **Store** box of the Summary area, select *SweetStore*.
4. In the **Prepare Mode** box, select *Incremental*.
5. In the table, select the unlabeled check box in the row of the *Sales Order* entity, and on the form toolbar, click **Prepare**.

6. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

7. In the row of the *Sales Order* entity, click the link with the number of prepared synchronization records in the **Prepared Records** column.

8. On the Process Data (BC501500) form, which opens with the store and the *Sales Order* entity selected, in the row of the order that you created in Step 2, select the unlabeled check box; on the form toolbar, click **Process**.

9. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

Step 4: Reviewing the Imported Sales Order

To review the details of the imported sales order, do the following:

1. Open the Sync History (BC301000) form.

2. In the Summary area, specify the following settings:

    - **Store**: *SweetStore*
    - **Entity**: *Sales Order*

3. On the **Processed** tab, in the row of the sales order that you have just imported (which you can locate by the external ID), click the link in the **ERP ID** column.

4. On the Sales Orders (SO301000) form, which opens for the imported order, review the order details.

    On the **Details** tab, notice that a separate line was added for each of the purchased product variants. The **Inventory ID** column contains the identifiers of the matrix items generated for the *JUICE* template item and not of the identifier of the *JUICE* template item itself.

Lesson 4.5: Import of an Order with Discounts

Synchronizing Orders: To Import Orders with Discounts

The following activity will walk you through the process of importing orders that contain items with discounts.

Story

Suppose that the SweetLife store wants to offer discounts for some of the products that the company sells in its BigCommerce store. As SweetLife's implementation consultant, you need to define these discounts and make sure that orders that contain items with discounts are imported to Acumatica ERP with the discounts applied correctly.

Configuration Overview

In the *U100* dataset, for the purposes of this activity, the following tasks have been performed:

- On the Stock Items (IN202500) form, the *BANJAM96* and *PLUMJAM96* stock items have been created.

- On the *Customers* (AR303000) form, the *GOODFOOD* customer has been created.

Process Overview

In this activity, you will do the following:

1. On the *BigCommerce Stores* (BC201000) form, review the discount-related settings.
2. In the control panel of the BigCommerce store, define three discounts of different types.
3. In the control panel, create a sales order with the automatically applied discounts.
4. On the *Prepare Data* (BC501000) form, prepare the sales order data for synchronization; on the *Process Data* (BC501500) form, process the sales order data prepared for synchronization.
5. On the *Sales Orders* (SO301000) form, review the imported sales order and applied discounts.

System Preparation

Before you complete the instructions in this activity, do the following:

1. Make sure that the following prerequisites have been met:
   - The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.
   - The connection to the BigCommerce store has been established and the initial configuration has been performed, as described in *Initial Configuration: To Establish and Configure the Store Connection*.
   - The *GOODFOOD* customer has been exported to the BigCommerce store, as described in *Synchronizing Customers: To Perform Bidirectional Synchronization*.
   - The *BANJAM96* and *PLUMJAM96* stock items have been exported to the BigCommerce store, as described in *Synchronizing Sales Prices: Process Activity*.
2. Launch the Acumatica ERP website with the *U100* dataset preloaded, and sign in with the following credentials:
   - Username: *gibbs*
   - Password: *123*
3. Make sure that the *Customer Discounts* feature is enabled as follows:
   a. Open the *Enable/Disable Features* (CS100000) form.
   b. On the form toolbar, click **Modify**, and select the **Customer Discounts** check box under **Advanced Financials**.
   c. On the form toolbar, click **Enable**.

Step 1: Reviewing Discount-Related Settings

To review the settings specified in Acumatica ERP for the import of online orders with discounts, do the following:

1. Open the *BigCommerce Stores* (BC201000) form.

2. In the **Store Name** box of the Summary area, select *SweetStore*.

3. On the **Order Settings** tab (**Order** section), in the **Show Discounts In** box, make sure that the *Document Discount* option is selected.

   With this option selected, the system aggregates discounts applied to particular lines of the order in the BigCommerce store and displays these discounts at the document level. Note that this option can be selected only if the *Customer Discounts* feature is enabled on the *Enable/Disable Features* (CS100000) form; if the feature is disabled, you can select only the *Line Discount* option.

   If the *Line Discount* option were selected, the system would show all discounts in the imported orders on the **Document Details** tab split between order lines.

Step 2: Defining the First Discount

In the BigCommerce store, you can define automatic discounts that will be applied to the order when certain conditions are met. In this step, you will define the first discount, a "buy one, get one free" discount that will be applied to the *Banana jam 96 oz* product.

Do the following:

1. Sign in to the BigCommerce store as the store administrator.

2. In the left pane, click **Marketing > Promotions**.

3. On the **Promotions** page, which opens, click **New automatic promotion** on the **Automatic** tab.

4. On the **Create Automatic Promotion** page, in the **Promotion Details** section, specify the following settings:

   - **Promotion Name**: `Buy one, get one free`
   - **Choose a Promotion Type**: *Product discount*
   - **Buy one get one free**: Selected

     In the settings that have appeared under this option button, leave the default quantities in the boxes as they are (*1*), and leave the check box (adjacent to the first box) cleared. To add the product to the discount, do the following:

     1. Click the *this product, none selected* link.
     2. On the **Select Product** page, which opens in a pop-up window, in the **Search by Product Name / SKU** box, type `banjam96`.
     3. Select the *Banana jam 96 oz* product in the search results box.
     4. Click **Select** to close the pop-up window and return to the**Create Automatic Promotion** page.

        Notice that the link below the **Buy one get one free** option button is displayed with the text *Banana jam 96 oz*, which means that the promotion will be applied to this product.

   - **Duration** (**Start date**): A date and time that are earlier than the current date and time so that the discount will be active when you create an order with this item (which you will do later in this activity)

5. Click **Save** at the bottom right to save the discount and close the **Create Automatic Promotion** page.

Step 3: Defining a Second Discount

To define the second discount—a 10% discount that will be applied to the price of the *Plum jam 96 oz* product—do the following:

1. While you are viewing the **Promotions** page (**Automatic** tab), click **New automatic promotion**.
2. On the **Create Automatic Promotion** page, in the **Promotion Details** section, specify the following settings:
   - **Promotion Name**: `10% off plum jam`
   - **Choose a Promotion Type**: *Product discount*
   - **Apply an amount or % off to Product X**: Selected

     In the settings that have appeared under this option button, do the following:
     - Change the quantity to *10* to establish 10 as the maximum number of jars that customers can buy with the discount.
     - In the second box, type `10`, and in the third box, select *%*; these settings indicate that the discount is 10%.
     - Click the link, and on the **Select Product** page, select the *Plum jam 96 oz* product (as you selected a product in Step 2).
   - **Duration** (**Start Date**): A date and time that are earlier than the current date and time so that the discount will be active when you create an order with the applicable quantity of this item (which you will do later in this activity)
3. Click **Save** at the bottom right to save the discount and close the **Create Automatic Promotion** page.

Step 4: Defining a Third Discount

To define the third discount—a discount that will be applied to all orders that exceed the $100 threshold—do the following:

1. While you are viewing the **Promotions** page (**Automatic** tab), click **New automatic promotion**.
2. On the **Create Automatic Promotion** page, in the **Promotion Details** section, specify the following settings:
   - **Promotion Name**: `5% discount on orders of $100 or more`
   - **Choose a Promotion Type**: *Order discount*
   - **Spend at least the specified amount, apply an amount or % discount to the order subtotal**: Selected

     In the boxes under this option button, specify the following settings:
     - **Discount Type**: *Percentage (%) off*

    - **Min. order value**: `100`
    - **Discount value**: `5`
  - **Duration**: A date and time that are earlier than the current date and time, so that the discount will be active when you create a qualifying order later in this activity

3. Click **Save** at the bottom right to save the discount and close the **Create Automatic Promotion** page.

Step 5: Creating a Sales Order

To create an order for the *Banana jam 96 oz* and *Plum jam 96 oz* products (to which the first and second discounts apply), do the following:

1. In the left pane of the control panel of the BigCommerce store, click **Orders > Add**.
2. On the **Add an Order - Customer Info** page, complete the order as follows:
   a. In the **Customer Information** section, select the **Existing Customer** option button right of **Order for**.
   b. In the **Search** box, start typing the customer name, `GOODFOOD`, and select the *GoodFood One Restaurant* customer in the list of search results.
   c. In the **Billing Information** section, click *Use this address* to use the existing customer address as a billing address.

      The billing address elements are filled with the settings from the previously saved address of this customer.
   d. At the bottom of the page, click **Next**.
3. On the **Add an Order - Items** page, under **Add Products**, do the following:
   a. In the **Search** box, start typing `plum`, and in the list of search results, select *Plum jam 96 oz*.
   b. In the only row for *Plum jam 96 oz*, in the **Qty** column, type `1`.

      Notice that in the **Item Price** column, the price of the product is $45.15, which is the default price, but the **Item Total** is $40.63, which is the price after the discount that you defined in Step 3 has been applied.
   c. In the **Search** box, start typing `banana`, and in the list of search results, select *Banana jam 96 oz*.

      Notice that two lines were added for the *Banana jam 96 oz* product. The price in the first line is $45.15. In the second line, the price is zero, because this is the free item that you specified for the discount in Step 2.
   d. In the line of the *Plum jam 96 oz*, change the quantity to *2*.
   e. Notice that the **Item Total** has changed for the items (except the free item) because the order total now exceeds the $100 threshold and the discount that you defined in Step 4 has been applied.
   f. At the bottom of the page, click **Next**.

4. On the **Add an Order - Shipping** page, in the **Shipping Method** section, click the *Fetch Shipping Quotes* link.

5. In the box with the list of shipping options, select *Free Shipping*.

   For the purposes of this activity, you can assume that the billing address and shipping address are the same.

6. At the bottom of the page, click **Next**.

7. On the **Add an Order - Finalize** page, do the following:

   - Review the information in the **Customer Billing Details**, **Shipping Details**, and **Summary** sections
   - In the **Finalize** section, select the *Manual Payment* payment method.

8. At the bottom of the page, click **Save & Process Payment**.

9. On the **View Orders** page, which opens, make a note of the number of the created order.

Step 6: Importing the Sales Order

To import the sales order you created in Step 5 to Acumatica ERP, do the following:

1. Sign in to Acumatica ERP by using the *gibbs* username.

2. Open the *Prepare Data* (BC501000) form.

3. In the Summary area, specify the following settings:

   - **Store**: The name of your BigCommerce store
   - **Prepare Mode**: *Incremental*

4. In the table, in the row of the *Sales Order* entity, select the unlabeled check box.

5. On the form toolbar, click **Prepare**.

6. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

7. In the row of the *Sales Order* entity, click the link in the **Prepared Records** column.

8. On the *Process Data* (BC501500) form, which opens with the BigCommerce store and the *Sales Order* entity selected, select the unlabeled check box in the row of the sales order that you created in Step 5, and on the form toolbar, click **Process**.

9. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

Step 7: Reviewing the Discounts in the Imported Sales Order

To review how the discounts are displayed in the imported sales order, do the following:

1. Open the Sales Orders (SO3010PL) form.

2. In the list of orders, click the order number link of the last sales order of the *EO* type for the *GOODFOOD* customer (which you created in Step 5 and imported in Step 6).

3. On the *Sales Orders* (SO301000) form, which opens, review the settings of the order.

   On the **Details** tab, notice that for the free item, *Banana jam 96 oz*, a separate line has been created with the **Free Item** check box selected. In the **Discount Amount** and **Discount Percent** column, the system has inserted zeros in both lines.

   On the **Discounts** tab, notice that one line has been created for all discounts applied to the order in the BigCommerce store. The text in the **Type** column (*External Document*) reflects the fact that the discounts were not applied in Acumatica ERP but were instead imported from an external system. The amount in the **Discount Amt.** column corresponds to the **Discount** value of the order in the BigCommerce store ($15.81).

You have created automatic discounts of different types in the BigCommerce store, explored how they are applied to an order in the store, and reviewed how they are displayed on the order after it has been imported to Acumatica ERP. If you were to continue processing the order, you would also notice that the document-level discounts are posted to a separate expense account specified for the customer in the **Discount Account** box on the **GL Accounts** tab of the *Customers* (AR303000) form.

Part 5: Scheduling Synchronization and Troubleshooting

Lesson 5.1: Scheduling Synchronization

Scheduling Synchronization: General Information

After you have completed the initial synchronization of the needed entities, you might want some of the entities to continue to be synchronized in real time or at regular intervals. For example, you might want sales orders, payments, and shipments to be imported from the BigCommerce store into Acumatica ERP as soon as the order is completed, whereas exporting price lists from Acumatica ERP to the BigCommerce store might only be required once a month.

Learning Objectives

In this section, you will learn the following:

- How to set up automated synchronization of entities for standard and optimized performance
- How to enable real-time synchronization of an entity
- How to schedule the synchronization of an entity

Applicable Scenarios

You set up the automated synchronization of entities to ensure that the entities are automatically exported and imported to the appropriate system in a timely manner.

The next section provides the recommended configuration for companies with standard and larger volumes of orders.

Recommended Synchronization Schedules

Depending on the volume of orders processed by your company, we recommend that you configure entities to be synchronized automatically as described in the following tables.

Table: Recommended Synchronization Setup for Lower Volumes

The schedules in these table are recommended for companies that process no more than 1,000 orders daily.

Entity	Real-Time Sync	Data Preparation	Data Processing
Sales Order	Start real-time synchronization; select the *Prepare & Process* real-time mode	Set up the schedule to prepare data once a night	Set up the schedule to process data once a night
Shipment	Start real-time synchronization; select the *Prepare & Process* real-time mode	Set up the schedule to prepare data once a night	Set up the schedule to process data once a night

Entity	Real-Time Sync	Data Preparation	Data Processing
Product Availability	Stop real-time synchronization	Set up the schedule to prepare data every 60 minutes	Set up the schedule to process data every 60 minutes
Other entities	Stop real-time synchronization	Set up the schedule to prepare data once a night	Set up the schedule to process data once a night

You should not rely on real-time synchronization alone. Always set up automation schedules as a backup.

We recommend that you not enable real-time synchronization if you plan to change configuration settings or to perform mass-addition, mass-deletion, and mass-update operations, including by means of import scenarios. We also recommend that you start real-time synchronization only after you begin production use to avoid unnecessary server traffic during the implementation.

Table: Recommended Synchronization Setup for Higher Volumes

The schedules in this table are recommended for companies that process more than 1,000 online orders daily.

Entity	Real-Time Sync	Data Preparation	Data Processing
Sales Order	Stop real-time synchronization	Set up the schedule to prepare data every 10 minutes	Set up the schedule to process data every 10 minutes
Shipment	Stop real-time synchronization	Set up the schedule to prepare data every 20 minutes	Set up the schedule to process data every 20 minutes
Product Availability	Stop real-time synchronization	Set up the schedule to prepare data every 60 minutes	Set up the schedule to process data every 60 minutes
Other entities	Stop real-time synchronization	Set up the schedule to prepare data once a night	Set up the schedule to process data once a night

Real-Time Synchronization

You enable real-time synchronization for an entity on the *Entities* (BC202000) form as follows:

1. In the Summary area, you select the following parameters:
    - **Store**: The name of the store with which you synchronize data
    - **Entity**: The entity that you synchronize with the store
    - **Sync Direction**: The direction of synchronization
        - If the **Sync Direction** is *Export*, only real-time export is enabled for the entity.
        - If the **Sync Direction** is *Import*, only real-time import is enabled for the entity.

    - If the **Sync Direction** is *Bidirectional*, both real-time export and real-time import are enabled for the entity.

    The direction of the synchronization is predefined by the system and can be changed only for some of the entities.

- **Primary System**: The system that will be used as the source of data during the synchronization of an entity

    The primary system is determined based on the direction of the synchronization. For *Export*, *ERP* is set to be the primary system. For *Import*, *External System* is set to be the primary system. For *Bidirectional*, you can select which system should be used as the primary system based on your processes.

- **Real-Time Mode**: The mode of the processing of the synchronization records. You can select one of the following options:

    - *Prepare*: As soon as a push notification about a change to data is received, the corresponding synchronization record is placed in the processing queue.

    - *Prepare & Process*: As soon as a push notification about a change to data is received, the corresponding synchronization record is placed in the processing queue, and the data synchronization process is immediately started for the synchronization record.

2. On the form toolbar, you click **Start Real-Time Sync** to start the real-time synchronization process.

To stop real-time synchronization for an entity, you select the store and the entity in the Selection area, and then click **Stop Real-Time Sync** on the form toolbar.

The status of the real-time export and import processes for an entity are displayed in the **Real-Time Import** and **Real-Time Export** boxes in the Summary area.

For detailed instructions on how to enable real-time synchronization, see *Scheduling Synchronization: To Enable Real-Time Sync of Shipments*.

Scheduled Synchronization

You set up a schedule according to which specific entities should be synchronized between the two systems by using the *Automation Schedules* (SM205020) form, which you can open directly or by clicking **Schedule > Add** on the form toolbar of the *Prepare Data* (BC501000) form and on the *Process Data* (BC501500) form.

To configure a schedule for data preparation, you do the following:

1. On the *Prepare Data* form, in the Selection area, you specify the BigCommerce store with which you are configuring synchronization, as well as the data preparation mode.

2. In the table, you select the unlabeled check box for each entity that should be processed when the schedule is executed.

3. On the table toolbar, you click **Schedule > Add**.

    The *Automation Schedules* form opens in a pop-up window. The settings that you have specified appear on the **Conditions** and **Filter Values** tabs of the form.

4. You specify a name and the description for the schedule, as well as its frequency, expiration information, execution dates and times, and other schedule details. Save the schedule.

To configure a schedule for synchronizing data—that is for processing synchronization records with the *Prepared* and *Failed* statuses—you do the following:

1. On the *Process Data* form, in the Selection area, you specify the BigCommerce store for which you are configuring synchronization, and the entity that needs to be processed.

   > To select all entities, clear the value in the **Entity** box.

2. On the table toolbar, you click **Schedule > Add**.

   The *Automation Schedules* form opens in a pop-up window. The settings that you have specified appear on the **Filter Values** tab of the form.

3. You specify a name and the description for the schedule, as well as its frequency, expiration information, execution dates and times, and other schedule details. Save the schedule.

For more information about automation schedules, see *Scheduled Processing*. For step-by-step instructions on creating a schedule for fetching and synchronizing data, see *Scheduling Synchronization: To Configure a Synchronization Schedule for Sales Orders*.

Scheduling Synchronization: To Enable Real-Time Sync of Shipments

In this activity, you will learn how to enable real-time synchronization of shipments.

Story

As an implementation consultant helping SweetLife to set up integration with BigCommerce, you want to configure continuous synchronization of particular entities. As part of the setup, you need to enable real-time synchronization of shipments so that shipments are exported to the BigCommerce website as soon as they are created or updated in Acumatica ERP.

Process Overview

In this activity, you will configure the system to immediately synchronize the changes in shipments with the BigCommerce store and then enable real-time synchronization for the *Shipment* entity by using the *Entities* (BC202000) form.

System Preparation

Before you enable real-time synchronization for the *Shipment* entity, do the following:

- Make sure that the following prerequisites have been met:
  - The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.
  - The connection to the BigCommerce store has been established and the initial configuration has been performed, as described in *Initial Configuration: To Establish and Configure the Store Connection*.

- Sign in to the Acumatica ERP instance with the *U100* dataset preloaded by using the *gibbs* username and *123* password.

Step: Enabling Real-Time Synchronization for Shipments

Perform the following instructions to enable real-time synchronization for shipments:

1. Open the *Entities* (BC202000) form.
2. In the **Store** box, select *SweetStore*.
3. In the **Entity** box, select *Shipment*.
4. In the **Real-Time Mode** box, select *Prepare & Process*.

   With this option selected, when the real-time synchronization process creates or updates a synchronization record for a shipment, it will also start processing this synchronization record so that out-of-sync data in the shipment is saved in the BigCommerce store.
5. On the form toolbar, click **Start Real-Time Sync**.

   Starting real-time synchronization can take a few seconds. After the real-time synchronization is turned on, **Real-Time Status** is changed from *Stopped* to *Running*.

> We recommend that you test the configuration by creating a new shipment for an existing sales order or updating an existing shipment in Acumatica ERP, and then reviewing the corresponding shipment record in the BigCommerce store. If for some reason the changes have not been synchronized, review the corresponding synchronization record on the *Sync History* (BC301000) form.

Scheduling Synchronization: To Configure a Synchronization Schedule for Sales Orders

The following activity will walk you through the process of creating an automation schedule. You will create two automation schedules to gain greater familiarity with the process. The first schedule will pull changes in sales orders every 10 minutes. The second schedule will start the data processing for out-of-sync order data every 10 minutes.

Story

As an implementation consultant helping SweetLife to set up integration with BigCommerce, you want to configure continuous synchronization of entities. As part of the setup, you need to configure the system to capture new and changed sales orders in BigCommerce every 10 minutes and import these changes to Acumatica ERP.

Process Overview

First, on the *Prepare Data* (BC501000) form, you will configure the conditions for preparing data for the *Sales Order* entity. Then on the *Automation Schedules* (SM205020) form, you will create an automation schedule that will start the data preparation process for the *Sales Order* entity every 10 minutes. After that, on the *Process Data* (BC501500) form, you will configure the conditions for processing data for the *Sales Order* entity. Then on the *Automation Schedules* form, you will create an automation schedule that will start data processing for the *Sales Order* entity every 10 minutes.

System Preparation

Before you start scheduling automated synchronization for an entity, do the following:

- Make sure that the following prerequisites have been met:
  - The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.
  - The connection to the BigCommerce store has been established and the initial configuration has been performed, as detailed in the steps in *Initial Configuration: To Establish and Configure the Store Connection*.
- Sign in to the Acumatica ERP instance with the *U100* dataset preloaded by using the *gibbs* username and the *123* password.

Step 1: Schedule the Automatic Data Preparation for Sales Orders

To configure an automation schedule that will start the data preparation process for the *Sales Order* entity every 10 minutes, do the following:

1. Open the *Prepare Data* (BC501000) form.
2. In the Summary area of the form, specify the following settings:
   - **Store**: *SweetStore*
   - **Prepare Mode**: *Incremental*

     With this option selected, during the data preparation process for the selected entities, only records that have been modified since the previous data preparation will be placed in the processing queue.
3. In the table, select the unlabeled check box in the row of the *Sales Order* entity.
4. On the form toolbar, click **Schedules > Add**.
5. On the *Automation Schedules* (SM205020) form, which opens in a pop-up window, in the **Description** box, enter a description for the new schedule, for example, `Prepare Data - Sales Orders`.
6. Make sure that *Prepare Data* is selected in the **Screen ID** box.
7. In the **Action Name** box, select the *Prepare* action.

   This schedule will invoke the data preparation action for only the selected entities.
8. On the **Details** tab, specify the additional settings of the schedule as follows:
   - In the **Starts On** box, select the start date. By default, the schedule execution starts on the current business date.
   - Select the **No Execution Limit** check box.
9. On the **Schedule** tab, configure the execution dates and times as follows:
   - In the **Schedule Type** section, select *Daily*.

- In the **Execution Time** section, specify the settings as follows:
  - In the **Starts On** box, select *12:00 AM*.

    This is the time when the schedule will be first executed on a particular day.
  - In the **Stops On** box, select *11:55 PM*.

    This is the time when the schedule will be last executed on a particular day.
  - In the **Every** box, type `00:10`.

    This box holds the time in hours and minutes (`hh:mm`) between executions of the scheduled process.

10. Review the settings on the **Conditions** and **Filter Values** tabs.

    The system has inserted the selections you have made on the *Prepare Data* form earlier in this step.

11. On the form toolbar, click **Save & Close** to save the changes to the automation schedule.

    Now changes in sales orders in the BigCommerce store will be pulled every 10 minutes, and placed in the processing queue for synchronization. In the next step, you will configure an automation schedule that will start data processing for the *Sales Order* entity every 10 minutes.

Step 2: Schedule Automatic Data Processing for Sales Orders

To configure an automation schedule that will start data processing for the *Sales Order* entity every 10 minutes, do the following:

1. Open the *Process Data* (BC501500) form.
2. In the Summary area of the form, specify the following settings:
   - **Store**: *SweetStore*
   - **Entity**: *Sales Order*
3. On the form toolbar, click **Schedules > Add**.
4. On the *Automation Schedules* (SM205020) form, which opens in a pop-up window, in the **Description** box, enter a description for the new schedule, for example, `Process Data - Sales Orders`.
5. Make sure that *Process Data* is selected in the **Screen ID** box.
6. In the **Action Name** box, select the *Process All* action.

   This schedule will start data processing for all rows on the form that match the specified filtering conditions.
7. On the **Details** tab, specify the additional settings of the schedule as follows:
   - In the **Starts On** box, select the start date. By default, the schedule execution starts on the current business date.
   - Select the **No Execution Limit** check box.

8. On the **Schedule** tab, configure the execution dates and times as follows:

- In the **Schedule Type** section, select *Daily*.
- In the **Execution Time** section, specify the settings as follows:
    - In the **Starts On** box, select *12:05 AM*.

      This is the time when the schedule will be first executed on a particular day.
    - In the **Stops On** box, select *11:55 PM*.

      This is the time when the schedule will be last executed on a particular day.
    - In the **Every** box, type `00:10`.

      This is the time between executions of the scheduled process.

9. Review the settings on the **Filter Values** tab.

10. On the form toolbar, click **Save & Close** to save the changes to the automation schedule.

You have configured two automation schedules for the *Sales Order* entity. Now the first automation schedule will start the data preparation process every 10 minutes to retrieve the changed data in sales orders, if any changes have occurred in the BigCommerce store since the previous data preparation, and will place it in the processing queue. The second schedule will start data processing for the *Sales Order* entity to process the synchronization records that have not yet been synchronized. During data processing, the system will also attempt to synchronize the sales order synchronization records that could not be synchronized before (that is, the synchronization records that have the *Failed* status).

> We recommend that you test the schedule configuration by creating a new or updating an existing sales order in the BigCommerce store, waiting for 10 minutes to give the schedule enough time to be executed, and then reviewing the corresponding sales order record in Acumatica ERP. If for some reason the changes have not been synchronized, review the corresponding synchronization record on the *Sync History* (BC301000) form.

Lesson 5.2: Monitoring Day-to-Day Commerce Operations

Troubleshooting: General Information

In day-to-day e-commerce operations, some data might fail to synchronize. To identify and troubleshoot synchronization issues, you can use various tools available in Acumatica ERP. In the sections of this topic, you will learn how to use some of these tools.

Learning Objectives

In this chapter, you will learn how to do the following:

- Monitor day-to-day e-commerce activities.

- Identify synchronization issues and process individual synchronization records that the system failed to process.
- Use business events to stay notified about synchronization records excluded from processing.

Applicable Scenarios

You monitor day-to-day activities and track failed and aborted synchronization records to ensure that all entities are synchronized between Acumatica ERP and the BigCommerce store correctly and in a timely manner.

The *Commerce Sync Monitoring* Dashboard

To get an instant overview of the current state of data synchronization between Acumatica ERP and your BigCommerce store, you use the *Commerce Sync Monitoring* dashboard. You open this dashboard by opening the **Commerce** workspace and clicking *Commerce Sync Monitoring* in the **Dashboards** category. By default, the widgets are displayed for the default store—that is, the store for which the **Default** check box is selected on the *BigCommerce Stores* (BC201000) form.

On the *Commerce Sync Monitoring* dashboard, you can review data synchronization statistics by using the widgets described in the following table.

Table: Widgets of the Commerce Sync Monitoring Dashboard

Widget	Description
Aborted Records	The number of synchronization records that have the *Aborted* status. These are the records that exceeded the maximum number of allowed failed attempts.
Failed Records	The number of synchronization records with the *Failed* status. These records are within the limit of the maximum number of allowed failed attempts.
Unpaid Orders	The number of orders that have been imported from the external system and that do not have payments applied, as well as the orders that have been created in Acumatica ERP without payments applied and exported to an external system.
Orders > 7 Days, Not Shipped	The number of orders that were created more than 7 days ago and have not been shipped.
Total Revenue	The sum of order total values (in the base currency) of all the orders that were imported or exported by using the commerce connector.
Prepared for Processing	The number of synchronization records with the *Prepared* status.
Processed in Last 7 Days	The number of synchronization records that have been processed in the last 7 days. The synchronization records are regarded as processed when they have been processed by the connector; these records can have various statuses, such as *Processed*, *Filtered*, *Invalid*, *Deleted*, or *Skipped*.
Total Processed	The number of synchronization records that have been processed.

Widget	Description
Sales Orders	A line chart that shows the number of sales orders imported per day. The maximum number of days shown is 10 by default.
Processed Records	A bar chart that shows the number of synchronization records that have been processed for each entity type.
Aborted Records	A table has been added, which shows the synchronization records with the *Aborted* status.

The first two widgets, *Aborted Records* and *Failed Records*, are the most critical because they show the information about the records that have not been processed. If either of these widgets shows a nonzero count, you should investigate the reasons, fix the issues, and process the synchronization records again.

The Sync History Form

You use the *Sync History* (BC301000) form to review the synchronization status of all records related to a particular entity. The form contains the following filter tabs that display synchronization records for the store and entity selected in the Summary area of the form:

- **All Records**: Displays all synchronization records that have ever been synchronized between Acumatica ERP and the BigCommerce store.
- **Ready to Process**: Displays active synchronization records that have the *Prepared* status or the *Failed* status. The system attempts to synchronize records with either of these statuses when data processing is started for the corresponding entity.
- **Failed**: Displays active synchronization records that have the *Failed* status.
- **Processed**: Displays active synchronization records that have the *Processed* status—that is, active synchronization records that have been successfully processed by the system.
- **Skipped**: Displays the active synchronization records that have the *Skipped* status—that is, the active synchronization records that have been manually excluded from the synchronization by users.
- **Aborted**: Displays active synchronization records with the *Aborted* status—that is, active synchronization records that have been excluded from the synchronization by the system. The system assigns the *Aborted* status to a synchronization record if it fails to process it for more than the maximum number of failed attempts allowed for the synchronization of the entity to which the synchronization record belongs.
- **Deleted**: Displays active synchronization records that have the *Deleted* status, which is assigned to a synchronization record if the record data it contains has been prepared (that is, pulled from Acumatica ERP and the external e-commerce system) and then deleted in the primary system of the entity.
- **Filtered**: Displays active synchronization records that have the *Filtered* status. The system assigns this status to a synchronization record if it has been prepared and then filtered out during the data processing because filtering conditions defined for the entity on the *Entities* (BC202000) form have been applied.
- **Invalid**: Displays active synchronization records that the system has assigned the *Invalid* status—that is, synchronization records generated for document or entity records that cannot be synchronized, for example, if they have been used in the store settings. For instance, a customer

record that has been selected as the **Generic Guest Customer** is not synchronized during the synchronization of the *Customer* entity.

- **Inactive**: Displays synchronization records for entities that have been deactivated (that is, the **Active** check box is cleared) on the **Entity Settings** tab of the *BigCommerce Stores* (BC201000) form. Inactive synchronization records have the **Active** check box cleared in the table.

To identify and fix a synchronization error, for each synchronization record, you can find various useful information. The following

- **ERP ID**: The ID of the document or entity record in Acumatica ERP. If you click the link in this column, the system opens the corresponding Acumatica ERP form in a pop-up window with the record selected.
- **External ID**: The ID of the document or entity record in the external e-commerce system. If you click the link in this column, the system opens the corresponding page of the e-commerce system in a new window and displays the details of the document or entity record.
- **Status**: The status of the synchronization record.
- **Last Error**: The error, if any, that occurred during the last attempt to process the synchronization record.
- **Last Operation**: The operation that was last performed on the record.

After you have fixed an issue that caused the system to fail the processing of a particular synchronization record, you need to process the aborted synchronization record manually. To do this, in the row of the synchronization record, you select the unlabeled check box, and on the form toolbar, you click **Sync**.

> When you invoke the **Sync** action, the system attempts to process the selected synchronization record even if it has the *Processed* status.

A Business Event on Aborted Synchronization Records

In order not to miss the moment when a synchronization record is assigned the *Aborted* status and excluded from further processing, you can define a business event that will trigger sending you an email notification about aborted records.

For more information about business events, see *Using Business Events*. For step-by-step instructions for defining a particular business even that will trigger sending an email notification, see *Troubleshooting: To Configure a Business Event*.

Troubleshooting: To Prepare the System

In this activity, you will make changes to the configuration of the Acumatica ERP instance and the BigCommerce store that will then prevent the system from successfully synchronizing the entities. You will use the results of performing this activity—that is, synchronization records with the *Failed* status—in the subsequent activities.

Process Overview

In this activity, you will do the following:

1. On the *Stock Items* (IN202500) form, create two stock items by copying the existing stock items.

2. On the *Prepare Data* (BC501000) form, prepare the *Stock Item* entity for synchronization.
3. On the *Process Data* (BC501500) form, process the prepared records for the four stock items (two that you copied and two that you created).

System Preparation

Do the following:

1. Make sure that the following prerequisites have been met:
   a. The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.
   b. The connection to the BigCommerce store has been established and the initial configuration has been performed, as described in *Initial Configuration: To Establish and Configure the Store Connection*.
2. Sign in to Acumatica ERP as Jerald Stevens by using the following credentials:
   - Username: *stevens*
   - Password: *123*

Step 1: Creating a Stock Item

To create the first stock item, do the following:

1. Open *Stock Items* (IN202500) form.
2. In the **Inventory ID** box of the Summary area, select *APJAM08*.
3. On the form toolbar, click **Clipboard > Copy**.
4. On the form toolbar, click **Add New Record**.
5. In the **Inventory ID** box, type `COPYAP08`.
6. On the form toolbar, click **Clipboard > Paste**.
7. On the form toolbar, click **Save**.

Step 2: Creating a Second Stock Item

To create the first stock item, while you are still viewing the *Stock Items* (IN202500) form, do the following:

1. In the **Inventory ID** box of the Summary area, select *BANJAM08*.
2. On the form toolbar, click **Clipboard > Copy**.
3. On the form toolbar, click **Add New Record**.
4. In the **Inventory ID** box, type `COPYBAN08`.
5. On the form toolbar, click **Clipboard > Paste**.
6. On the form toolbar, click **Save**.

Step 3: Synchronizing the Stock Items

To prepare the *Stock Item* entity for synchronization and process the prepared synchronization records, do the following:

1. Open the *Prepare Data* (BC501000) form.
2. In the Summary area, specify the following settings:
   - **Store**: *SweetStore*
   - **Prepare Mode**: *Incremental*
3. In the table, in the row of the *Stock Item* entity, select the unlabeled check box.
4. On the form toolbar, click **Prepare**.
5. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.
6. In the row of the *Stock Item* entity, click the link in the **Prepared Records** column.
7. On the *Process Data* (BC501500) form, which opens with the *SweetStore* store and the *Stock Item* entity selected, do the following:
   a. In the rows of the stock items that you copied and created (*APJAM08*, *COPYAP08*, *BANJAM08*, and *COPYBAN08*), select the unlabeled check box.
   b. On the form toolbar, click **Process**.
8. In the **Processing** dialog box, which opens, review the results of the processing, and click **Close** to close the dialog box.

   Because you created the *COPYAP08* and *COPYBAN08* stock items by copying the *APJAM08* and *BANJAM08* items, respectively, and did not change any details, the new items have the same descriptions as the original ones. A product name in a BigCommerce store (which corresponds to an item description in Acumatica ERP) must be unique. That is why the system could not process the prepared synchronization records and assigned them the *Failed* status. You will use these synchronization records in the next activity.

Troubleshooting: To Monitor Day-to-Day E-Commerce Operations

The following activity will walk you through the tools you can use to monitor day-to-day e-commerce operations.

Story

Suppose that you are Jerald Stevens, an eCommerce Manager at SweetLife Fruits & Jams. You start your day by checking how the synchronization of data between Acumatica ERP and the BigCommerce is going and whether any synchronization issues have occurred that require your attention. While reviewing the synchronization statistics, you notice that the some of the synchronization records have not been processed. You need to investigate and fix the issue and then manually resynchronize the failed synchronization records.

Process Overview

In this activity, you will do the following:

1. On the *Commerce Sync Monitoring* dashboard, you will review the widgets and identify a synchronization record that the system failed to process.
2. On the *Stock Items* (IN202500) form, you will fix the synchronization issue.
3. On the *Sync History* (BC301000) form, you will manually resynchronize the synchronization record.

System Preparation

Do the following:

1. Make sure that the following prerequisites have been met:
   a. The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.
   b. The connection to the BigCommerce store has been established and the initial configuration has been performed, as described in *Initial Configuration: To Establish and Configure the Store Connection*.
   c. The stock items have been created and the synchronization records have been processed, as described in *Troubleshooting: To Prepare the System*.
2. Sign in to Acumatica ERP as Jerald Stevens by using the *stevens* username and the *123* password.

Step 1: Reviewing the *Commerce Sync Monitoring* Dashboard

To get instant insights into the state of data synchronization with a particular store, you can use the *Commerce Sync Monitoring* dashboard, as follows:

1. To open the dashboard, open the **Commerce** workspace, and in the **Dashboards** category, select *Commerce Sync Monitoring*.
2. On the *Commerce Sync Monitoring* dashboard form, which opens, in the **Store** box, select *SweetStore*.

   The system displays the statistical synchronization data for the *SweetStore* store. Notice that the *Failed Records* widget shows the number of synchronization records that the system has failed to synchronize one or several times but will still try to synchronize again when data processing is started for them next time.

   > The widget shows at least two failed synchronization records that you created during the preparation activity. If the processing of any other synchronization records has failed before, you might see a different record count.

3. Click the *Failed Records* tile to open the *BC-DB-Status* generic inquiry and view the list of failed synchronization records.

   The table contains two synchronization records of the *Stock Item* entity with the following error message (**Last Error** column): *Export of the Stock Item record cannot be completed. The stock item with the same field or fields (item_description) already exists.* The error message displayed for a synchronization record is your starting point for investigating synchronization issues.

Step 2: Updating the Stock Item

To fix the synchronization issue with the duplicate description of the *COPYAP08* stock item, do the following:

1. Open the *Stock Items* (IN202500) form.
2. In the **Inventory ID** box of the Summary area, select *COPYAP08*.
3. In the **Description** box, change the existing text to *Home-made apple jam 8 oz.*.
4. On the form toolbar, click **Save**.

   You have now fixed the duplicate description error for the *COPYAP08* stock item. However, this item will remain unsynchronized until the synchronization record is processed again.

   For the purpose of this activity, you don't need to fix a similar issue for another stock item, *COPYBAN08*. You will work on this issue in the next activity.

Step 2: Processing the Failed Synchronization Record

To manually process the record that the system failed to process previously, do the following:

1. Open the *Sync History* (BC301000) form.
2. In the **Store** box of the Summary area, select *SweetStore*.
3. In the **Entity** box, select *Stock Item*.
4. On the **Failed** filter tab, in the row of the synchronization record of the *Apple jam 8 oz.* stock item (shown in the **ERP ID** column), select the unlabeled check box, and on the form toolbar, click **Sync**.

   The system force-synchronizes the synchronization record. When the processing is finished successfully, the synchronization record is assigned the *Processed* status and moved from the **Failed** filter tab to the **Processed** filter tab.

Troubleshooting: To Configure a Business Event

The following activity will walk you through the process of configuring a business event.

Story

Suppose that you want to receive an email notification every time the system excludes a synchronization records from processing (because it's failed to process the synchronization record too many times and set its status to *Aborted*). You need to set up a business event that will trigger sending an email message every time the status of a synchronization record changes to *Aborted*.

Configuration Overview

In the *U100* dataset, on the *Notification Templates* (SM204003) form, the *Aborted Synchronization Record* notification template has been configured for the purposes of this activity.

Process Overview

On the *Business Events* (SM302050) form, you will create a new business event that will trigger sending an email when the system fails to process a synchronization record for more than five times (which is the maximum number of synchronization attempts allowed by default).

System Preparation

Do the following:

1. Make sure that the following prerequisites have been met:
   a. The BigCommerce store has been created and configured, as described in *Initial Configuration: To Set Up a BigCommerce Store*.
   b. The connection to the BigCommerce store has been established and the initial configuration has been performed, as described in *Initial Configuration: To Establish and Configure the Store Connection*.
   c. The stock items have been created and the synchronization records have been processed, as described in *Troubleshooting: To Prepare the System*.
2. Sign in to Acumatica ERP by using the following credentials:
   - Username: *gibbs*
   - Password: *123*

Step 1: Creating a Business Event

To create a business event triggered by a record change, do the following:

1. Open the *Business Events* (SM302050) form.
2. On the form toolbar, click **Add New Record**.
3. In the Summary area, specify the following settings:
   - **Event ID**: `Sync Record Aborted`
   - **Type**: *Trigger by Record Change* (selected by default)
   - **Raise Event**: *For Each Record* (selected by default)

     With this setting, the system will generate a business event for every synchronization record whose status changes to *Aborted*.
   - **Active**: Selected
   - **Screen Name**: *BC-DB-Status*
   - **Description**: `Email notification on aborting synchronization for an individual record`
4. On the **Trigger Conditions** tab, add a row with the following settings:
   - **Operation**: *New Field Value*

- **Table Name**: *BCSyncStatus*
- **Field Name**: *Status (status)*
- **Condition**: *Equals*
- **Value 1**: *Aborted*

5. On the **Subscribers** tab, on the table toolbar, click **Add Row**, and add a row with the following settings:
   - **Active**: Selected
   - **Subscriber ID**: *Aborted Synchronization Record*

     This email notification template has been preconfigured for the purposes of this activity.
6. On the form toolbar, click **Save**.

You have configured a business event that will trigger sending Jerald Stevens, who is an eCommerce Manager that has been specified in the *Aborted Synchronization Record* notification template, an email notification every time a synchronization record is assigned the *Aborted* status. In the next step, you will verify that the notifications are triggered and review the email that is sent to the user.

Step 2: Verifying that Email Notifications Work Correctly

The system changes the status of a synchronization record to *Aborted* after it fails to process it for more than 5 times (which is the default value that you can change). To make the system change the status, do the following:

1. Open the *Sync History* (BC301000) form.
2. On the **Failed** filter tab, in the row of the synchronization record of the *Banana jam 8 oz.* stock item (see the **ERP ID** column), select the unlabeled check box, and on the form toolbar, click **Sync**.

   The system fails to process the synchronization record, and the value in the **Attempt Count** column increases by one.
3. Repeat Instruction 2 three more times.

   When the sync record is assigned the *Aborted* status, it is moved from the **Failed** filter tab to the **Aborted** filter tab. Now you need to verify that the email was sent to Jerald Stevens.
4. Open the *All Emails* (CO409070) form.
5. In the **Summary** column of the table, click the *Processing of a synchronization record was aborted* link.
6. On the *Email Activity* (CR306015) form, which opens with the email contents, review the email message that was created by the system.

   For the purposes of this activity, you do not have to investigate the issues with the aborted record.

In the *U100* dataset, the outgoing email server has not been configured so the actual email was not sent. In a production environment with the mail service configured, the email message would be delivered to the user's inbox.

In this activity, you have explored how you can get an instant overview of the ongoing synchronization operations by using the *Commerce Sync Monitoring* dashboard, how you can manually resynchronize failed or aborted synchronization records by using the *Sync History* (BC301000) form, and how you can configure a business event to send a notification to the user every time the system excludes a synchronization record from processing.

Additional Materials

Initial Configuration: Implementation Checklist

You can use the information in this topic to quickly check what needs to be configured in the BigCommerce store and in the Acumatica ERP instance, and what information must be obtained before you can start implementing the integration with the BigCommerce store.

API Credentials and WebDAV Information to Capture in the BigCommerce Store

The table below lists the API and WebDAV information that is necessary for configuring a store connection and should be captured beforehand. For more information, see *Initial Configuration: To Capture Store Connection Information*.

Required Information	Description
Store Admin Path	The permanent URL of the e-commerce store followed by */manage*. This path is used for navigating to BigCommerce pages from the *Sync History* (BC301000) and *Process Data* (BC501500) forms.
REST Settings	
API Path	The URL of the BigCommerce API.
Client ID	An ID that is provided by BigCommerce when a new store is set up on the BigCommerce platform.
Access Token	An access token provided by BigCommerce when a new store is set up on the BigCommerce platform. For synchronization to work properly, the access token should have the necessary access permissions in BigCommerce. We recommend that you grant the maximum access permissions, as described in *Initial Configuration: To Capture Store Connection Information*
WebDAV Settings	
WebDAV Path	The URL of the store used for file management, which facilitates the exchange of data between the e-commerce store and the users and external systems. This URL is the store's permanent URL followed by *DAV*. This URL is used by Acumatica ERP to upload files and images to the BigCommerce store.
WebDAV Username	The email address of the registered owner of the BigCommerce store, which is used to connect to the BigCommerce store.
WebDAV Password	The password that is used to connect to the BigCommerce file storage. The WebDAV password is a string of random letters and numbers, which you can find on the **File Access** page in your BigCommerce store.

Settings in the BigCommerce Store

In the table below, you will find the information about the settings that you should specify in the BigCommerce store before you start setting up the integration with Acumatica ERP. For more information, see *Initial Configuration: To Set Up a BigCommerce Store*.

Required Settings	Description
Store profile	The basic information about the online store, including the store name, address, country, and contact details. The store country is important because it determines which payment and shipping options are available for your store.
Default currency	The default currency in which prices are displayed to users and which transactions are made. The default currency should be the same as the base currency in the Acumatica ERP instance.
Payment methods for the default currency	The payment methods that can be used for transactions in the default currency.
Shipping rules	The shipping zones and rates that you want to use in your store.
Taxes	The tax settings that apply to your online store.

Settings in Acumatica ERP

The table below contains the features that need to be enabled, the entities that need to be created, and the settings that need to be specified in Acumatica ERP before you can specify the appropriate settings on the *BigCommerce Stores* (BC201000) form.

Form	Things to Check	Notes
Enable/Disable Features (CS100000)	The following required features are enabled: • *Business Account Locations* • *Commerce Integration* • *BigCommerce Connector* • *Custom Order Types* • *Inventory* • *Scheduled Processing* • *Volume Pricing* The *Inventory Subitems* feature is disabled. If this feature is enabled, the import of sales orders will not work. The following recommended features are enabled:	See *Preparing an Instance: Acumatica ERP Features*.

Form	Things to Check	Notes
	• *Drop Shipments* • *External Tax Calculation Integration* • *Customer Discounts* • *Multicurrency Accounting* • *Multiple Warehouses* • *Multiple Warehouse Locations* • *Shipping Carrier Integrations*	
Customer Classes (AR201000)	The customer class for e-commerce customers has been created. This customer class is used for creating customer records in Acumatica ERP for customers imported from the BigCommerce store.	See *Accounts Receivable: Customer Classes*.
Customers (AR303000)	The customer account for importing to Acumatica ERP orders placed in the online store by guest users has been created.	See *Customers: General Information*.
Numbering Sequences (CS201010)	• A numbering sequence has been defined for the auto-numbered segment that will be used for generating customer IDs on import. • A numbering sequence has been defined for the auto-numbered segment that will be used for generating customer location IDs on import.	See *Use of Numbering Sequences*.
Item Sales Categories (IN204060)	The sales categories under which the stock items and non-stock items are placed have been configured and assigned to individual items. A sales category under which non-stock and stock items will be placed if they are not assigned any category in Acumatica ERP has been configured.	See *To Add a New Item Sales Category* and *To Add Inventory Items to the Catalog*.
Order Types (SO201000)	A unique order type has been created for orders imported from the online store.	See *Sales Order Types: General Information*.
Taxes (TX205000)	The sales taxes applicable to the products that you sell have been configured.	See *Sales Taxes: General Information*.
Ship via Codes (CS207500)	The ship via codes for the delivery services that the company uses have been created.	See *To Create a Ship via Code*.
Cash Accounts	The cash accounts associated with payment methods used in the e-commerce transactions have been created.	See *Cash Management: To Create Cash Accounts*.

Form	Things to Check	Notes
Payment Methods	The payment methods used in the e-commerce transactions have been configured.	See *Cash Management: Payment Methods*.
Processing Centers	The Authorize.Net processing center to be used for processing credit card payments has been configured.	See *Setup of Card Payment Processing*.

Preparing Entities for Synchronization: Filtering

In this topic, you will learn how you can define export and import filtering settings.

Export Filtering

You can configure the rules according to which data from Acumatica ERP should or should not be exported to the online store by using the **Export Filtering** tab of the *Entities* (BC202000) form.

To define a filter, you need to specify at least one filtering condition. Each condition includes the following components:

- **Field Name**: The data field by which data needs to be filtered. The list of options you can select from depends on the selected entity.
- **Condition**: The logical operation to apply to the value of the selected data field.
- **Value**: The value you enter for the logical condition used to filter the data, if the selected condition requires a value.
- **Value 2**: The second value for the logical condition, if the selected logical condition requires a second value. For example, the *Is Between* logical condition requires a second value.

A filter may contain multiple simple conditions or lines combined into one logical expression with brackets and logical operators (*And* and *Or*).

Example

Suppose that you want to maintain customers of a particular customer class, *INTL*, only in Acumatica ERP, and you want to exclude such customers from synchronization with the BigCommerce store. To do this, you select the *Customer* entity in the Summary area of the *Entities* form, and on the **Export Filtering** tab, you specify the condition corresponding to the settings shown in the following table.

Active	Brackets	Field Name	Condition	Value	Value 2	Brackets	Operator
Selected	-	*Customer Class*	*Does Not Equal*	`INTL`	Empty	-	*And*

The particular fields that you can select in the **Field Name** column depend on the selected entity.

If you change the export filter settings after an export has been completed, the synchronization records that have been previously processed and are no longer included in the filter, will remain synchronized but will be assigned the *Filtered* status.

Export Filtering by Custom Fields

Export filtering by custom fields, which are fields added to a form as a result of publishing a customization project, is available for the *Customer*, *Stock Item*, *Non-Stock Item*, *Template Item*, and *Sales Order* entities.

To use a custom field in a filtering condition, on the **Export Filtering** tab of the *Entities* (BC202000) form, you should type the name of the field in the **Field Name** column of the table. The system validates the field name against the API field list and displays an error if the field name cannot be found.

To avoid typing errors, you can copy the name of the needed field from the API Advanced list as follows:

1. On the **Export Mapping** tab, in the **Source Object** column, select the *<Entity>* → *Advanced* option.
2. In the **Source Field / Value** column, click the down arrow, and then select and copy the needed field name.

In some situations, a custom field used in a filtering condition may become unavailable during export, for example, if a customization project that added the field has been unpublished. In this case, the system will treat the value in the condition that contains the missing field as *null*. To avoid issues during the export, the *Is Not Empty* condition should be added to each filtering condition that includes custom fields.

Export Filtering by Attributes

Export filtering by attributes is available for the *Customer*, *Stock Item*, *Non-Stock Item*, and *Template Item* entities.

When an attribute is created and added to a customer class or item class, it becomes available for selection on the *Entities* (BC202000) form. To use an attribute in a filtering condition, you should select it in the **Field Name** column of the table on the **Export Filtering** tab. An attribute can be distinguished from other fields by the *Attributes* prefix before its name.

In some situations, an attribute used in a filtering condition may become unavailable during export, for example, if an attribute has been removed from an item class or a customer class of an item or a customer, respectively, being exported. In this case, the system will treat the value in the condition that contains the missing field as *null*. To avoid issues during the export, the *Is Not Empty* condition should be added to each filtering condition that includes attributes.

Import Filtering

You can configure the rules according to which data from the online store should or should not be imported into Acumatica ERP by using the **Import Filtering** tab of the *Entities* (BC202000) form.

To define a filter, you need to specify at least one filtering condition. Each condition includes the following components:

- **Field Name**: The data field by which data needs to be filtered. The list of options you can select from depends on the selected entity.

- **Condition**: The logical operation to apply to the value of the selected data field.
- **Value**: The value you enter for the logical condition used to filter the data, if the selected condition requires a value.
- **Value 2**: The second value for the logical condition, if the selected logical condition requires a second value. For example, the *Is Between* logical condition requires a second value.

A filter may contain multiple simple conditions or lines combined into one logical expression with brackets and logical operators (*And* and *Or*).

Example

Suppose that you do not want to import into Acumatica ERP orders placed in the online store by a particular customer, Morning Cafe. To do this, you select the *Order* entity in the Summary area of the *Entities* form, and on the **Import Filtering** tab, you specify the condition corresponding to the settings shown in the following table.

Active	Brackets	Field Name	Condition	Value	Value 2	Brackets	Operator
Selected	-	*Customer*	*Does Not Equal*	`Morning Cafe`	Empty	-	*And*

The particular fields that you can select in the **Field Name** column depend on the selected entity.

If you change the import filter settings after an import has been completed, the synchronization records that have been previously processed and are no longer included in the filter, will remain synchronized but will be assigned the *Filtered* status.

Preparing Entities for Synchronization: Field Mapping

In this topic, you will learn how you can map fields between Acumatica ERP and BigCommerce to override the standard field mapping or define an additional mapping to suit your synchronization requirements.

Mapping of Fields for Export

Acumatica ERP Retail-Commerce Edition provides you with the ability to map fields, which are related to synchronized entities, in Acumatica ERP with fields in BigCommerce. You can define additional mappings of standard or custom fields as well as override the standard mappings provided with the BigCommerce integration.

You define the mappings of fields that should be processed during the export of data from Acumatica ERP into BigCommerce on the **Export Mapping** tab of the *Entities* (BC202000) form. During the export process, data from the specified fields is fetched and processed according to the defined mappings.

To map two fields that will be processed during the export process, you specify values in the following columns:

- **Target Object**: An object in the e-commerce system, which is a related set of fields, for the entity. The list of objects available for selection depends on the entity selected in the Summary area.

- **Target Field**: A field related to the selected target object. The fields that are displayed in the list depend on the selected object.
- **Source Object**: An Acumatica ERP object, which is a related set of fields, for the entity. The list of objects available for selection depends on the entity selected in the Summary area.
- **Source Field / Value**: A field related to the selected source object. The fields that are displayed in the list depend on the selected object. In this field, you can also define a particular value for the mapped field.

Example

Suppose that you do not want inventory IDs of stock items maintained in Acumatica ERP to be publicly displayed as SKU names on the storefront of your BigCommerce store. Instead, you want to show alternate IDs. To map the alternate IDs of stock items in Acumatica ERP to stock keeping units (SKU) in BigCommerce, you do the following:

1. In Acumatica ERP, you make sure that an alternate ID is specified for each stock item on the **Cross-Reference** tab of the *Stock Items* (IN202500) form.
2. On the **Export Mapping** tab of the *Entities* form, you select the store and the *Stock Item* entity, and in the table row, you specify the following mapping settings.

Active	Target Object	Target Field	Source Object	Source Field / Value
Selected	*Product*	*Stock Keeping Unit*	*Stock Items → Cross References*	*Alternate ID*

With this mapping, when you synchronize stock items with the BigCommerce store, the alternate ID of a stock item will be exported to the **SKU** field of the item in the BigCommerce store.

Mapping of Fields for Import

Acumatica ERP Retail-Commerce Edition provides you with the ability to map fields, which are related to synchronized entities, in Acumatica ERP with fields in BigCommerce. You can define additional mappings of standard or custom fields, as well as override the standard mappings provided with the BigCommerce integration.

You define the mappings of fields that should be processed during the import of data from BigCommerce into Acumatica ERP on the **Import Mapping** tab of the *Entities* (BC202000) form. During the import process, data from the specified fields is fetched and processed according to the defined mappings.

To map two fields that will be processed during the import process, you specify values in the following columns:

- **Target Object**: An Acumatica ERP object, which is a related set of fields, for the entity. The list of objects available for selection depends on the entity selected in the Summary area.
- **Target Field**: A field related to the selected target object. The fields that are displayed in the list depend on the selected object.

- **Source Object**: An object in the e-commerce system, which is a related set of fields, for the entity. The list of objects available for selection depends on the entity selected in the Summary area.
- **Source Field / Value**: A field related to the selected source object. The fields that are displayed in the list depend on the selected object. In this field, you can also define a particular value for the mapped field.

Example

Suppose that you want to provide the customers of your BigCommerce store the ability to add a note when signing up for a new account. You also want this note to be imported into Acumatica ERP during the synchronization of customer data. The standard customer sign-up form available in the BigCommerce store does not contain a field for a note. To add a note field in BigCommerce and map it to an attribute field in Acumatica ERP, you need to perform the following steps:

1. In the BigCommerce store, you open the **Form Fields** page by clicking **Advanced Settings > Account Signup Form** in the left pane, and you create a new field of the text type, *Message for Admin*.
2. In Acumatica ERP, on the *Attributes* (CS205000) form, you define an attribute with the following settings:
   - **Attribute ID**: `MESSAGE`
   - **Description**: `Message for Admin`
   - **Control Type**: *Text*
3. On the *Customer Classes* (AR201000) form, you select a customer class based on which customer records are created when BigCommerce customers are imported to Acumatica ERP—that is, the customer class specified for the store in the **Customer Class** box on the **Customer Settings** tab of the *BigCommerce Stores* (BC201000) form—and on the **Attributes** tab, you add the created attribute.
4. On the *Entities* form, you select the store and the *Customer* entity, and on the **Import Mapping** tab, you specify the following settings.

Active	Target Object	Target Field	Source Object	Source Field / Value
Selected	*Customer → Attributes*	*Message to Admin*	*Customer → Form Fields*	*Message to Admin*

With this mapping, the text that a customer enters in the **Message to Admin** field in the customer registration form in the BigCommerce store will be imported to Acumatica ERP during the synchronization of customer data, and will be displayed for the customer in the row of the *Message for Admin* attribute on the **Attributes** tab of the *Customers* (AR303000) form.

For step-by-step instructions on mapping a nonstandard field for customers, see *Preparing Entities for Synchronization: Implementation Activity*.

Auto-Mapping of Fields

When configuring the mapping of fields of the *Stock Item*, *Non-Stock Item*, and *Template Item* entities, instead of selecting a particular target field, you can type `<<Auto_Mapping>>` in the **Target**

Field column. During the synchronization process, the system looks for a field similar to the source field and does one of the following:

- If the field is found, maps it to the source field
- If the field is not found, creates a new text field in the e-commerce system with the same name as that of the source field

> If <<*Auto_Mapping*>> is entered in the target field, you cannot use a formula in the source field.

Removing Standard Mapping for a Field

You can remove the mapping for fields that you do not want to be synchronized between Acumatica ERP and the external system. You perform the unmapping for import and export directions separately as follows:

1. On the *Entities* (BC202000) form, you select the store and the entity for which you want to modify field mapping.
2. Depending on the synchronization direction, you do one of the following:
    - To remove the mapping from an Acumatica ERP field so that it is not used during the import, on the **Import Mapping** tab, you select the needed values in the **Target Object** and **Target Field** columns, and then in the **Source Object** column, you select <<*Unmap*>>.
    - To remove the mapping from a field in the external e-commerce system so that it is not used during the export, on the **Export Mapping** tab, you select the needed values in the **Target Object** and **Target Field** columns, and then in the **Source Object** column, you select <<*Unmap*>>.

    During the synchronization, the system will not pull data from the unmapped fields or record data to these fields.

Mappable Fields and Mapping Limitations

You can define additional mapping or override default mapping for the following types of Acumatica ERP fields:

- *Standard fields*: These fields are available in Acumatica ERP out of the box.
- *Custom fields*: These fields are not present in the out-of-the-box version of Acumatica ERP and are created when a customization project is published.

    > Only custom fields created on the *Customers* (AR303000), *Non-Stock Items* (IN202000), and *Stock Items* (IN202500) forms can be used for mapping with BigCommerce.

- *Attribute fields*: You define an attribute (that is, additional properties) of customers on the *Attributes* (CS205000) form. Then you add the attribute to a customer class on the **Attributes** tab of the *Customer Classes* (AR201000) form. After that, you specify the appropriate attribute values for particular customers on the **Attributes** tab of the *Customers* form. Similarly, you add attributes of inventory items to an item class on the *Item Classes* (IN102000) form, and then specify the appropriate attribute values for particular stock items, non-stock items, and template items on the *Non-Stock Items*, *Stock Items*, and *Template Items* (IN203000) forms, respectively.

    For more information about attributes, see *Attributes*.

- *User-defined fields*: User-defined fields are similar to attribute fields but are represented differently on Acumatica ERP forms.

> User-defined fields are not supported on the *Stock Items* and *Non-Stock Items* forms but are supported on the *Customers* and *Customer Locations* (AR303020) forms. Thus, you can use in mappings only the user-defined fields created on these forms.

For more information about user-defined fields, see *User-Defined Fields*.

The table below lists the entities for which the mapping of nonstandard fields is supported, as well as the types of fields that are supported for each entity. The last column also displays the objects in BigCommerce to which the nonstandard Acumatica ERP fields can be mapped.

Table: Supported field types for entities in Acumatica ERP

Acumatica ERP Object				**BigCommerce Object**
Entity	**Custom Fields**	**Attribute Fields**	**User-Defined Fields**	
Stock Item	Yes	Yes	No	*Product*
Non-Stock Item	Yes	Yes	No	*Product*
Customer	Yes	Yes	Yes	• *Customer* • *Customer → Customer Address* • *Customer → Customer Form Fields*
Customer Location	Yes	Yes	Yes	• *Customer Address Data* • *Customer Address Data → Form Fields*