

# Inventory Import File

The Inventory Import process provides current stock-level information to Kibo. This data helps Kibo accurately assign orders to fulfillment locations and set product availabilities. If you have multiple fulfillment locations, you use inventory data to manage inventory levels at each location and assign orders to them appropriately.

## Types of Inventory Import

Two types of Inventory Import processes exist: Refreshes and Updates. Refreshes are more comprehensive and usually sent once per day, providing the total count for all products in the catalog. Updates are normally sent every hour and provide an adjustment to the values sent in the previous Refresh, indicating which product counts should be increased or decreased.

### Refresh File Attributes

- Delivered to Kibo once each day
- Represents an accurate stock count for all products
- Includes products with a stock count of zero (0)

### Update File Attributes

- Delivered to Kibo throughout the day
- Increments (+2) or decrements (-2) existing stock count(s)
- Sometimes called a 'trickle' feed

## Getting Started

You must prepare either an SFTP (Secure File Transfer Protocol) site, S3 bucket, or GCS bucket where Kibo can pick up inventory files. Use the [Save Fetch Config API](#) to provide its information to Kibo, including the remote path and remote path archive for the file transmission location.

Some different fields are required depending on whether you're setting up SFTP, S3, or GCS. These are labelled in the field names and descriptions of the Save Fetch Config schema (which will be updated soon with GCS fields). The below example would configure a GCS bucket:

```
{
  "active": true,
  "refreshEnabled": true,
  "gcsBucket": "bucket_1",
  "gcsPath": "path_1",
  "gcsArchivePath": "arch_path_1",
  "lockName": "lock",
  "postProcessAction": 1,
  "refreshFileDescription": "refreshinventory"
}
```

## SFTP Best Practices

Kibo recommends following the below guidelines to maximize SFTP performance. These suggestions apply to any file pickup and ingestion processes from the client-side or third party SFTP droppoint, as well as Kibo's own file delivery.

- Ensuring access to the SFTP droppoint is the responsibility of the client or a third party maintainer. Make sure that Kibo's SFTP user has read and write permissions to the directory, which is required to deliver files.
  - For example, in the command line this may look like `drw-rw-r--` (which means the owner has read/write, the group has read/write, others are read-only)
- Ensure files do not pile up over time → utilize /archive folders and periodic cleanup of historic data. Monitor the droppoint and clean up files that are no longer needed.
  - If you need to retain the files, archive them to another folder once they've been processed.
- Ensure disk space usage is monitored and alerts the maintaining IT team in time to address low disk space situations before causing connection issues for Kibo.

## Create and Upload Inventory Files

Inventory data should be submitted as XML or CSV files and compressed into Zip format before being transferred.

A Trigger/Control file should also be created each time data is submitted. The Trigger file tells Kibo that the inventory file is ready to process. This is an empty file with the same file name as the inventory files being submitted, and the extension .done (ex. `T_{tenantId}_REFRESH_130909121152.zip.done`).

The zipped file should be uploaded to the SFTP or S3/GCS bucket followed by the Trigger file.



For optimal efficiency and timely data processing, please ensure that all submitted Refresh and Update files are populated with inventory data. As a best practice, your automated processes should be configured to prevent the unnecessary transmission of empty files without inventory data to Kibo.

## Naming Inventory Import Files

Inventory files should be named with the following conventions, depending on what type of inventory import it is:

- `T_{tenantId}_REFRESH_YYMMDDhhmmss`
- `T_{tenantId}_UPDATE_YYMMDDhhmmss`

Where:

- {tenantId} is the Kibo-assigned tenant ID (for example, 3456)
- REFRESH identifies this file as a Refresh
- UPDATE identifies this file as an Update
- YYMMDD is the year, month, and day represented in two-digit format. For example, 130301 is March 1, 2013
- hhmmss is the time in Pacific Standard Military Time, expressed as hour-minute-second, that the file was created. For example, 205912 is 10:59:12 p.m. PT.

## Data Elements

These parameters are used in both CSV and XML file formats. When building the file, identify a location name and then follow it with blocks of the item-specific data for each product.

Field	Required	Format	Description
Field	Required	Format	Description
LocationCode	Yes	String	The identifier of the location that is submitting inventory data. Note that this value should actually be the external ID for the location, not the name as stored in the Kibo Composable Commerce Platform admin.
PartNumber	Optional	String	A merchant-assigned part identification for the item.
UPC	Yes	String	The UPC for the item. This should be the most unique identifier for the item; any other identifier can be used in PartNumber.
SKU	Optional	String	The SKU for the item.
LotCode	Optional	String	The <a href="#">granular lot code</a> for the item.
Date	Optional	String	The <a href="#">granular date</a> for the item.
Condition	Optional	String	The <a href="#">granular condition</a> for the item.
SerialNumber	Optional	String	The <a href="#">granular serial number</a> for the item.

Field	Required	Format	Description
Quantity	Yes	Integer	<p>If this is a Refresh, this is the number of the item in inventory. Examples are 352 and 4. If this is an Update, this value includes a + (plus) or - (minus), and is the change in quantity from the previous submission. Examples are +352 and -4.</p> <p>By default, this value is used for the On Hand inventory level and the system calculates the appropriate Available amount. If you want this quantity to be applied directly as the Available inventory instead, contact to change its behavior in your tenant configurations.</p>
Bin	Optional	Integer	The name of the bin within a location. Used for warehouse and store management. It must exist for the LocationCode.
LTD	Optional	Integer	Custom field used for store prioritization. Kibo will advise you on the type of data to enter in this field if you need to use it.
SafetyStock	Optional	Integer	Quantity of this item you want to keep in stock to ensure your stock isn't completely depleted. Both Safety Stock and Floor are optional; most people prefer Safety Stock to Floor.
Floor	Optional	Integer	Absolute minimum quantity of this item that should be in stock at any time. Both Safety Stock and Floor are optional; the two values are used for similar purposes; most people prefer to use Safety Stock rather than Floor.
DeliveryDate (XML) Delivery_Date (CSV)	Optional	String (date-time)	The expected delivery date for incoming <a href="#">future inventory</a> records.

Field	Required	Format	Description
ExternalID (XML) External_ID (CSV)	Optional	String	A unique external identifier used for <a href="#">future inventory</a> .
CurrencyID	Optional	Integer	Field defining which currency is used to store the RetailPrice. Required if RetailPrice is passed in. See the Currency API for details
RetailPrice	Optional	Decimal	The location specific price the product being refreshed. CurrencyID is required if RetailPrice is passed in.
Attributes	Optional	Array	A list of attributes that are assigned to the item.
InventoryLocatorName	Optional	String	An identifier to indicate where a particular SKU exists within a location. For example, "Aisle 5" would indicate that the bin this item belongs to is located in Aisle 5. The maximum length is 50.
Custom Tag	Optional	String	If you use tags for <a href="#">inventory segmentation</a> , you can include those tags in the file just like any other field. The tag name should be the field name (such as "Channel") and values should match the options set up in your segmentation configuration (such as "Amazon" or "eBay").

## Examples

Here is an example import sequence:

1. Create the file : T\_{tenantId}\_REFRESH\_130909121152.xml (or .csv)
2. Compress (zip) the file : T\_{tenantId}\_REFRESH\_130909121152.zip
3. Upload the zip file.
4. Upload a Trigger/Control file : T\_{tenantId}\_REFRESH\_130909121152.zip.done

## XML File

The following example provides inventory information for two locations and includes only required

elements.

```
<?xml version="1.0" encoding="UTF-8"?>
<Inventory>
  <Location>
    <LocationCode>0001</LocationCode>
    <Item>
      <PartNumber>883360541099</PartNumber>
      <UPC>883360541099</UPC>
      <Quantity>11</Quantity>
      <SafetyStock>4</SafetyStock>
      <Floor>1</Floor>
      <LTD>3</LTD>
      <Attributes>RESTOCK-CARRIER|RESTOCK-TRUCK</Attributes>
      <InventoryLocatorName>Aisle 2</InventoryLocatorName>
    </Item>
    <Item>
      <PartNumber>883360541075</PartNumber>
      <UPC>883360541075</UPC>
      <Quantity>44</Quantity>
      <SafetyStock />
      <Floor />
      <LTD />
      <Attributes>RESTOCK-CARRIER</Attributes>
      <InventoryLocatorName>Aisle 3</InventoryLocatorName>
    </Item>
  </Location>
  <Location>
    <LocationCode>0002</LocationCode>
    <Item>
      <PartNumber>883360541099</PartNumber>
      <UPC>883360541099</UPC>
      <Quantity>11</Quantity>
      <SafetyStock>4</SafetyStock>
      <Floor>1</Floor>
      <LTD>3</LTD>
      <Attributes>RESTOCK-CARRIER</Attributes>
      <InventoryLocatorName>Aisle 4</InventoryLocatorName>
    </Item>
    <Item>
      <PartNumber>883360541075</PartNumber>
      <UPC>883360541075</UPC>
      <Quantity>44</Quantity>
      <SafetyStock>5</SafetyStock>
      <Floor>1</Floor>
      <LTD>2</LTD>
      <Attributes>RESTOCK-CARRIER</Attributes>
      <InventoryLocatorName>Aisle 5</InventoryLocatorName>
    </Item>
  </Location>
</Inventory>
```

## CSV File

The following example provides inventory information for two locations. Note that CSV has some special requirements:

- The header is optional.
- Order of inventory fields matters: LocationCode,PartNumber,UPC,SKU,Quantity,Bin, etc.
- At least the string fields must be quoted. Quotes may not be required for the data field names or integers, but if you experience errors then Kibo recommends adding quotes to all values as shown below.

```
"LocationCode","PartNumber","UPC","SKU","Quantity","Bin","TD","SafetyStock","Floor","CurrencyI
D","RetailPrice","Attributes","InventoryLocatorName"
"0001","PartNumber1","UPC1","SKU1","11","BinName1","1.0","2","4","1","25.99","","Aisle 1"
"0001","PartNumber2","KCCP1","","44","BinName2","","Aisle 2"
"0002","PartNumber1","UPC1","SKU1","11","","1.0","2","1","","Aisle 3"
"0002","PartNumber2","UPC1","","44","","Aisle 4"
```

### CSV File with Inventory Tags

This example includes a custom tag called "channel" used in [inventory segmentation](#). This indicates that these inventory records belong to the Amazon order channel.

```
"LocationCode","PartNumber","UPC","SKU","Quantity","InventoryLocatorName","Channel"
"0001","PartNumber1","UPC1","SKU1","11","Aisle 1","Amazon"
"0002","PartNumber2","UPC1","","44","Aisle 4","Amazon"
```