https://cloudblue.com

Usage – Vendor Portal

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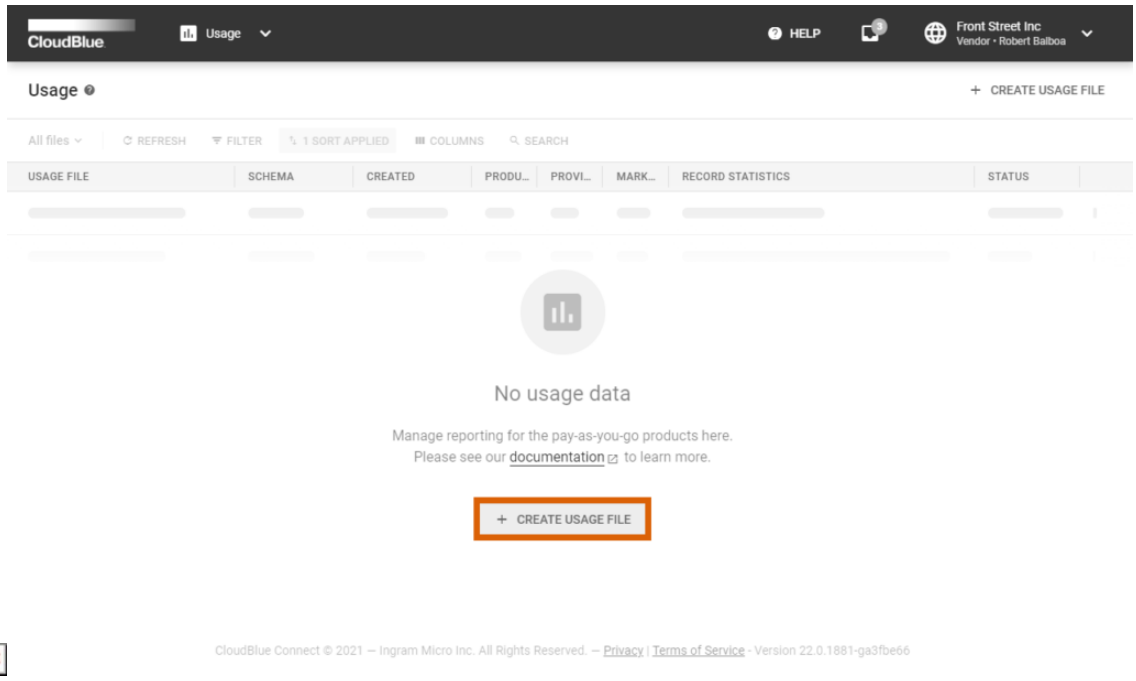
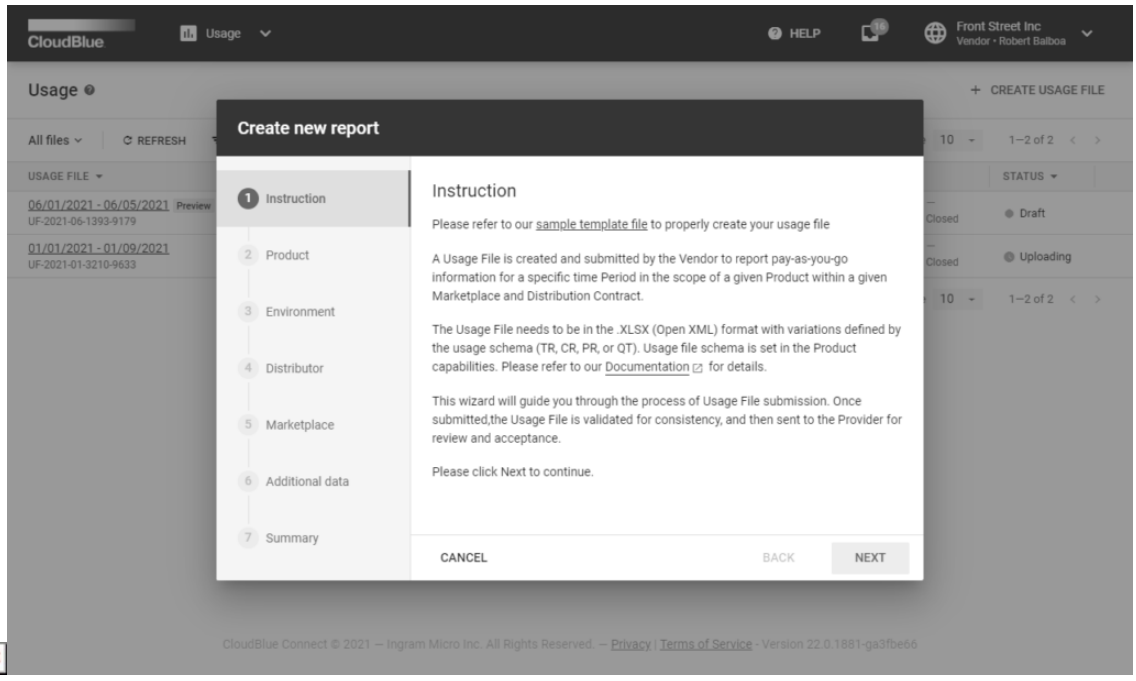
Usage Report Creation

Vendors can create usage report objects by accessing the **Usage** module from the CloudBlue Connect® Portal.





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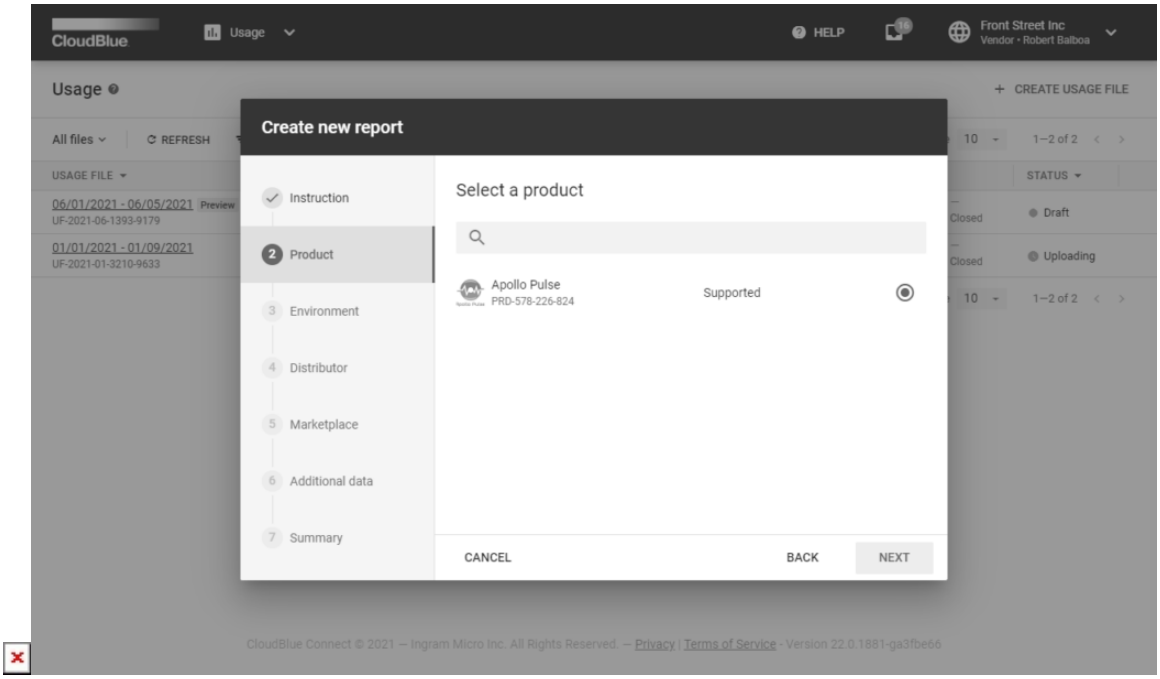

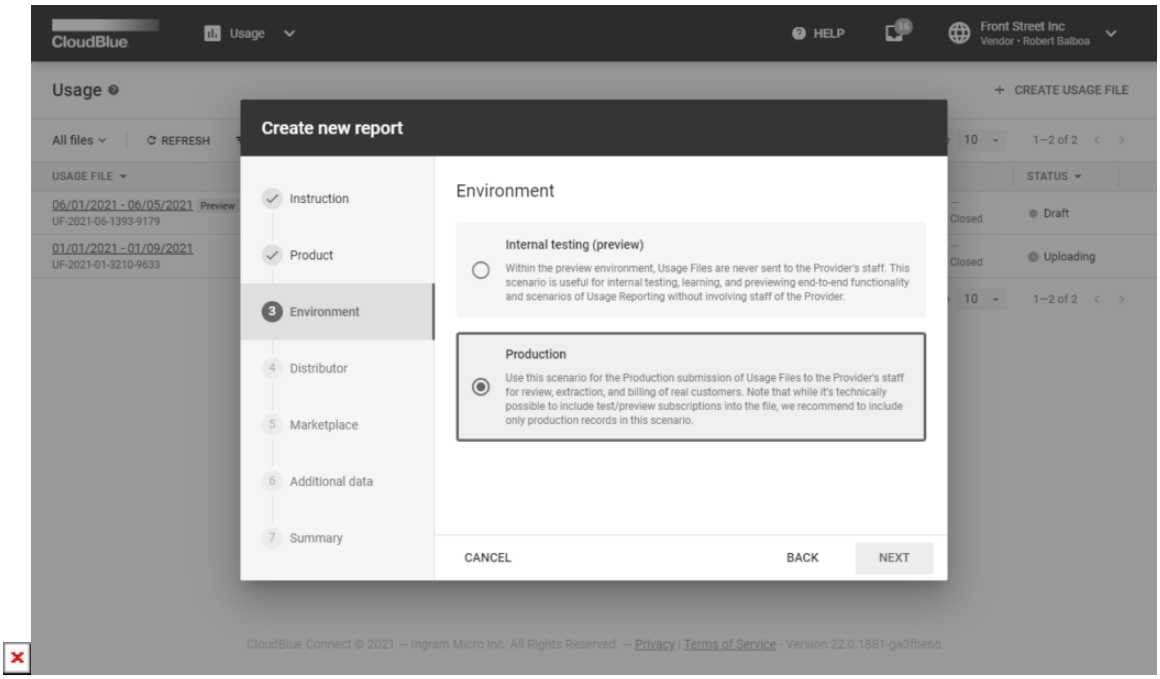

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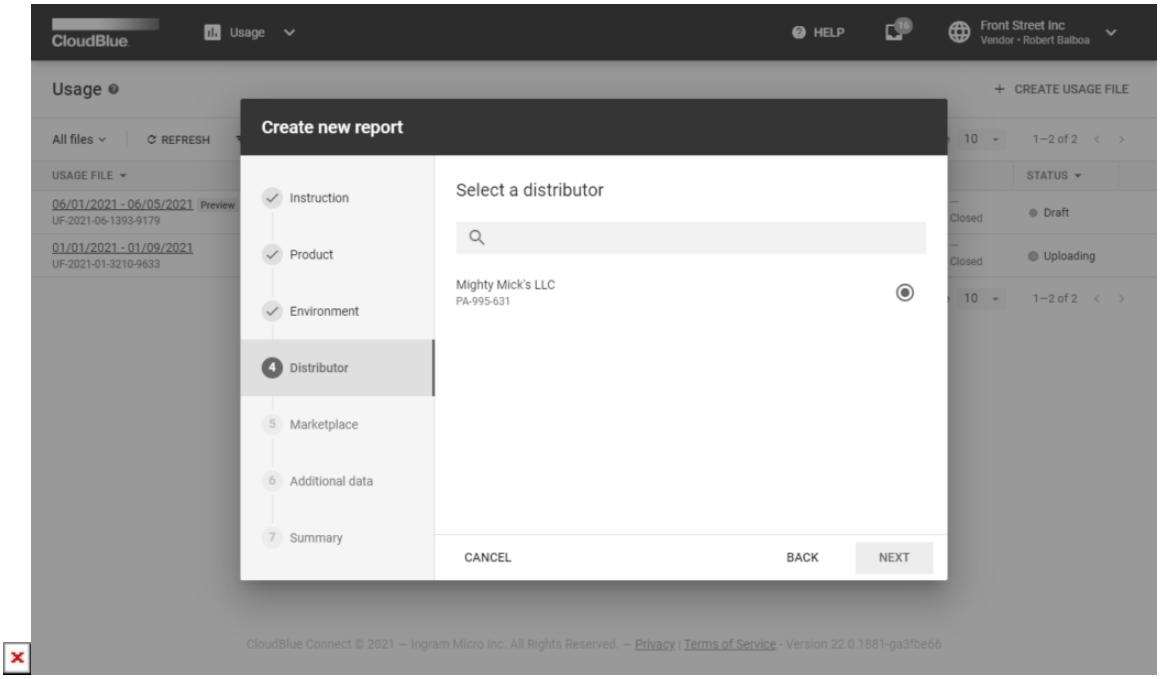

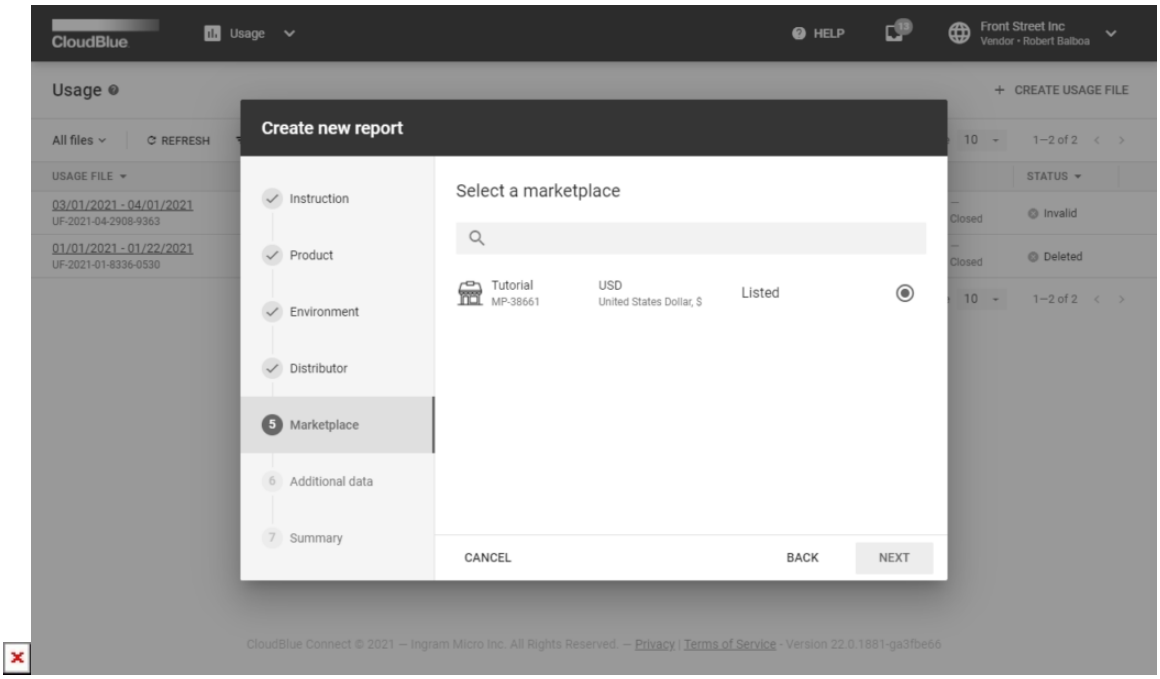

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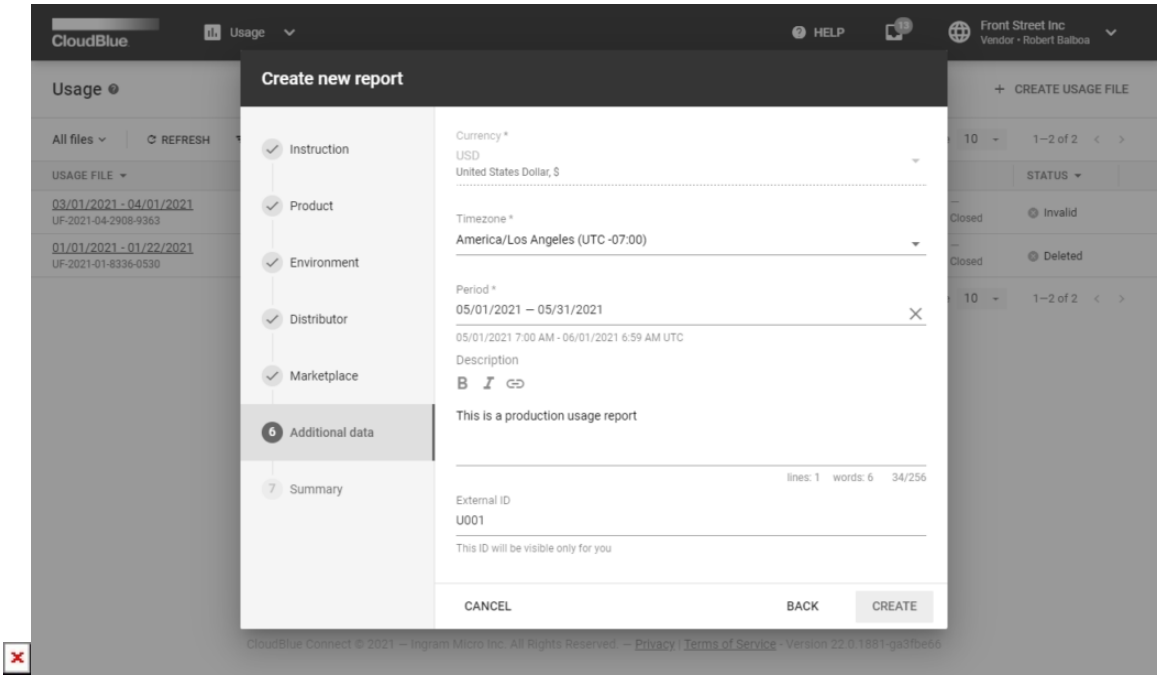

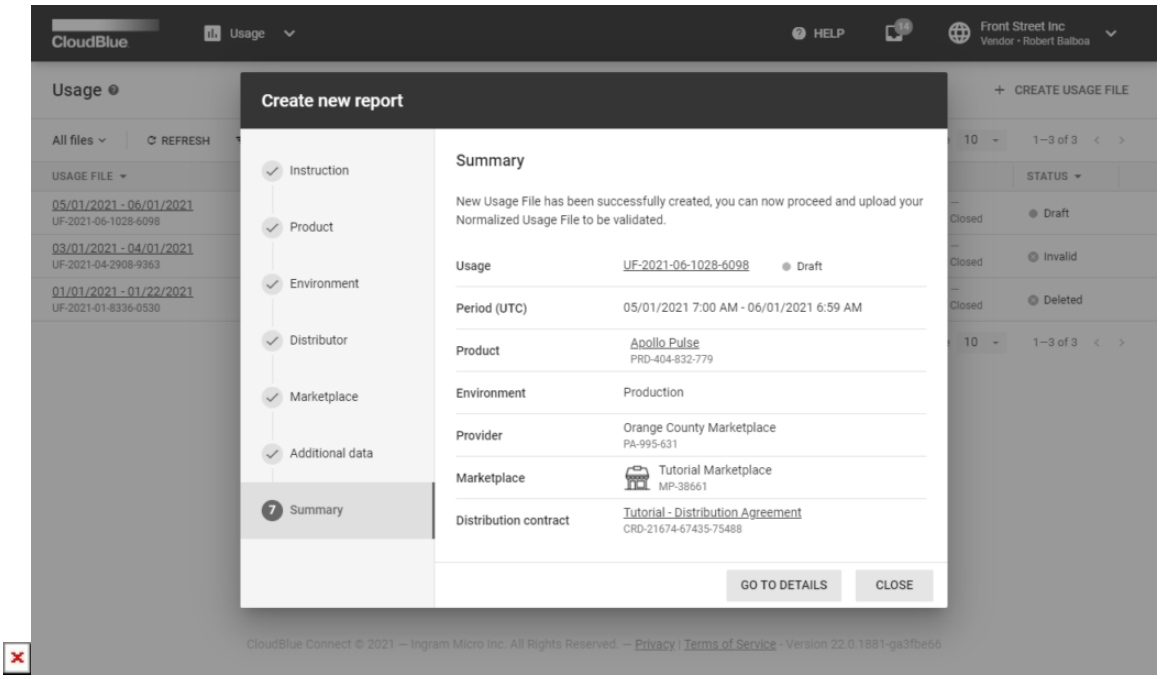

Click the **Create Usage File** button to launch a multi-step wizard. Follow the wizard steps to successfully create a new usage report object:

1. **Instruction**: The wizard provides an overview and a report template download link. Download the template by clicking on the contextual template file link. Thereafter, click *Next* to continue.

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2. **Product**: Select a product that supports required Capabilities.
3. **Environment**: Specify your environment in the following form:
    - **Internal testing (preview)**: Use this environment for testing and previewing the Usage module functionality. Thus, Distributors will not receive your uploaded usage report file.
    - **Production**: Select this environment for production scenarios. Therefore, Distributors can review, extract and use submitted data to bill their customers. Note that while it's technically possible to include *test/preview* subscriptions into the report file, it is recommended to include only *production subscriptions* in this scenario.
4. **Distributor**: Choose your Distributor in the following form.
5. **Marketplace**: Select a marketplace that includes your product.
6. **Additional data**: Specify the following additional data:
    - **Currency**: Choose a required currency. Note that specified marketplace can predefine the selected currency.
    - **Time zone**: Select a required time zone.
    - **Period**: Specify usage report time period.
    - **Description**: Enter your usage report instance description.
    - **External ID**: Enter an external identifier of your usage report instance.
7. **Summary**: Once Vendors click the *Create* button, the system generates a report instance and provides a summary as a final step.

Therefore, the system generates a usage record object that can be used to upload required data and subsequently pass this data to your business partners as described below.

Template File Overview

Usage data is reported by using a spreadsheet in the XLSX format. The same file format is used for both manual and automated workflows. This spreadsheet is logically similar to CDR (Call Detail Record) files that are traditionally used in the telecommunication industry.

The Connect platform helps Vendors submit the usage data to their Distributors via specific *template files*. These template files can be downloaded from the creation wizard on the **Instruction** step as described above.

Alternatively, download the template by clicking the **Upload Normalized Usage File** button from the **Usage Details** screen. Thereafter, click on the contextual template file link to download it.

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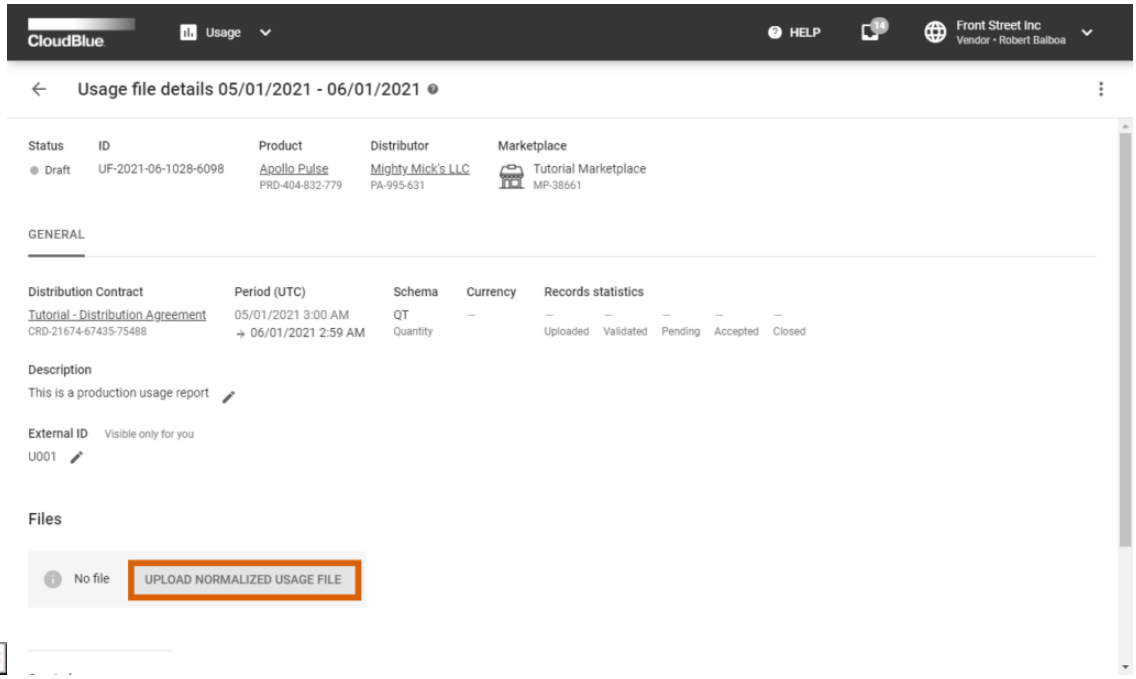

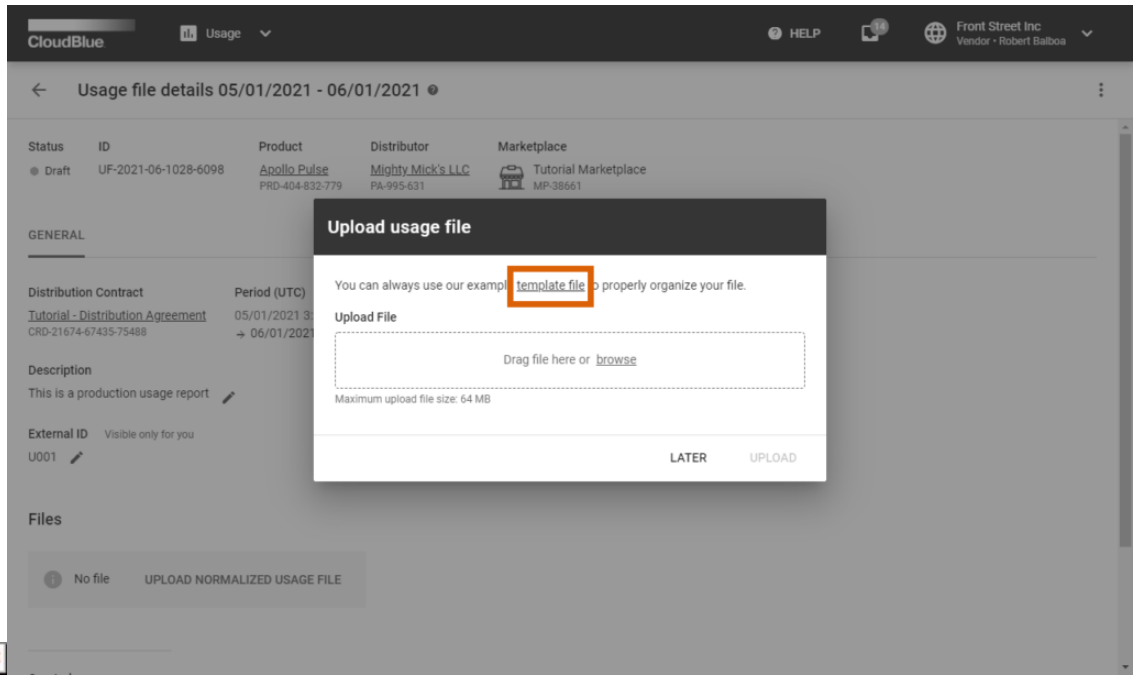

Note

In case you do not want to use the template file, you can create a spreadsheet file that should include the *records* tab and can include *categories* tab. Furthermore, make sure

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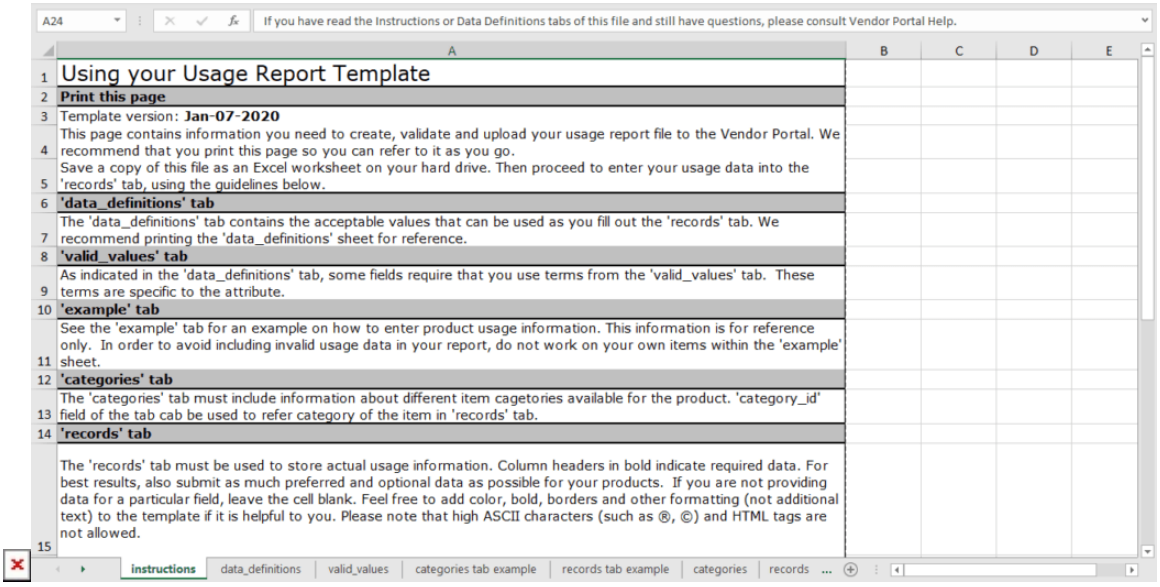
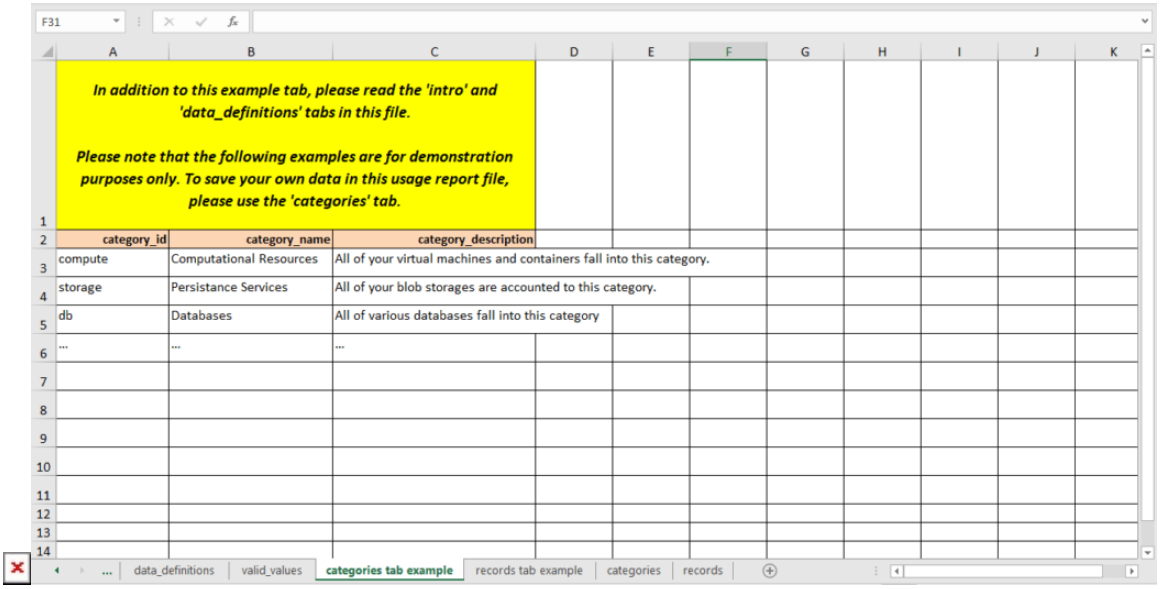
> that these tabs includes your specified data and your file is saved in the *XLSX* format.

The provided usage template represents a spreadsheet file that contains multiple tabs:



	A
1	Using your Usage Report Template
2	**Print this page**
3	Template version: **Jan-07-2020**
4	This page contains information you need to create, validate and upload your usage report file to the Vendor Portal. We recommend that you print this page so you can refer to it as you go.
5	Save a copy of this file as an Excel worksheet on your hard drive. Then proceed to enter your usage data into the 'records' tab, using the guidelines below.
6	**'data_definitions' tab**
7	The 'data_definitions' tab contains the acceptable values that can be used as you fill out the 'records' tab. We recommend printing the 'data_definitions' sheet for reference.
8	**'valid_values' tab**
9	As indicated in the 'data_definitions' tab, some fields require that you use terms from the 'valid_values' tab. These terms are specific to the attribute.
10	**'example' tab**
11	See the 'example' tab for an example on how to enter product usage information. This information is for reference only. In order to avoid including invalid usage data in your report, do not work on your own items within the 'example' sheet.
12	**'categories' tab**
13	The 'categories' tab must include information about different item cagetories available for the product. 'category_id' field of the tab cab be used to refer category of the item in 'records' tab.
14	**'records' tab**
15	The 'records' tab must be used to store actual usage information. Column headers in bold indicate required data. For best results, also submit as much preferred and optional data as possible for your products. If you are not providing data for a particular field, leave the cell blank. Feel free to add color, bold, borders and other formatting (not additional text) to the template if it is helpful to you. Please note that high ASCII characters (such as ®, ©) and HTML tags are not allowed.



	A	B	C
1	***In addition to this example tab, please read the 'intro' and 'data_definitions' tabs in this file.*** ***Please note that the following examples are for demonstration purposes only. To save your own data in this usage report file, please use the 'categories' tab.***		
2	**category_id**	**category_name**	**category_description**
3	compute	Computational Resources	All of your virtual machines and containers fall into this category.
4	storage	Persistance Services	All of your blob storages are accounted to this category.
5	db	Databases	All of various databases fall into this category
6	...	...	...

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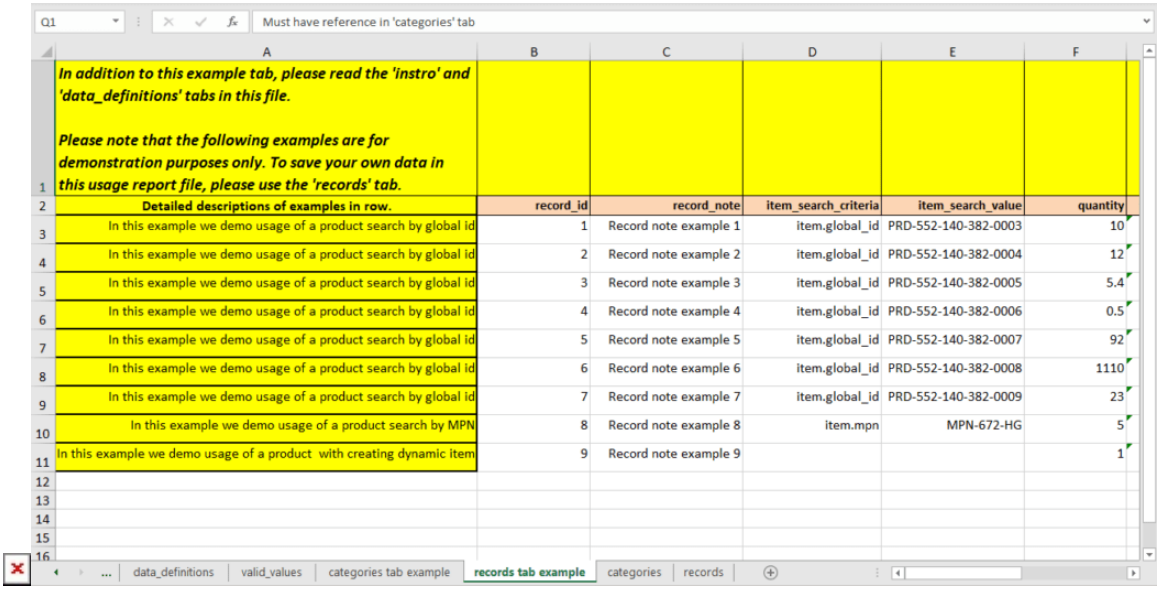

	A	B	C	D	E	F
1	***In addition to this example tab, please read the 'instro' and 'data_definitions' tabs in this file.*** ***Please note that the following examples are for demonstration purposes only. To save your own data in this usage report file, please use the 'records' tab.***					
2	**Detailed descriptions of examples in row.**	**record_id**	**record_note**	**item_search_criteria**	**item_search_value**	**quantity**
3	In this example we demo usage of a product search by global id	1	Record note example 1	item.global_id	PRD-552-140-382-0003	10
4	In this example we demo usage of a product search by global id	2	Record note example 2	item.global_id	PRD-552-140-382-0004	12
5	In this example we demo usage of a product search by global id	3	Record note example 3	item.global_id	PRD-552-140-382-0005	5.4
6	In this example we demo usage of a product search by global id	4	Record note example 4	item.global_id	PRD-552-140-382-0006	0.5
7	In this example we demo usage of a product search by global id	5	Record note example 5	item.global_id	PRD-552-140-382-0007	92
8	In this example we demo usage of a product search by global id	6	Record note example 6	item.global_id	PRD-552-140-382-0008	1110
9	In this example we demo usage of a product search by global id	7	Record note example 7	item.global_id	PRD-552-140-382-0009	23
10	In this example we demo usage of a product search by MPN	8	Record note example 8	item.mpn	MPN-672-HG	5
11	In this example we demo usage of a product with creating dynamic item	9	Record note example 9			1
12						
13						
14						
15						
16						

- **instructions**: Provides basic information on how to use the spreadsheet and overview.
- **data_definitions**: Describes all values that should be provided within the *records* tab.
- **valid_values** : Provides a list of all valid conditional values from the *records* tab.
- **categories_tab_example**: Showcases example values for the *categories* tab.
- **records_tab_example**: Contains example values the *records* tab. It also explains which fields are essential for your selected reporting schema, enabled capabilities, etc.
- **categories**: This tab helps Vendors specify product category information, such as ID, name, and description.
- **records**: This tab is used to provide usage data records. Specify necessary records, save the results and upload your spreadsheet file to Connect.

Note that the system processes only the *records* and *categories* tabs. Other tabs provide additional support information, guidelines and example values.

Populating Usage File

Vendors are required to provide their usage report file and consequently submit this usage file to their business partners. Enter your record data under corresponding column in your spreadsheet. In case it is necessary to provide records for multiple objects, use new rows to provide records for each object. Thus, for example, if your report include several item types, keep adding records for every item type in a new row.

The following table introduces and describes all columns within the *records* and *categories* tabs. Use this table to complete your usage report file and successfully upload this file to the Connect platform.

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Tab	Column	Definition and Use	Accepted Values	Example	Required/ Optional
records	record_id	Usage record unique identifier	Any text string	`record-01234-5678`	Required
records	record_note	A note for your usage record	Any text string	`Demo report`	Optional

records	item_search_criteria	Search criteria type that is used to locate a required item	1) **item.mpn**: helps identify item by using MPN specified by Vendors;
			2) **item.global_id**: helps identify an item by using global id of the item
				`item.global_id`
				or
				`item.mpn`
					Required (leave intact in case dynamic items are selected)

records	item_search_value	Search criteria value that is used to locate your item	1) Your specified **item MPN** in case the *item.mpn* criteria is selected;
			2) If the *item.global_id* criteria is selected, enter **global item ID** that is assigned by Connect
				`MPN-123-321`
				or
				`PRD-123-123-123-0001`
					Required (leave intact in case dynamic items are selected)

records	category_id	Your specified item category identifier; it also refers to the **category_id** from the *categories* tab	Any text string	`db`	Optional
records	quantity	Item quantity that is specified in your required Subscription (Asset)	Any number	`123.45`	Required
records	amount	Total monetary amount in the specified currency. It may or may not be equal to the *quantity* * *unit_price*	Any number	`2352.54`	Required only for PR, CR and TR schemas
records	tier	Tier reference for which usage record is applicable	**0**, **1**, or **2**	`1`	Required for TR schema

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records	start_time_utc	Usage report start time and date in the UTC time zone	Use one one of the following formats: 'YYYY-MM-DD hh:mm:ss' or 'MM/DD/YYYY hh:mm:ss'	`2021-01-23 07:21:39`	Required
records	end_time_utc	Usage report end time and date in the UTC time zone	Accepted formats: 'YYYY-MM-DD hh:mm:ss' and 'MM/DD/YYYY hh:mm:ss'	`6/1/2021 2:59:00`	Required

records	asset_search_criteria	Search criteria type that is used to locate your Subscription (Asset)	1) **asset.id**: helps identify a Subscription (Asset) by using its ID;
			2) **parameter.{param_id}**: allows locating a Subscription by using the value of your parameter that is identified through *param_id*
				`asset.id`
				or
				`parameter.account_id`
					Required

records	asset_search_value	Value that is used to identify the required Subscription; the value may include a Subscription (Asset) ID or a specific parameter identifier	1) **Subscription ID** (Asset ID) in case the *asset.id* search criteria is selected;
			2) **Parameter value** in case the *parameter.{param_id}* criteria is selected
				`AS-2329-4388-2680`
				or
				`external-account-000123456`
					Required

records	item_name	This value is applicable only to dynamic items; the provided value represent an item name	Any text string	`Online Storage`	Optional
records	item_mpn	Only for dynamic items; the provided value serves as the MPN for your item	Any text string	`ST001`	Optional
records	item_unit	Only for dynamic items; the provided value represents the unit measurement for your item	**mbh**, **mhzh**, **unit*h**	`mbh`	Optional
records	item_precision	Specify your dynamic item precision	**integer**, **decimal(1)**, **decimal(2)**, **decimal(4)**, or **decimal(8)**	`decimal(4)`	Optional

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categories	category_id	Item category ID	Any text string	`db`	Optional
categories	category_name	Item category name	Any text string	`Database`	Optional
categories	category_description	Item category description	Any text string	`Database related SKU`	Optional

Data Format

Usage File Examples

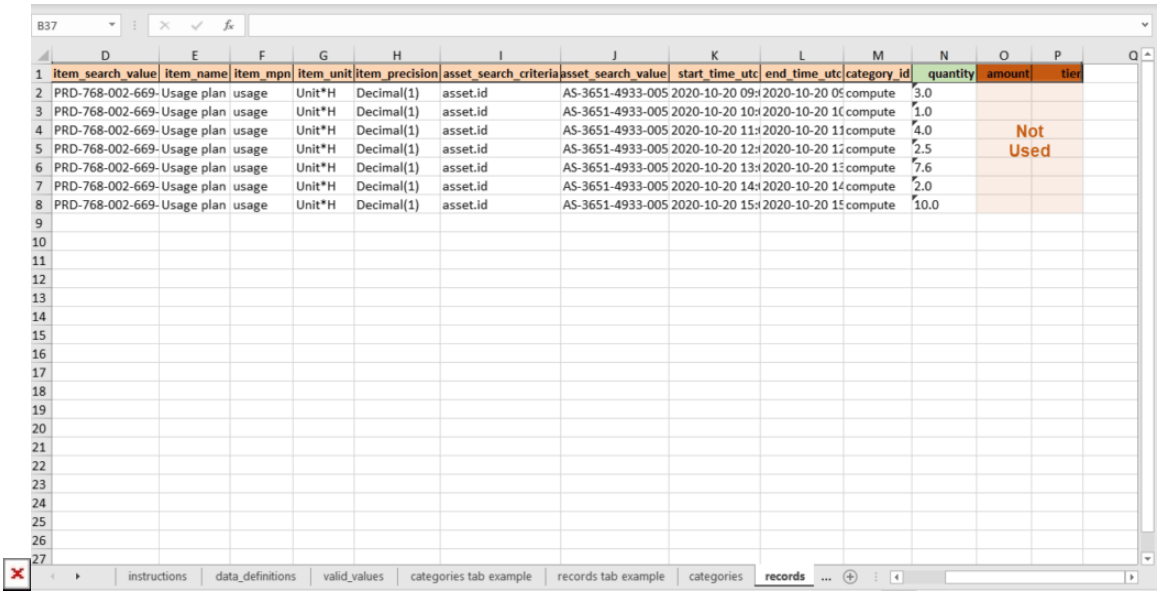
The following provides the examples of filled usage report files that are successfully uploaded to the Connect platform. Depending on your selected reporting schemas and your enabled capabilities (e.g., if the dynamic items capability is switched on), certain fields should be ignored, while other fields should include your provided values.

Refer to the Usage module documentation, to learn more about all available reporting schemas and product capabilities that are associated with the usage report file creation.

QT Schema

In case the Quantity (QT) reporting schema is selected, it is necessary to provide the **quantity** record alongside other required records for a subscription. This is the most straightforward schema, since it does not requires you to specify *amount* and *tier* data. The Distributor or Reseller systems perform all calculations based on the provided quantity data.

The following provides a usage report example with the Quantity reporting schema:



This example outlines several items with different records. Since the QT reporting schema is used, this example also highlights

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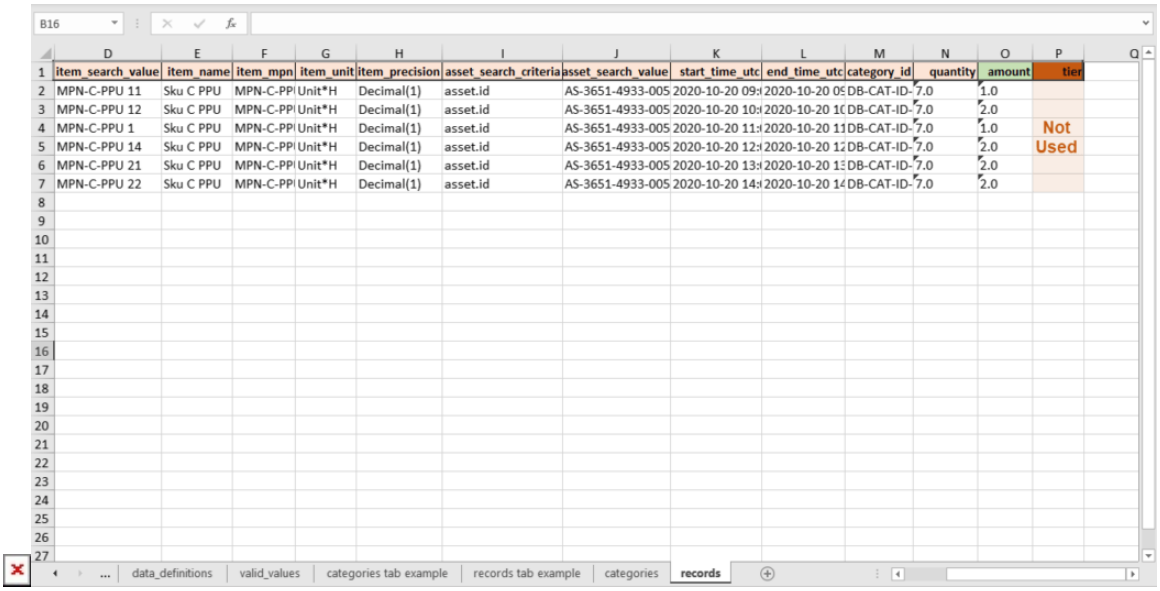
the quantity records that are essential for the following calculations.

The amount and tier records are not used with this schema. Therefore, their corresponding columns should be left empty or removed.

PR Schema

This schema is helpful for many companies and organizations that work with Azure Modern or AWS. As mentioned before, the Price Rated schema requires Vendors to report Tier-0 (End Customer) price. Other prices are calculated based on the reported value. In this case, the **amount** value in the usage report file represents your *T-0 price*. Note that the *tier* value should not be used in this schema.

A usage report example with the PR schema is presented below:



	item_search_value	item_name	item_mpn	item_unit	item_precision	asset_search_criteria	asset_search_value	start_time_utc	end_time_utc	category_id	quantity	amount	tier
2	MPN-C-PPU 11	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(1)	asset.id	AS-3651-4933-005	2020-10-20 09:	2020-10-20 0	DB-CAT-ID-	7.0	1.0	
3	MPN-C-PPU 12	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(1)	asset.id	AS-3651-4933-005	2020-10-20 10:	2020-10-20 1	DB-CAT-ID-	7.0	2.0	
4	MPN-C-PPU 1	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(1)	asset.id	AS-3651-4933-005	2020-10-20 11:	2020-10-20 1	DB-CAT-ID-	7.0	1.0	Not
5	MPN-C-PPU 14	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(1)	asset.id	AS-3651-4933-005	2020-10-20 12:	2020-10-20 1	DB-CAT-ID-	7.0	2.0	Used
6	MPN-C-PPU 21	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(1)	asset.id	AS-3651-4933-005	2020-10-20 13:	2020-10-20 1	DB-CAT-ID-	7.0	2.0	
7	MPN-C-PPU 22	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(1)	asset.id	AS-3651-4933-005	2020-10-20 14:	2020-10-20 1	DB-CAT-ID-	7.0	2.0	

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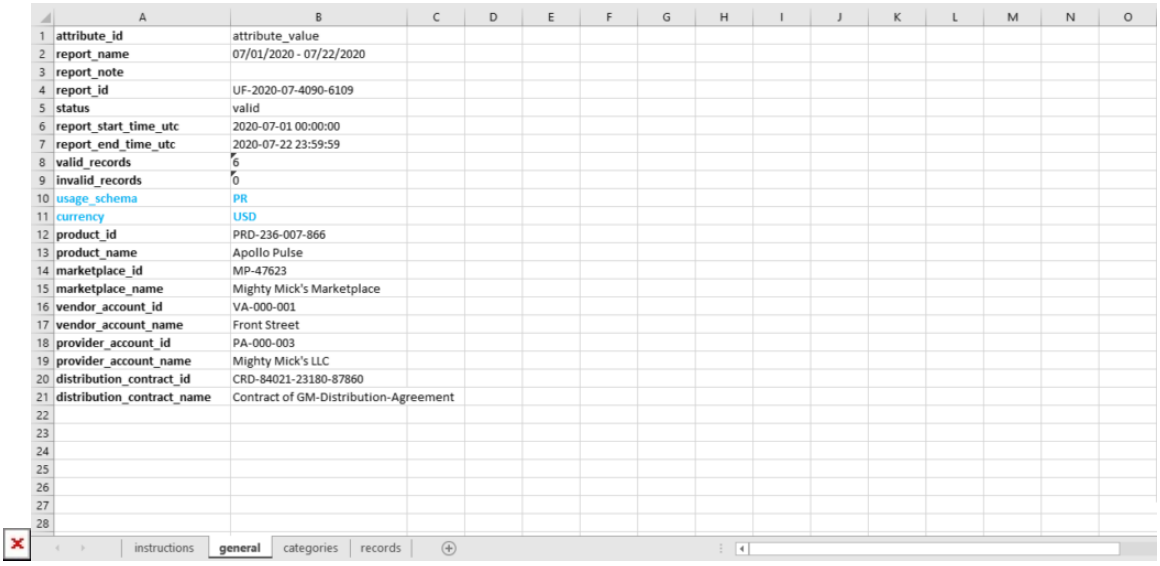

	A	B
1	attribute_id	attribute_value
2	report_name	07/01/2020 - 07/22/2020
3	report_note	
4	report_id	UF-2020-07-4090-6109
5	status	valid
6	report_start_time_utc	2020-07-01 00:00:00
7	report_end_time_utc	2020-07-22 23:59:59
8	valid_records	6
9	invalid_records	0
10	usage_schema	PR
11	currency	USD
12	product_id	PRD-236-007-866
13	product_name	Apollo Pulse
14	marketplace_id	MP-47623
15	marketplace_name	Mighty Mick's Marketplace
16	vendor_account_id	VA-000-001
17	vendor_account_name	Front Street
18	provider_account_id	PA-000-003
19	provider_account_name	Mighty Mick's LLC
20	distribution_contract_id	CRD-84021-23180-87860
21	distribution_contract_name	Contract of GM-Distribution-Agreement

instructions | general | categories | records

Since the Price Rated schema is selected, this example highlights the amount records that are essential for the reporting operations. The system uses your selected currency for the provided amount records.

The tier records should not be used with the PR schema. Thus, it is required to ignore or remove the corresponding column.

CR Schema

The Cost Rated (CR) schema requires Vendors to report the cost in the scope of the distribution contract. Namely, this represents the *Distributor Cost*. Other prices are calculated based on this reported value. Therefore, the **amount** value in the usage report file represents the *distributor cost*. In addition, note that the *tier* value should not be used in this schema.

The following provides a usage report example with the Cost Rated reporting schema:

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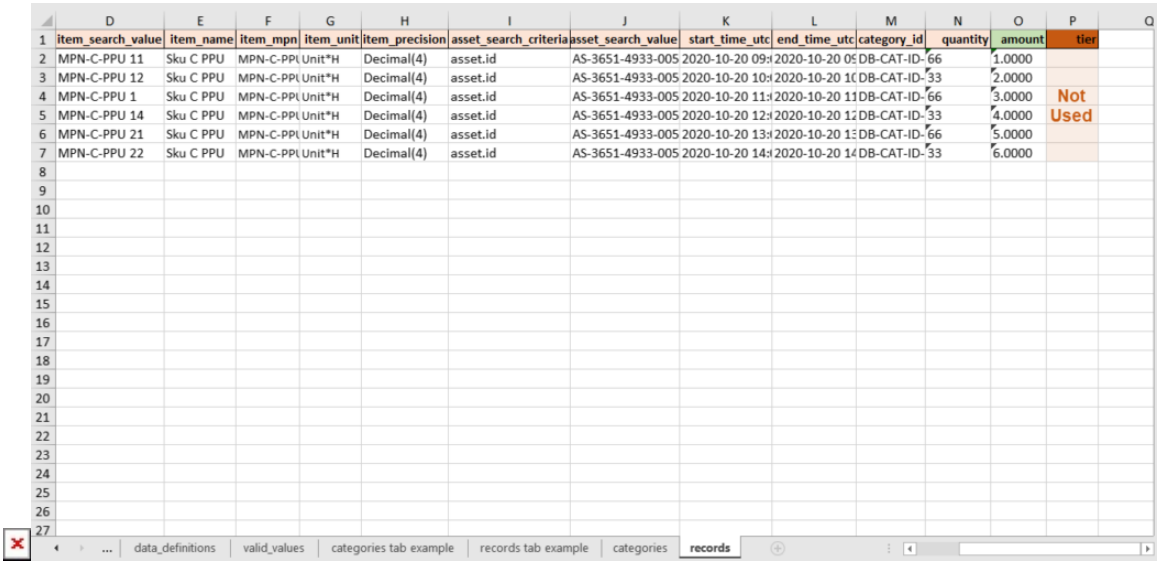
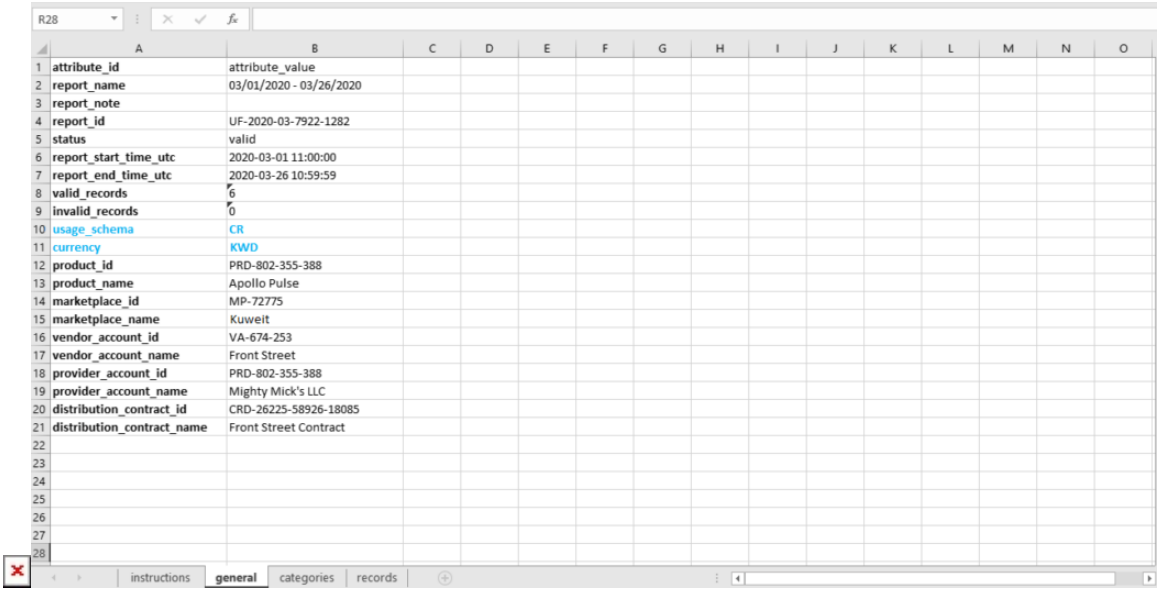


item_search_value	item_name	item_mpn	item_unit	item_precision	asset_search_criteria	asset_search_value	start_time_utc	end_time_utc	category_id	quantity	amount	tier
MPN-C-PPU 11	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(4)	asset.id	AS-3651-4933-005	2020-10-20 09:	2020-10-20 0	DB-CAT-ID-	66	1.0000	
MPN-C-PPU 12	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(4)	asset.id	AS-3651-4933-005	2020-10-20 10:	2020-10-20 1	DB-CAT-ID-	33	2.0000	
MPN-C-PPU 1	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(4)	asset.id	AS-3651-4933-005	2020-10-20 11:	2020-10-20 11	DB-CAT-ID-	66	3.0000	Not Used
MPN-C-PPU 14	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(4)	asset.id	AS-3651-4933-005	2020-10-20 12:	2020-10-20 1	DB-CAT-ID-	33	4.0000	
MPN-C-PPU 21	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(4)	asset.id	AS-3651-4933-005	2020-10-20 13:	2020-10-20 1	DB-CAT-ID-	66	5.0000	
MPN-C-PPU 22	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(4)	asset.id	AS-3651-4933-005	2020-10-20 14:	2020-10-20 1	DB-CAT-ID-	33	6.0000	

data_definitions | valid_values | categories tab example | records tab example | categories | records



attribute_id	attribute_value
report_name	03/01/2020 - 03/26/2020
report_note	
report_id	UF-2020-03-7922-1282
status	valid
report_start_time_utc	2020-03-01 11:00:00
report_end_time_utc	2020-03-26 10:59:59
valid_records	6
invalid_records	0
usage_schema	CR
currency	KWD
product_id	PRD-802-355-388
product_name	Apollo Pulse
marketplace_id	MP-72775
marketplace_name	Kuweit
vendor_account_id	VA-674-253
vendor_account_name	Front Street
provider_account_id	PRD-802-355-388
provider_account_name	Mighty Mick's LLC
distribution_contract_id	CRD-26225-58926-18085
distribution_contract_name	Front Street Contract

instructions | general | categories | records

Since the CR reporting schema is used, this example highlights the amount records that are essential for the following calculations. The system also uses your selected currency for the provided amount records.

The tier records are not used with this schema. Therefore, their corresponding column should be left empty or removed.

TR Schema

The Multi-Tier Rated schema requires Vendors to report prices for each available *tier* (i.e., distributor, reseller, and customer prices). Therefore, Distributor or Reseller systems can simply apply provided values. In this case, Vendors can report charges for multiple *tiers* by using the the tier column.

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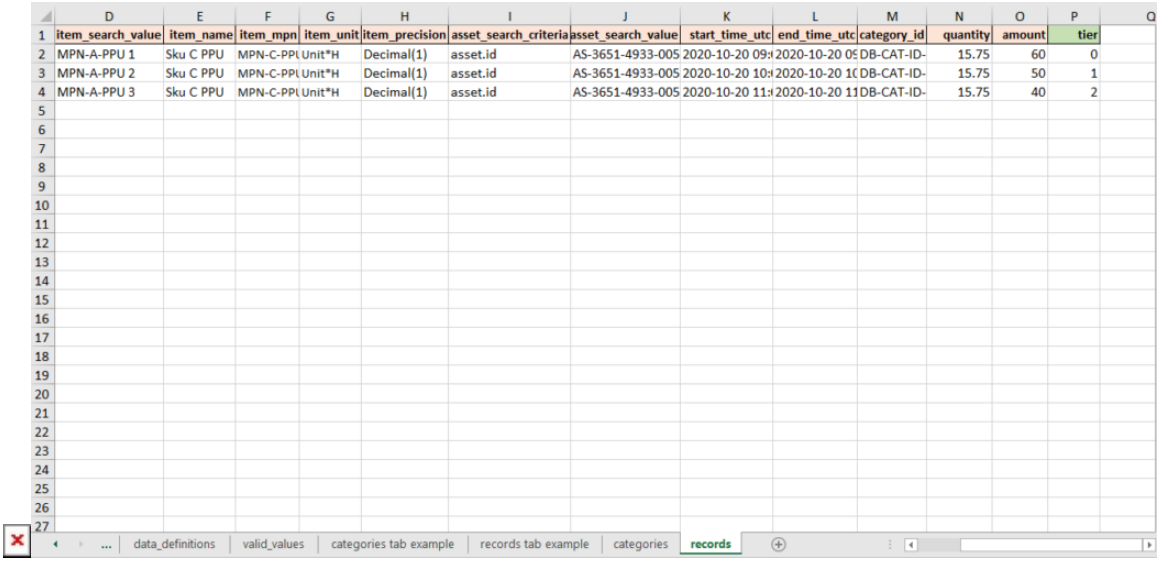
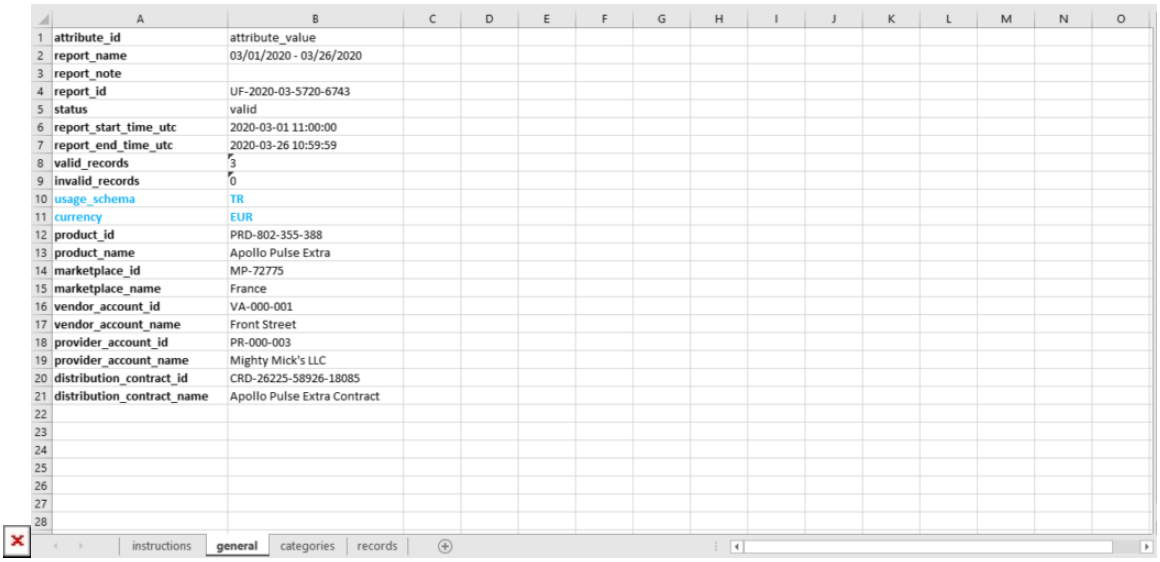
The following example showcases charges for the same item with the same *quantity value* (15.75) that is applied to 3 tiers accounts with different *amount values*.



	item_search_value	item_name	item_mpn	item_unit	item_precision	asset_search_criteria	asset_search_value	start_time_utc	end_time_utc	category_id	quantity	amount	tier
2	MPN-A-PPU 1	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(1)	asset.id	AS-3651-4933-005	2020-10-20 09:	2020-10-20 0	DB-CAT-ID-	15.75	60	0
3	MPN-A-PPU 2	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(1)	asset.id	AS-3651-4933-005	2020-10-20 10:	2020-10-20 1	DB-CAT-ID-	15.75	50	1
4	MPN-A-PPU 3	Sku C PPU	MPN-C-PPU	Unit*H	Decimal(1)	asset.id	AS-3651-4933-005	2020-10-20 11:	2020-10-20 1	DB-CAT-ID-	15.75	40	2

data_definitions | valid_values | categories tab example | records tab example | categories | records



	A	B
1	attribute_id	attribute_value
2	report_name	03/01/2020 - 03/26/2020
3	report_note	
4	report_id	UF-2020-03-5720-6743
5	status	valid
6	report_start_time_utc	2020-03-01 11:00:00
7	report_end_time_utc	2020-03-26 10:59:59
8	valid_records	3
9	invalid_records	0
10	usage_schema	TR
11	currency	EUR
12	product_id	PRD-802-355-388
13	product_name	Apollo Pulse Extra
14	marketplace_id	MP-72775
15	marketplace_name	France
16	vendor_account_id	VA-000-001
17	vendor_account_name	Front Street
18	provider_account_id	PR-000-003
19	provider_account_name	Mighty Mick's LLC
20	distribution_contract_id	CRD-26225-58926-18085
21	distribution_contract_name	Apollo Pulse Extra Contract

instructions | general | categories | records

Since the TR reporting schema is used, this example highlights the tier column that should be used to specify prices for each associated tier. The system also uses your selected currency for the provided amount records.

Uploading Usage File

Once Vendors filled out their usage report file, it is necessary to upload this normalized file to the Connect platform. Access your created usage report instance from the **Usage** module. Thereafter, click the **Upload Normalized Usage File** button and drag

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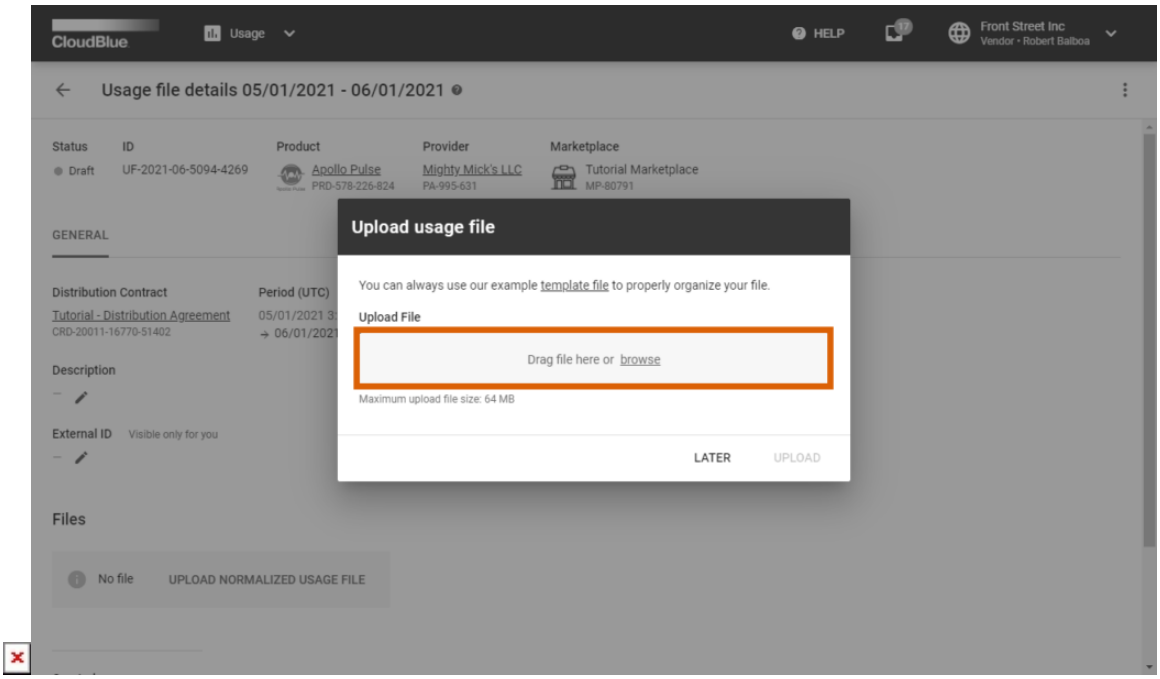
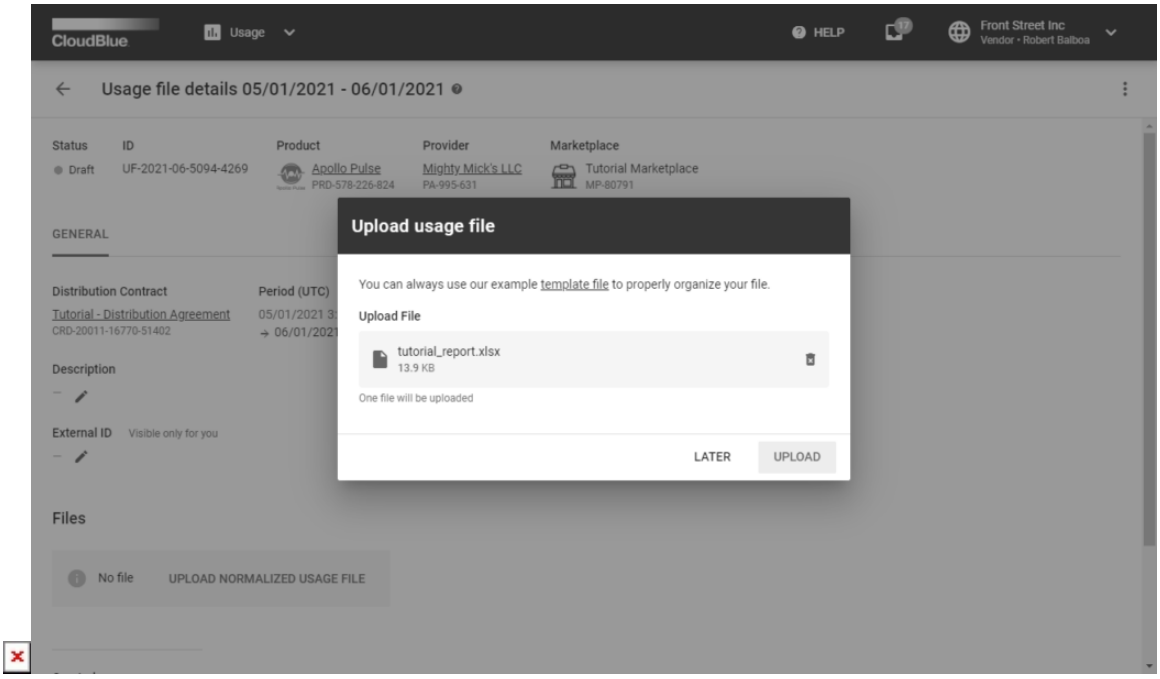
your file into the following form.





Once your file is uploaded, the system adds the file to the queue and assigns the *Uploaded* status to your usage report instance. When the system starts to process your usage report file, the aforementioned status will be switched to the *Processing*.

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Vendors can add custom columns to the usage file to pass custom usage parameters to the distributor's e-commerce system. Connect does not modify values in the custom columns.

> ●
> Information
>
> The name of such custom columns must start with "v."

Processing Stages

Once your usage report file is assigned to the *Processing* status, the system validates each reported record according to the following rules:

1. Subscription can be found in the scope of the contract using the **asset_search_criteria** and **asset_value** defined on each record.
2. In case the required subscription is located, the system verifies if this subscription includes your specified item by using **item_search_criteria** and **item_value**.
3. In case your specified item is found, the system verifies if provided **quantity**, **amount** and **tier** data is valid. For example, if Vendors specify reservation item quantity, the system compares this quantity with the item quantity in the required subscription.
4. The system processes provided time records:
    - **start_time_utc** or **end_time_utc** can't be set to the future dates.
    - Time records should not correlate with a different usage file that was already processed. In case that corrections for previous usage report file are required, your new file must cover longer period of time than your previous one.

If all provided data are valid, the system marks your uploaded file as *Ready*. Therefore, this usage report file can be submitted to Distributors.

Possible Errors

In case your uploaded usage report file contains an error, the system marks your usage report as *Invalid*. Note that only valid usage report files can be successfully submitted to Distributors. Namely, the system requires Vendors to fix all errors and upload their usage file once again.

Once the system marks a usage file as *Invalid*, Vendor can download the processed spreadsheet to review error details. The processed spreadsheet highlights incorrect data and provides error messages in the *records* tab. Possible error values are summarized in the following table:

#	Error Code	Explanation	Example

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1	USG_FILE_001	The system did not find a subscription or an item that matches your specified search criteria value	Resource ID not found for filter item.mpn with value MPN-D
2	USG_FILE_002	If your subscription search criteria is based on a parameter, this error indicates that your required subscription with your specified parameter is not found	Asset id not found for filter parameter.param_a with value test B
3	USG_FILE_003	In case the subscription ID search criteria is selected, this error indicates that your required subscription with your specified ID is not found	Asset id not found for filter asset.id with value AS-044-545-256-7
4	USG_FILE_004	This error indicates that your provided parameter search criteria value is not unique and multiple subscriptions are found	Multiple assets found for parameter param_a with value test A
5	USG_FILE_005	The system can’t read or process the file; make sure that your usage file is not corrupted and it includes a tab called **records**	Contract ID: CRD-123-123-123-123-123 and Product ID: PRD-123-123-123-123 can not be validated
6	USG_FILE_006	This error indicates that provided value isn’t a float value	Usage value is not a float value
7	USG_FILE_007	Provided **start_time_utc** that is invalid; usually caused by an incorrect format	Usage start time is not valid
8	USG_FILE_008	Provided **end_time_utc** that is invalid; usually caused by an incorrect format	Usage end time is not valid
9	USG_FILE_009	Specified **record_id** is not unique and belongs to another usage file	Record belongs to existing usage file UF-2019-05-5760-1645
10	USG_FILE_010	Provided **item.search_criteria** is not valid; choose either **item.global_id** or **item.mpn**	This item filter type not allowed
11	USG_FILE_012	Specified **start_time_utc** value is behind the **end_time_utc** value	Usage start time value greater than end time value
12	USG_FILE_013	Reported quantity is greater than purchased quantity	Usage quantity reported in usage file is greater than allowed usage
13	USG_FILE_014	Reported value does not match the defined item precision; e.g., your item has the integer precision and reported value is decimal	Usage quantity reported doesn’t match with the data type of the item

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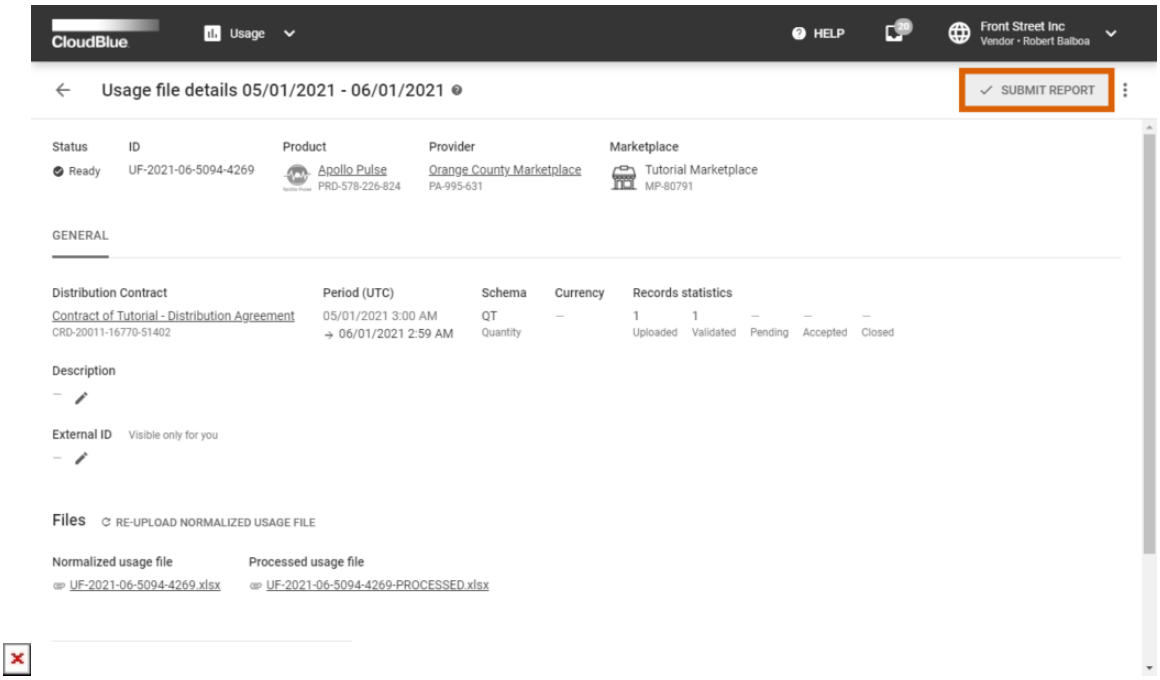
Submitting Usage Report

Once the system assigns the processed usage file to the *Ready* state, Vendors can submit this report by clicking the **Submit Report** button from the **Usage File Details** screen:



Once a usage report file is submitted, the system transfers the instance to the *Pending* state. Thereafter, Distributors can accept the file or reject it in case of an error. Note that the system can also accept your submitted file automatically.

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