



Contentstack Connector Documentation



Overview

The purpose of iLangL Contentstack Connector is to provide localization flow between Contentstack and a set of supported translation tools. Localization Hub is a middleware platform that is used to transfer content between Contentful and translation tools, such as Phrase (Memsorce), memoQ Server, and Textmaster.

Contentstack Terminologies

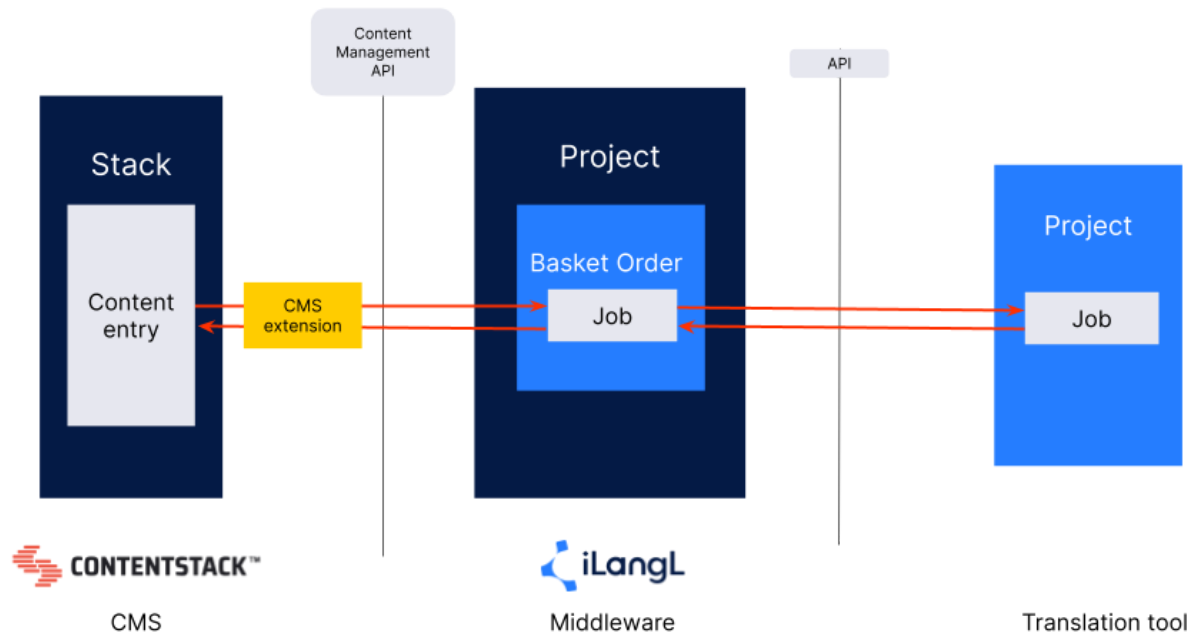
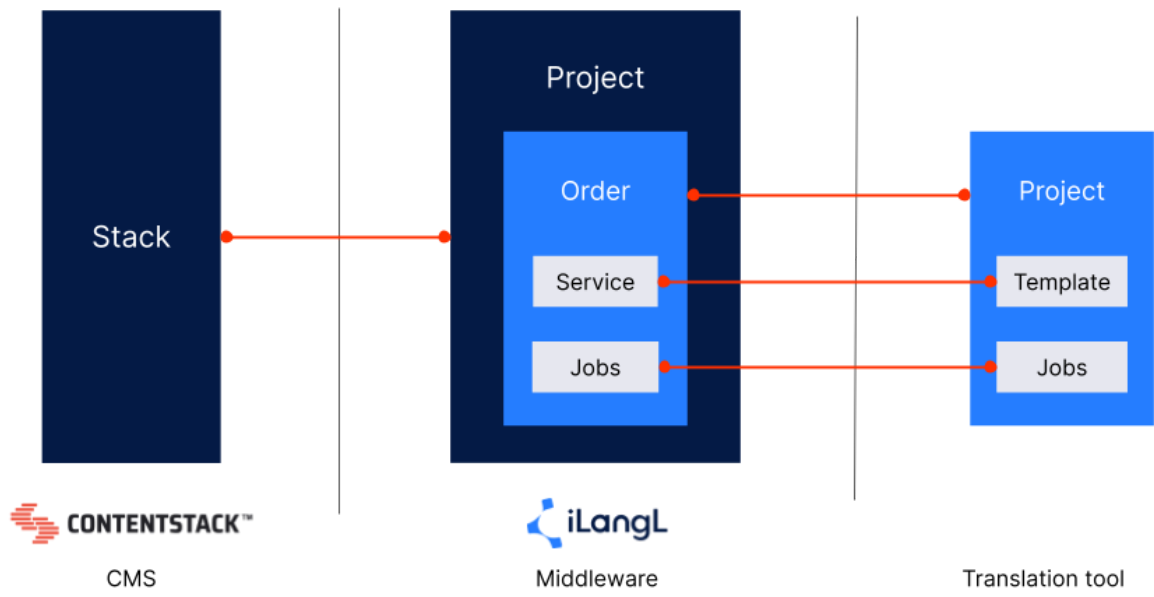
- **Stack** is a repository or a container that holds all the content/assets of your site. It allows multiple users to create, edit, approve, and publish their content within a single space. Contentstack allows you to create multiple stacks and invite users (if you have required permissions) to the stack.
- **Content Type** is the structure or blueprint of a page or a section that your web or mobile property will display. It lets you define the overall schema of this blueprint by adding fields and setting its properties.
- **Entry:** After you define a content type, you can add data to your content type by creating an entry.
- **Asset:** Any media file you want to upload in an entry.
- **Fields:** These are the building blocks/component of your structured content. You can control which data you want to add by configuring fields and their properties in a content type.

How It Works

LOCALIZATION WORKFLOW

1. iLangL Localization Hub system connects to Contentstack CMS via Contentstack Content Management API. Contentstack Content Management API is used for localization flow between Contentstack and translation tools. *See also:* [Contentstack Content Management API documentation](#).
2. iLangL Localization Hub extracts the content for translation, applies content processing and uploads processed content to the translation tool.
3. The jobs in translation tools are created automatically and their progress can be tracked in the Localization Hub.
4. When the translation is finished, the translated files are sent to Contentstack and the drafts of pages for specific language versions are created automatically.

BASIC INFRASTRUCTURE DIAGRAM



TRANSLATION ORDER FLOW

The translation order can be initiated in two ways:

1. Using the iLangL Localization Hub extension for Contentstack
2. Using the translation order form in the Localization Hub portal

Translation order from the Contentstack extension

When the CMS manager makes translation orders using the iLangL extension for Contentstack, the ordered request is added to the Localization Hub basket/order, and when this basket is moved to "In Progress", the connector pulls the content from Contentstack via Content Management API, applies content processing and moves it to the translation tool.

The screenshot displays the Contentstack Localization Hub interface. The main content area shows a form for creating a translation order titled "Integrations Test". The form includes fields for Title, Teaser, URL, and a JSON Rich Text Editor. The URL field is set to "/copy-of-integrations". The JSON editor contains the text "this is json".

On the right side, there is a "Widgets" panel for "Staging Localization ...". It includes a "Select service" dropdown set to "Machine Translation", a "Due" date and time selector (02/07/2023, 08:07 PM), a "Cost Center" dropdown, and filters for "Filter by applied service" (Machine Translation) and "Filter by status" (Any). Below these are "Localization status" filters for "All Language" and "Service".

<input type="checkbox"/>	All Language	Service	Status
<input type="checkbox"/>	de-de	Machine Translation	NEVER STARTED
<input type="checkbox"/>	fr-fr	Machine Translation	NEVER STARTED
<input type="checkbox"/>	nl-nl	Machine Translation	NEVER STARTED

At the bottom right of the widgets panel, there are "Request" and "Details" buttons.

When the translation order is completed, the connector grabs the content from the translation tool and delivers it to Contentstack.

The statuses of localization requests can be tracked in Contentstack and in Localization Hub.

Integrations Test

Content Type about
Content ID bit1131ac67a0685eab

Recent jobs

Locales

Order # Source Target Service Ordered By Status Due Updated

Search...

Select

Select

2 selected

Select

Select

Due

Last Updated

24154	en-us	de-de	Translate from English	Administrator	DELIVERED	Sep 20, 2022, 20:33	Overdue	Oct 06, 2022, 16:50:33
24608	en-us	fr-fr	Machine Translation	Sergey Yuryev	NEW	Feb 07, 2023, 20:07		Feb 07, 2023, 12:09:55

Select service

Select service

Filter by applied service

Any

Filter by status

Any

Localization status

Language	Service	Status
de-de	Translate from English Outdated	Delivered Changed Oct 06, 2022, 16:50:33 Due Sep 20, 2022, 20:33:00 Overdue
fr-fr	Machine Translation	NEW Changed Feb 07, 2023, 12:09:55 Due Feb 07, 2023, 20:07:00

Details

Translation order from the Localization Hub portal

Automated action checks for content in Contentstack via Content Management API based on workflow filter and updates the data in the Localization Hub content tree.

Home > Projects > Contentstack > Settings

Settings

General Languages Workflows Services **Automations** Access

Automations

Name	Task	Service	Step	Next Step	Scheduled	Last Run	Last Duration	Next Run	Enabled	Actions
Refresh content tree	Refresh content tree	Translation	In Progress		Every hour at 0	a month ago	89.882 sec.	Never	NO	Edit

When a user places a translation order via Localization Hub, all content available for localization is presented in the form of a content tree. The user can select Service, the list of items to order, target languages, and create a new Basket or Order depending on the settings.

New Order

Service selection Demo Content selection 18 item(s) Languages 6 language(s) Summary and confirmation

[←](#) [New Order](#) [Add to basket](#)

New or outdated content

SUMMARY

Service Demo

Source language [EN-US](#)

Target languages [AR](#) [NL-NL](#) [EDIT](#) [FR-FR](#) [DE-DE](#) [UK-UA](#)

Selected Content

ID	Name	Type
bltdf07cdcd2a62		about
about	About	contenttype
blt5520980a37327cb7	About us demo change 🗨️ 2	about
bltc3586328c5741b23	Arabic Content 83 words	about
blt102d17daf615793a	Chinese content 318 words	about

When the Basket is moved to In Progress, the connector pulls the content from Contentstack via Content Management API, applies content processing and moves it to the translation tool.

When the translation order is completed, the connector grabs the content from the translation tool and delivers it to Contentstack.

Users can track the statuses of their localization requests in Contentstack and in Localization Hub.

PROCESSING DATA FOR TRANSLATION

EXPORT

Contentstack exports entries in the form of JSON data, where all entry properties are located. To create a new version, we require an aggregated JSON structure identical to the source.

Connector autonomously identifies text for localization. It utilizes the content type model to iterate through all fields designated for localization and extract text. Text is extracted with the JSON path serving as an identifier. This JSON path specifies the location within the JSON structure from which the text was extracted.

DELIVERY

When a new language version is created for the first time, it essentially copies the source version. In subsequent instances, our connector iteratively merges the source and target versions, adding missed items to the target version.

Upon delivery of translations, our connector merges the source and target versions and applies localized text based on the JSON path. The challenge lies in merging multiple fields. Each multiple field instance lacks a unique identifier, so when merging the source and target versions, we can only align items in arrays based on their sequence. As our connector synchronizes the source and target arrays, it processes items from the source array and adds them to the target array if they do not already exist.

SCENARIOS IN WHICH DELIVERY CAN FAIL

If the JSON path is not found in the newly created target version, the translation cannot be applied. It's essential to understand the scenarios in which this might occur.

Here is a list of cases when the JSON path may fail to be found in the target version:

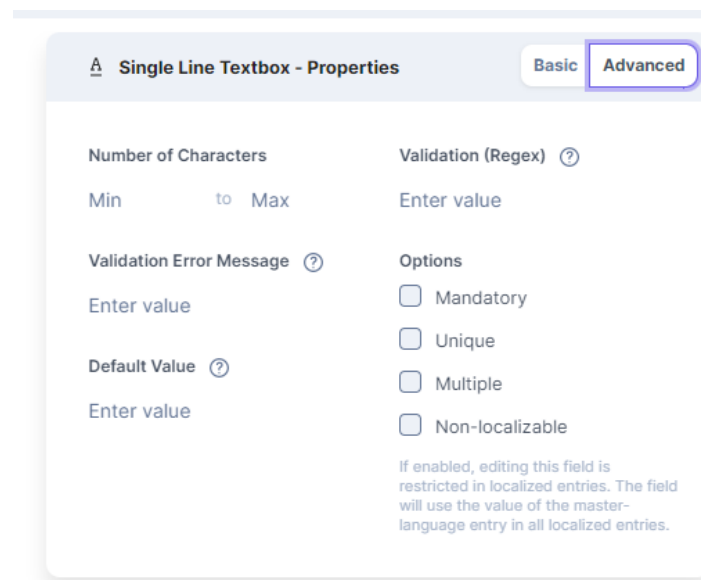
1. The unique ID of the field has been modified after the translation order.
2. Multiple option of the field have been altered after the translation order.
3. The field was removed after the translation order.

4. The sequence of groups in an array has been modified.
5. The sequence of modular blocks in an array has been modified.

CONNECTOR SETTINGS

Non-localizable fields

Connectors define which Fields to include in localization scope based on Field settings in Content Type. If you don't want to localize the property of this field just check the Non-localizable option.



The image shows a screenshot of the 'Single Line Textbox - Properties' dialog box, specifically the 'Advanced' tab. The dialog box has a title bar with a small 'A' icon and the text 'Single Line Textbox - Properties'. There are two tabs: 'Basic' and 'Advanced', with 'Advanced' being the active tab. The main content area is divided into several sections:

- Number of Characters:** A section with 'Min' and 'Max' labels and a 'to' separator, with input fields for each.
- Validation (Regex):** A section with a question mark icon and an 'Enter value' input field.
- Validation Error Message:** A section with a question mark icon and an 'Enter value' input field.
- Default Value:** A section with a question mark icon and an 'Enter value' input field.
- Options:** A section containing four checkboxes: 'Mandatory', 'Unique', 'Multiple', and 'Non-localizable'. The 'Non-localizable' checkbox is highlighted with a blue border.

Below the 'Options' section, there is a small text block: 'If enabled, editing this field is restricted in localized entries. The field will use the value of the master-language entry in all localized entries.'

Non-localizable option: If enabled, the field editing is restricted to localized entries. The field will use the value of the source-language entry in all localized entries.

Max length validation

Max length validation can be applied to Fields. Contentstack connector helps to automatically apply this validation and validate localization content by linguists inside of translation tools.

The screenshot shows the configuration for a 'Teaser' field. On the left, there is a sidebar with field types: URL (Default field), Single line textbox (Multiple), and SEO (Title, Description, Keywords). The 'Single line textbox' field is selected, and its properties are shown in a modal window titled 'Single Line Textbox - Properties'. The modal has two tabs: 'Basic' and 'Advanced'. The 'Advanced' tab is active, showing the following settings:

- Number of Characters:** Min to 50
- Validation (Regex):** Enter value
- Validation Error Message:** Enter value
- Default Value:** Enter value
- Options:**
 - Mandatory
 - Unique
 - Multiple
 - Non-localizable

A note at the bottom of the modal states: "If enabled, editing this field is restricted in localized entries. The field will use the value of the master-language entry in all localized entries."

The screenshot shows a text input field for a 'Teaser' field. The field contains the text "Welcome to our CMS!". The character count "19/20" is displayed in the bottom right corner of the field.

The screenshot shows the Phrase translation tool interface. The top menu includes 'Phrase', 'Edit', 'Tools', 'Format', 'Document', and 'Help'. Below the menu is a toolbar with various editing tools. The main area displays a table of source and target text:

#	Source: en	Target: de			
1	Integrations Test		✗		
2	Welcome to our CMS!	Willkommen in unserem CMS!	✗	MT	
3	Integrations		✗		

Below the table is a 'Context note' section with the following information:

- Key: teaser
- Note: Welcome to our CMS!
- Max length: 20

At the bottom right of the context note section are three buttons: 'Plain', 'Rich', and 'Autoselect'.

Referenced items

Contentstack provides flexibility to build different page types and more than one content type can be used to build an HTML page. In this case, many content elements can represent different HTML pieces.

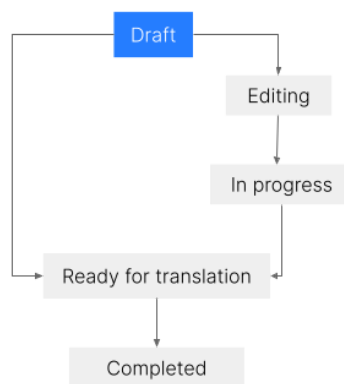
Usually, there's one parent item that represents the page and refers to other content elements, such as the carousel, header, footer, etc.

If you want to export all items as one page, it might be hard for you to select a parent item and all child items in one translation package. Connector configuration allows defining parent/child structure between content types, and when you pick the parent content element, all referenced items will be exported in the same translation batch automatically. This helps to make a translation order easy and improve the quality of translation by providing the entire page context for a linguist and ensuring that all page blocks will be translated.

Contentstack workflow

Contentstack workflow can be used in localization flow in case when content is ordered from Localization Hub.

During the ordering process, the connector can filter content elements by workflow steps. Typically, the following workflow steps are used for the source language:



- **Draft** — initial state of the content.
- **Editing** — an optional state used for the case when the source content proofreading is required.
- **In progress** — shows that content is in the progress of editing or translation.

- **Ready for translation** — flags that content requires translation.
- **Completed** — translation is ordered.

When the translation is delivered and the language version created, the connector can change the workflow step for a language version to the "Completed" step.

More information about Contentstack localization workflow you can find in the [Contentstack knowledge base](#).

Workflow is not required for ordering content through the Localization Hub Contentstack extension.

Security

API ACCESS

The iLangL Contentstack Connector accesses the Content Management API securely via HTTPS. Contentstack account (Username and password) is used to authenticate and get the access token and sign all API Requests. All interactions with Contentstack are limited by account permissions. Passwords in Localization Hub are stored encoded with hashing algorithm PBKDF2.

CONTENTSTACK EXTENSION AUTHENTICATION

Contentstack extension authenticates Contentstack users in the Localization Hub by sending the Project ID, API key, and Contentstack User ID. Localization Hub auto-registers and authenticates users in the system. The iLangL Localization Hub extension allows sending orders to the Localization Hub.

When the Localization Hub pulls the content from Contentstack, it uses the Content Management API and token-based authentication. The API key is stored in the Localization Hub in an encrypted way.

Content processing

Localization Hub applies additional processing to optimize Contentstack content for the Translation tool.

The list of processing rules is defined based on client content types structure and clients localization requirements. The processing rules are specified during the connector configuration phase.

Installation Prerequisites

To set up integration between Contentstack CMS and the Localization Hub, the client needs to provide the following information to the iLangL team:

Set of language pairs used for localization

1. List of content types that should be included in the localization scope
2. Reference Map of content types
3. Contentstack account for the connector
4. Test environment or test language

Reference Map is a list of parent/child content types that can be configured in the Contentstack connector settings that allow exporting referenced items, such as the hero section, accordion, block, etc.

Linked child types
The list of linked child types

Linked Child Content Types	State	Actions
<input style="width: 90%;" type="text" value="accordion"/>	<input checked="" type="checkbox"/> Enabled? <input type="button" value="Enable All"/> <input type="button" value="Disable All"/> 	<input style="border: 1px solid red; width: 30px; height: 20px;" type="button" value="del"/>