Sitecore CMP guide

July 18, 2019

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1. Introducing Sitecore Connect for Sitecore CMP

The Sitecore Content Management Platform (CMP) connector lets you synchronize content created in Sitecore Content Hub to Sitecore Experience Platform (XP).

With the module, you can:

- Map Sitecore Content Hub fields to Sitecore fields.
- Create a language version based on the relationship in the Sitecore Content Hub.
- Update items automatically.
- Set the publication date.
- Create content items in buckets.

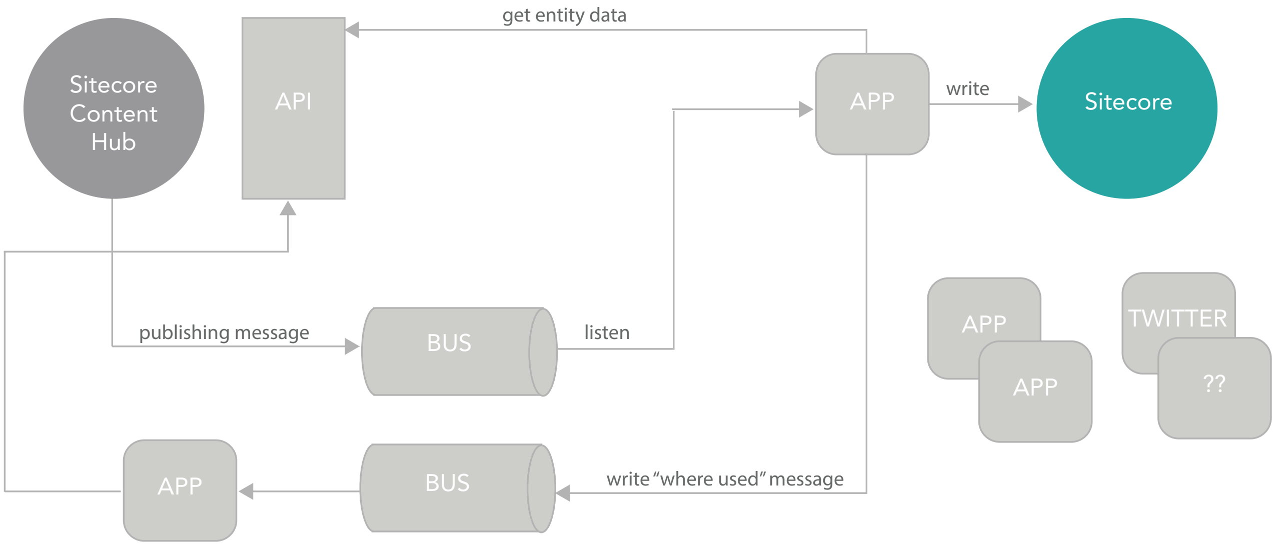
This topic describes:

- The CMP architecture
- The CMP process

1.1. The CMP architecture

The key architecture components in the Sitecore CMP module are: the Azure Service bus, the Sitecore Content Hub, and Sitecore.

The following diagram shows a simplified version of the architecture:



1.2. The CMP process

The following describes the CMP connector process:

1. The CMP connector listens to the Azure Service Bus topic’s subscription for new messages.
2. When a message is received, the CMP connector expects a target ID. If it exists, the connector gets a content type from the Sitecore Content Hub using the target ID as the content type ID.
3. The CMP connector creates a new item (or updates an existing item) in one of the preconfigured item buckets (or a new (language) version of an existing item).
4. The CMP connector saves fields from the Sitecore Content Hub content type into the item’s fields. You can specify which fields to save in the configuration.
5. The CMP connector checks for localization and localization parents of the source:
   If the content type has a `LocalizationToContent` relation, it is used to decide in which language the item (version) must be created.
   If the content type has a `ContentToContentLocalization` relation, the entity is considered as a localization of another entity and instead of creating an item, the connector will look for another item that is linked to the `ContentToContentLocalization` parent.
6. The CMP connector sends a message to the Azure Service Bus topic with information about the item that was just created or updated in Sitecore.
7. Any exceptions are added to the Service Bus message. All exceptions are written to Sitecore log files.

2. The CMP items in the Content Editor

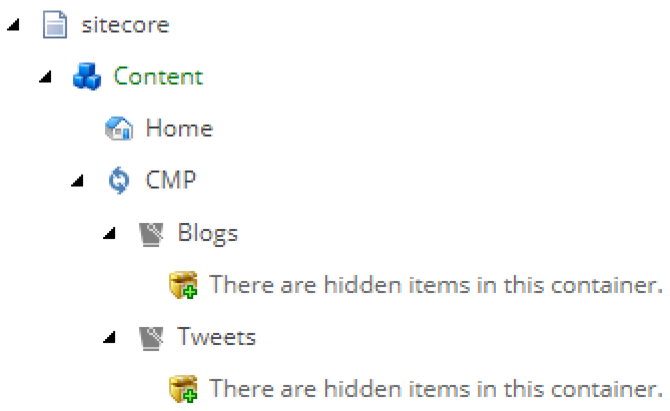
The Sitecore Content Management Platform (CMP) connector writes Sitecore Content Hub items into Sitecore and stores them in the Master database in a default folder named *CMP*.

This topic describes the following CMP items in Sitecore:

- The CMP content items
- The CMP configuration items
- The CMP templates

2.1. The CMP content items

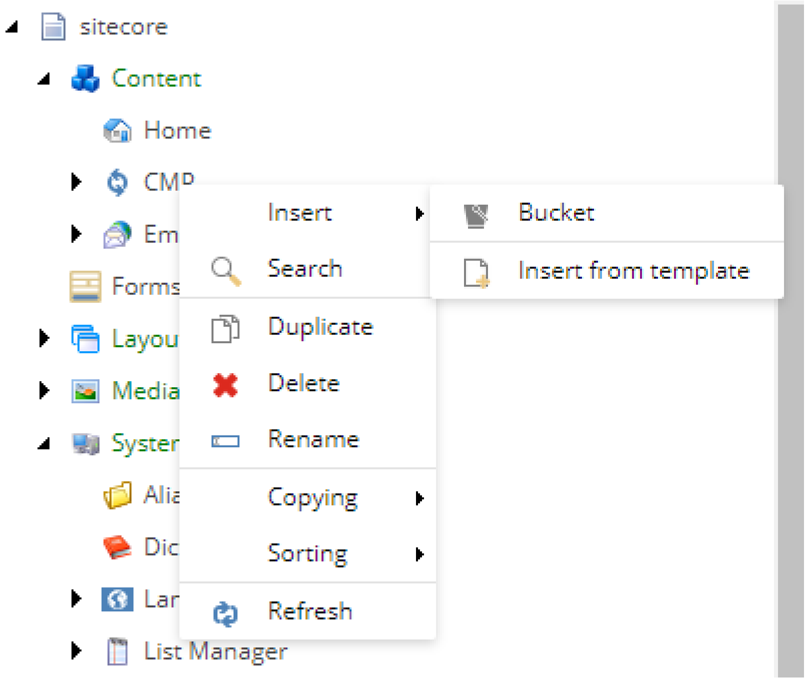
The parent item that contains the preconfigured item buckets is located in `/sitecore/content/CMP`. Every bucket keeps items linked to a content type in the Sitecore Content Hub. For example, buckets for Blogs and Tweets:



- sitecore
  - Content
    - Home
    - CMP
      - Blogs
        - There are hidden items in this container.
      - Tweets
        - There are hidden items in this container.

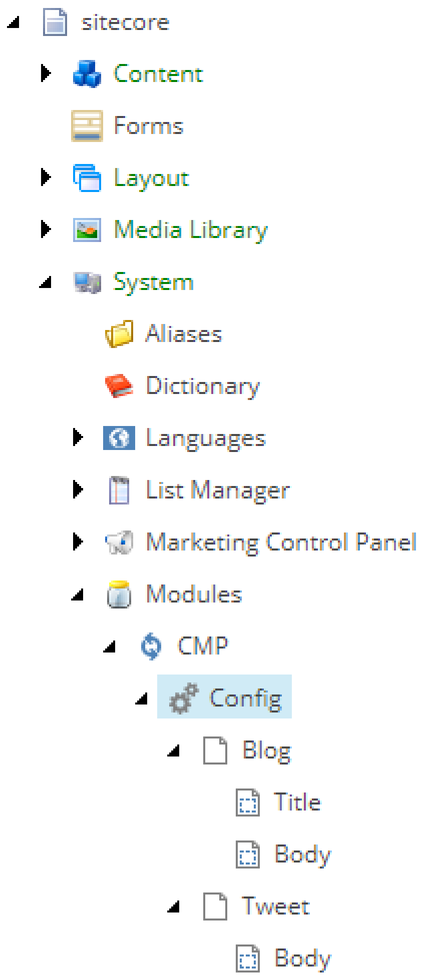
To create a new bucket:

- Navigate to `/sitecore/templates/Branches/CMP`, right-click **Buckets**, click **Insert**, and click **Bucket**.



2.2. The CMP configuration items

The configuration items that contain all necessary connection strings and mapping details are located in `/sitecore/system/Modules/CMP/Config`.

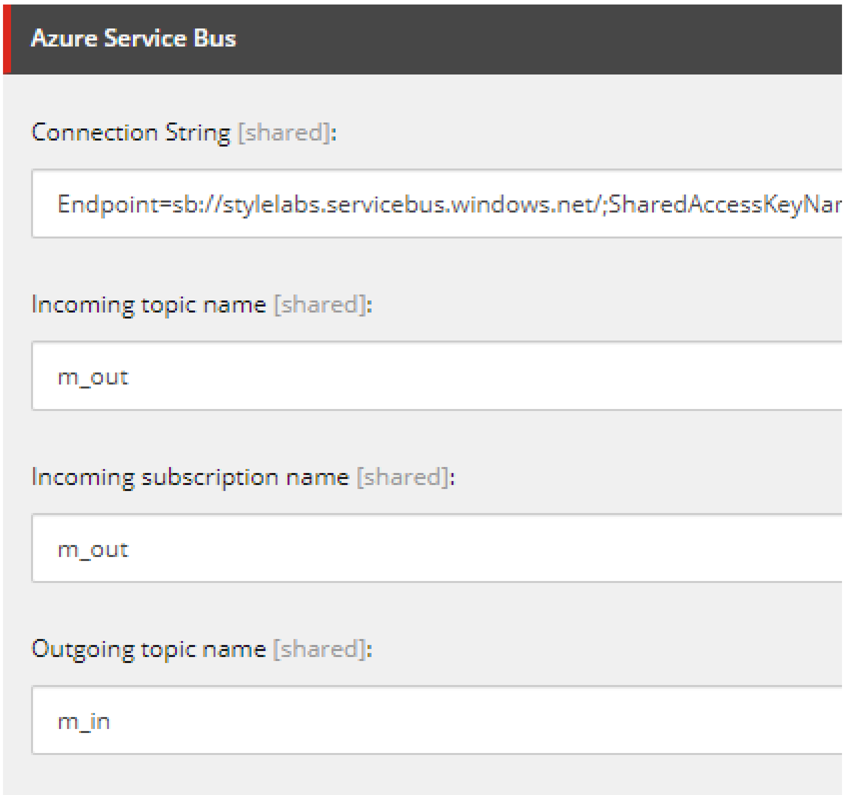


- sitecore
  - Content
  - Forms
  - Layout
  - Media Library
  - System
    - Aliases
    - Dictionary
    - Languages
    - List Manager
    - Marketing Control Panel
    - Modules
      - CMP
        - Config
          - Blog
            - Title
            - Body
          - Tweet
            - Body

In the client items, you must ensure that the following fields in the **Content Hub Credentials** section contain the correct information: **Client Id**, **Client Secret**, **User Name**, **Password**, **Content Hub URI**.

In the **Azure Service Bus** section, the following fields are important:

- **Connection String** - the connection string to Azure Service Bus.
- **Incoming topic name** - the topic name used for the posted messages from the Content Hub when new content is created or existing content is updated.
- **Incoming subscription name** - the subscription name that the connector will use to read new messages. Azure Service Bus should contain two topics: one for incoming messages and one for outcoming messages. The subscription should be created under the topic for incoming messages.
- **Outcoming topic name** - the topic name used for the messages posted by CMP Connect when content is imported.



Azure Service Bus

Connection String [shared]:

Endpoint=sb://stylelabs.servicebus.windows.net/;SharedAccessKeyNar

Incoming topic name [shared]:

m_out

Incoming subscription name [shared]:

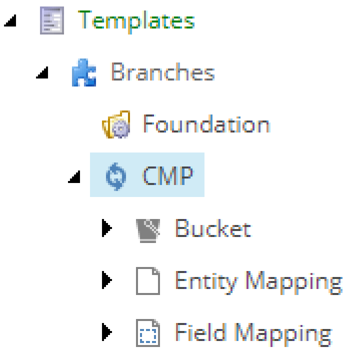
m_out

Outgoing topic name [shared]:

m_in

2.3. The CMP templates

To make the CMP configuration easier, branch templates are available in `/sitecore/templates/Branches/CMP`:



- Templates
  - Branches
    - Foundation
    - CMP
      - Bucket
      - Entity Mapping
      - Field Mapping

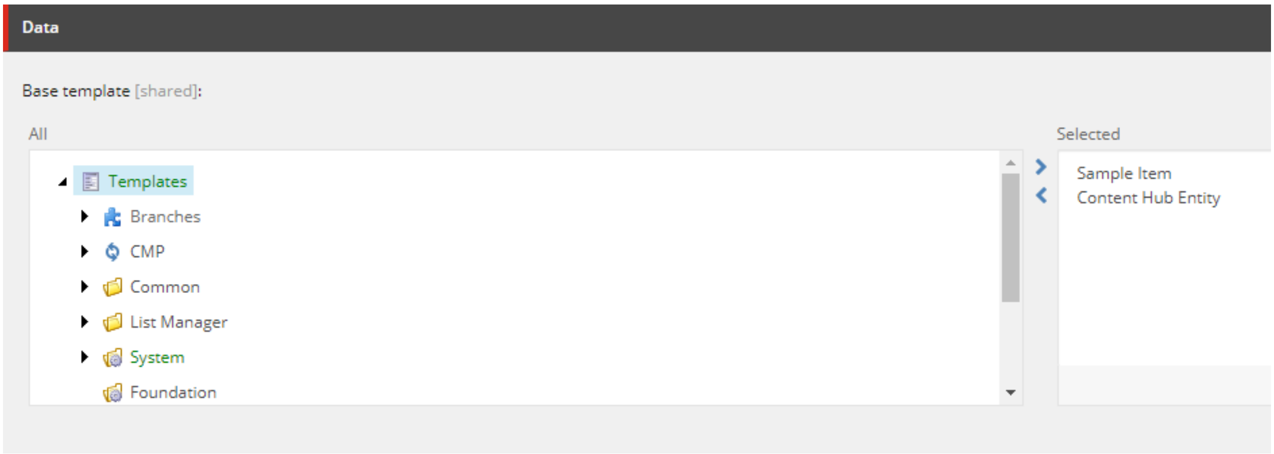
The branch templates let you create item buckets and entity mappings.

The CMP templates are located in `/sitecore/templates/CMP` and contain the following:

- **Config root** - for the config item.

- **Entity Mapping** - to be able to sync entities of a given content type, you need an Entity Mapping item.
- **Field Mapping** - contains the name of the field in the entity and the name of the field in Sitecore item.
- **Content Hub Entity** - each content item template created for the connector, must inherit from this template. It mixes in the `EntityIdentifier` field and in this way the connector can match entities to Sitecore items.

You can also create your own templates to create items from entities. The only requirement is that the templates inherit from the *Content Hub Entity* template:



Data

Base template [shared]:

All

Selected

Templates

Branches

CMP

Common

List Manager

System

Foundation

Sample Item

Content Hub Entity

3. The CMP pipelines

The Sitecore Content Management Platform (CMP) connector adds one new processor to the `<initialize>` pipeline, and one new `<cmp.importEntity>` pipeline, including three new processors. The pipelines are defined in the

`App_Config/Modules/Sitecore.Connector.CMP/Sitecore.Connector.CMP.config` file.

This topic describes the following CMP pipelines and their processors:

- The <initialize> pipeline
- The <cmp.importEntity> pipeline

3.1. The <initialize> pipeline

The `<initialize>` pipeline is used to initialize the Azure Service Bus listener. For CMP, the following processor is added:

Processor	Description

`InitializeServiceBus`	Initializes the Azure Service Bus listener that runs the `<cmp.importEntity>` pipeline when a new message appears in the topic’s subscription.
	The `InitializeServiceBus` processor does the following:
	1. Gets the config item, reads the connection information, and initializes a topic and a subscription clients.
	2. If a message is triggered, the `ProcessMessagesAsync` is executed:
	• It runs the `<cmp.importEntity>` pipeline.
	• Then, it checks the `ImportEntityPipelineArgs` pipeline and sends a message back to the Bus. For example:
	`{`
	`"input_message_id": "1174",`
	`"item_id": "{D071EDAF-55A4-4CB0-9ED3-6AAB6288ECA5}",`
	`"target_id": 10436,`
	`"target_identifier": "Iqa356VYWEe-PsBiEcAgPg"`
	`"inputMessageId": "2446", "itemId": "{CD41DE03-1169-493C-A138-B7DD4722EBB8}" }`
	3. Writes to the log file. For example:
	`17580 11:48:16 INFO  Sitecore Connect for Sitecore CMP: Sending a message: {`
	`  "input_message_id": "1174",`
	`  "item_id": "{D071EDAF-55A4-4CB0-9ED3-6AAB6288ECA5}",`
	`  "target_id": 10436,`
	`  "target_identifier": "Iqa356VYWEe-PsBiEcAgPg"`
	`}`
	`24428 14:49:58 INFO Sitecore Connect for Sitecore CMP: Sending a message: { "inputMessageId": "2446", "itemId": "{CD41DE03-1169-493C-A138-B7DD4722EBB8}"`
	`}`

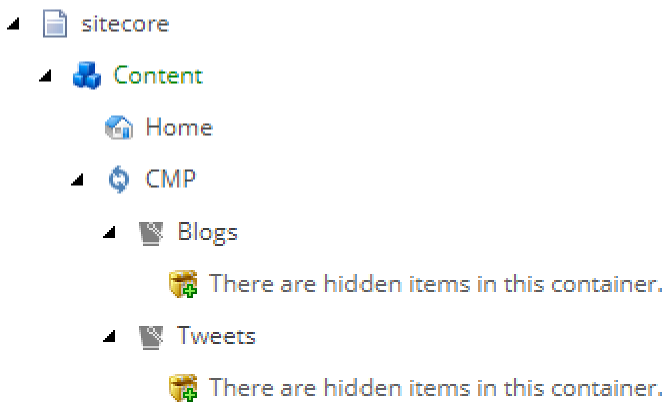
3.2. The <cmp.importEntity> pipeline

The `<cmp.importEntity>` pipeline is used to import entities. It includes the following processors:

Processor	Description
`FetchEntity`	Gets an entity by ID. The `FetchEntity` processor does the following: 1. Creates the Content Hub client and gets the entity by ID (the target_id in the bus message) and puts it in the args to make it available to the next processors. 2. Checks for the `ContentToContentLocalization` relation. If there is a parent entity, its identifier will be used, otherwise, the current entity's identifier will be added to the args. 3. Checks for the `LocalizationToContent` relation. If there is a parent entity, the processor will try to parse the parent's `ValueName` property to a language. If there is no parent, the default language will be used. The language will be added to args to be available for the next processors. An exception is thrown if the processor fails to parse the language. If there is no `LocalizationToContent` parent, the exception will not be thrown. 4. Checks for the `ContentTypeToContent` parent and puts its identifier to the args.
`EnsureItem`	Gets the entity mapping item and finds the `EntityIdentifier` field. The `EnsureItem` processor does the following: 1. Enumerates the children of the config item to find the entity mapping item that matches the content type identifier from the args. 2. If the entity mapping item is found, it gets the corresponding item bucket item (it is configured in the entity mapping item). 3. Tries to find an item that contains the `EntityIdentifier` field (Content Hub template)) equal to the `EntityIdentifier` in the args (it could be either the current M-entity identifier or its `ContentToContentLocalization` parent's identifier). If there is already an item with such an `EntityIdentifier`, the processor gets it (a language version based on the `args.Language`) and put it into the args. If there is no such item, the processor creates it with a version in a given language (`args.Language`) and puts the item in the args.
`SaveItem`	Saves the item to Sitecore. The `SaveItem` processor does the following: 1. In a given language context (`args.Language`), it goes through field mapping items of the entity mapping item, and for each field mapping it gets a property value from the Content Hub entity and sets the value to the Sitecore item. 2. Sets the publish date on a current version (if the date is not null).

4. Publish a CMP item from an item bucket

Sitecore Content Management Platform (CMP) items are stored in item buckets. Item buckets let you manage large numbers of items in the content tree. An item bucket is a container that you can use to hide innumerable items and still easily retrieve and work with these items.



- sitecore
  - Content
    - Home
    - CMP
      - Blogs
        - There are hidden items in this container.
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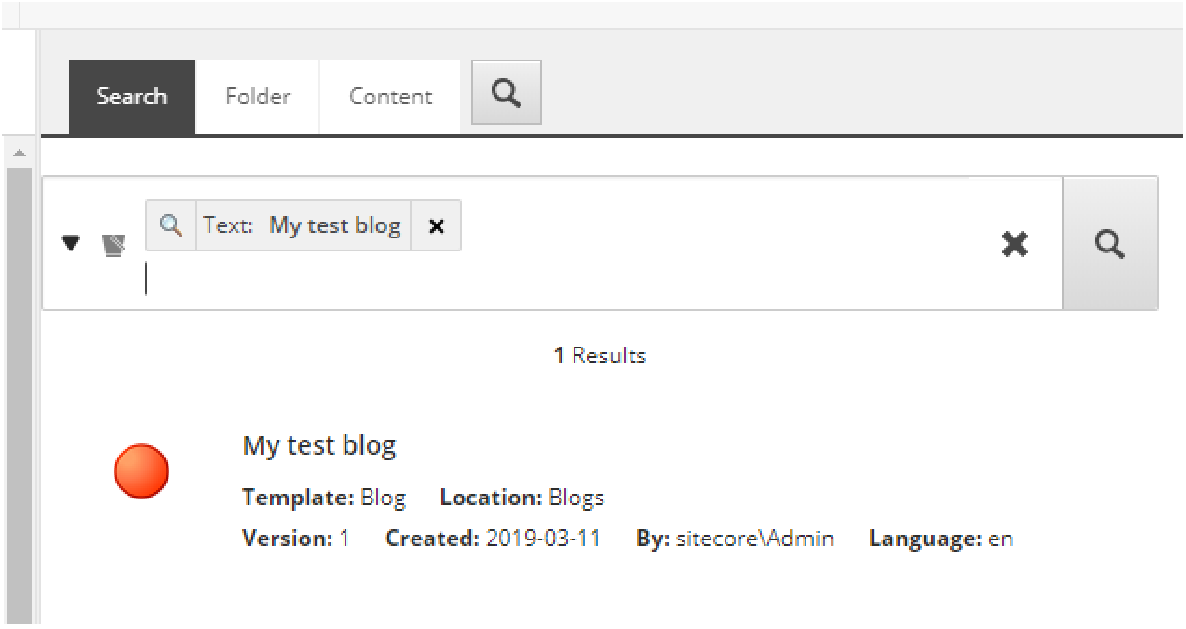
        - There are hidden items in this container.

You can only find bucket items using the Sitecore search engine.

To find a CMP item:

1. Navigate to `sitecore/content/CMP`.
2. On the **Search** tab, enter a search term and click **Search**.



Text: My test blog

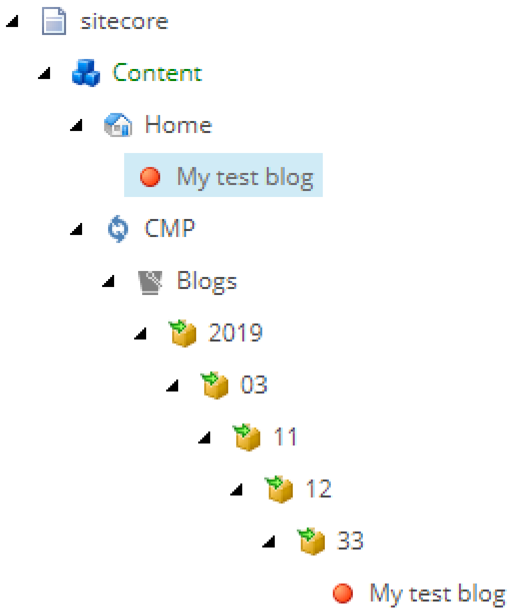
1 Results

My test blog

Template: Blog **Location:** Blogs

Version: 1 **Created:** 2019-03-11 **By:** sitecore\Admin **Language:** en

3. On the **Configure** ribbon, click **Clone** and locate the clone under the site root item:



IMPORTANT

It is important that you clone the item because a clone is an item that inherits the field values from the original item and is not just a copy. If you copy or duplicate the item instead, the item is not synced.

4. Now you can check the workflow and publish the item. Check whether the item is available on the website.