Sitecore Connect™ software for Salesforce Marketing Cloud 1.0 Behavioral Data Exchange Installation Guide

September 5, 2019

Table of Contents

1. Introduction

You use Sitecore Connect for Salesforce Marketing Cloud - Behavioral Data Exchange to push selected Sitecore contact data and marketing list data to corresponding data structures in Salesforce Marketing Cloud (SFMC). The connector only synchronizes data from Sitecore to SFMC. Changes in SFMC are not updated in Sitecore.

This guide describes how to install and configure the connector.

1.1. Requirements

The following packages need to be installed in sequence before you install Sitecore Connect for Salesforce Marketing Cloud - Behavioral Data Exchange 1.0:

- Sitecore Experience Platform 9.0.1 or 9.0.2.

- Data Exchange Framework (DEF) 2.0.1.

- SC Hotfix 330565-1 for DEF version 2.0.1.

- xConnect Provider for Data Exchange Framework 2.0.3.

- An SFMC account where you can create an installed package with appropriate access rights.

> **NOTE**
> SFMC versions 1.0 and 2.0 do not support running via Remote SDK.

1.2. Recommendations

To avoid issues when synchronizing data from Sitecore to SFMC, follow these recommendations:

- Make sure that each contact list has a unique name in Sitecore.
  It's possible to have two contact lists with the same name in Sitecore, but SFMC does not allow you to have two data extensions with the same name.

- Make sure that the names of contact lists in Sitecore contain at least one alphanumeric character.
  Sitecore allows you to use contact list names that only contain numeric characters, but it's not possible to have data extension names in SFMC that only consist of numeric characters.

2. Installation

To install Sitecore Connect for Salesforce Marketing Cloud - Behavioral Data Exchange (SFMC-BDE):

1. Download the Sitecore Connect for Salesforce Marketing - Behavioral Data Exchange package.

2. On the Sitecore Launchpad, click **Control Panel**.

3. In the Control Panel, in the **Administration** section, click **Install a package** to open the **Installation Wizard**.

4. Click **Upload package** and follow the steps to upload the module package to Sitecore.

5. Click **Next** and follow the steps to install the package.

6. Before you close the wizard, select **Restart the Sitecore Client**.

To check that you have installed SFMC-BDE successfully:

1. In the Contend Editor, go to `/sitecore/system/Data Exchange`.

2. Check that the **Connect for SFMC Tenant** insert option is present.

2.1. Configure a connection to Salesforce Marketing Cloud

To configure a connection between xConnect and Salesforce Marketing Cloud (SFMC), do the following:

• Add an API integration package to your SFMC installation.

• Add an SFMC connection string to your Sitecore installation.

• Ensure the required xConnect connection strings are present.

2.1.1. Add an API integration package to your SFMC installation

To add an API integration package to your SFMC installation:

1. Open your Marketing Cloud site.

2. In top right corner, click your account, then click **Setup**.

3. In the left navigation bar, in the **Platform Tools** section, click **Apps**, then click **Installed Packages**.

4. In top right corner, click **New**. In the **New Package Details** window, in the **Name** field, enter a name for your package. You can name it anything, for example, *sitecore-def*.

5. Click **Add Component**, and select **API Integration**. Click **Next**.

6. Select the **Server-to-Server** integration type, and then click **Next**.

7. Add the required rights for your connection. xConnect to SFMC integrations require the following rights:

| DATA | Data Extensions | • Read |
| | | • Write |

8. Click **Ok**.

2.1.2. Add an SFMC connection string to your Sitecore installation

To add an SFMC connection string to your Sitecore installation:

1. In the Components area of the component you created, make a note of the following values:

    - *Client Id*

    - *Client Secret*

    - *Authentication Base URI*

    - *REST Base URI*

    - *SOAP Base URI*

2. Use the values to construct a connection string with this format:

    ```
    <add name="sfmc" connectionString="client id=Client Id;client secret=Client Secret;auth
    endpoint=Authentication Base URI;rest endpoint=REST Base URI;soap endpoint=SOAP Base URI" />
    ```

3. Add the connection string to the `App_config\connectionstrings.config` file on your Sitecore instance.

2.1.3. Ensure the required xConnect connection strings are present

In the `App_config\connectionstrings.config` file on your Sitecore instance, check that the following connection strings are present:

- `xconnect.collection`
- `xconnect.collection.certificate`
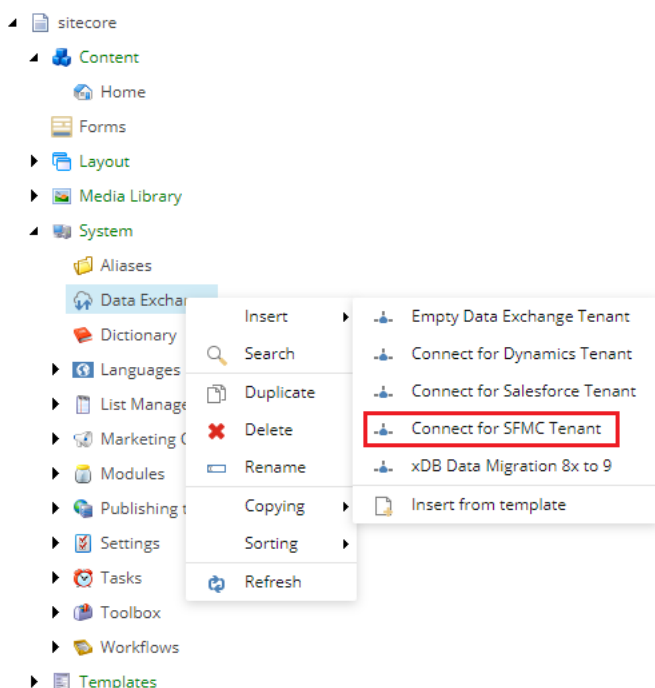
3. Configure a tenant

To set up a tenant to synchronize data to Salesforce Marketing Cloud (SFMC), do the following:

- Create an SFMC tenant.

- Configure an SFMC endpoint for the tenant.

- Test the xConnect endpoint for the tenant.

- Run the pipeline batch that creates the required data folders.

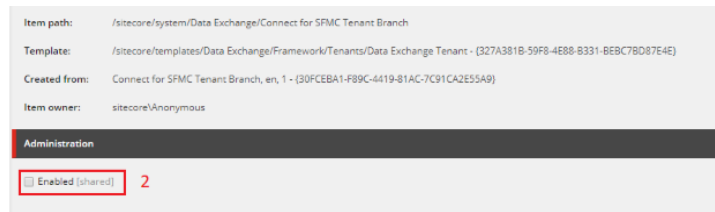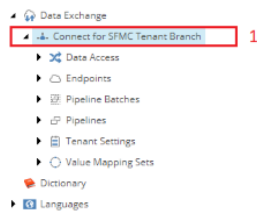## 3.1. Create an SFMC tenant

To create an SFMC tenant:

1. In the Sitecore Launchpad, open the **Content Editor**.

2. Go to `/sitecore/system/Data Exchange` and right-click on **Data Exchange**.

3. In the **Insert** menu, click **Connect for SFMC Tenant**.

4. Go to `/sitecore/system/Data Exchange/<tenant name>`. On the **Content** tab, in the **Administration** section, click **Enabled**.
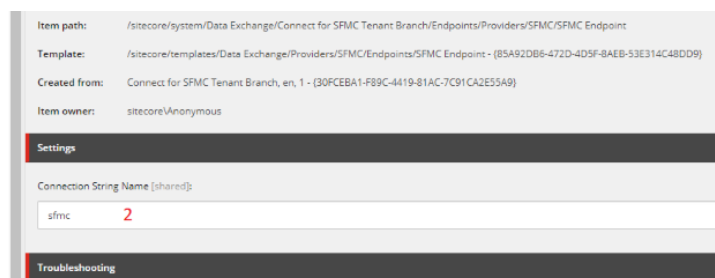
5. Save the item.

3.2. Configure an SFMC endpoint

To configure an SFMC endpoint for the tenant:

1. In the **Content Editor**, go to `<tenant name>/Endpoints/Providers/SFMC/SFMC Endpoint`.

2. In the **Connection String Name** field, enter the name of the SFMC connection string you created, for example, *sfmc*.
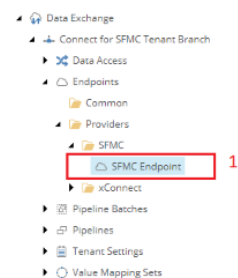
3. Save the item.

4. Verify that the connection was successfully established: in the menu ribbon, on the **Data Exchange** tab, click **Run Troubleshooter**.

> **NOTE**
> If you do not see the **Data Exchange** tab, right click on the top menu and click **Data Exchange**.

3.3. Test the xConnect endpoint

To test the xConnect endpoint for the tenant:

1. Go to `<tenant name>/Endpoints/Providers/xConnect/xConnect Client Endpoint.` Verify that the connection string names are set correctly:

2. Verify that the connection was successfully established: in the ribbon menu, on the **Data Exchange** tab, click **Run Troubleshooter**.
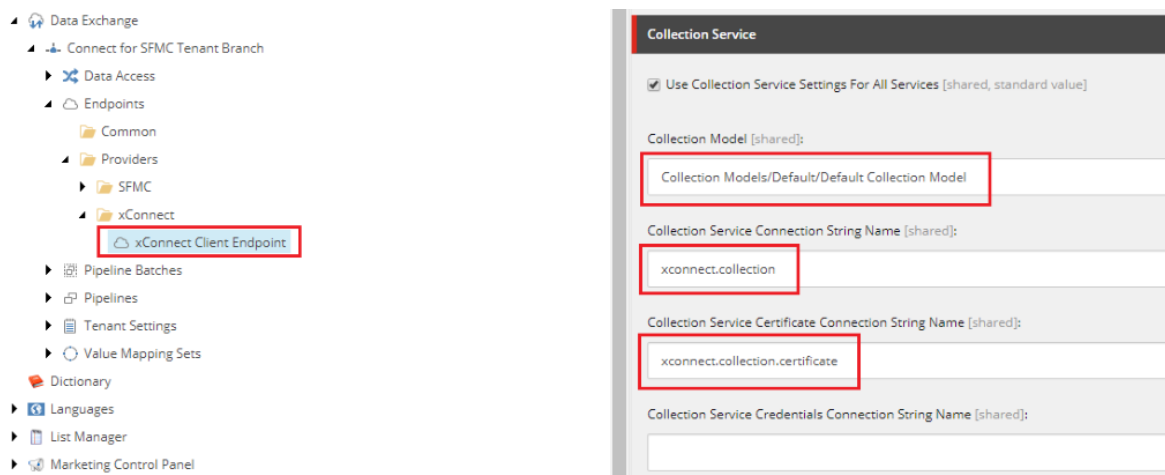
3.4. Run the pipeline batch that creates the required data folders

By default, the tenant you have created has four predefined pipeline batches. The first pipeline batch is called `Setup - SFMC Account Infrastructure`. Before you use any other pipeline batches, you must run this pipeline batch once, in order to create the required folder infrastructure in your SFMC account.

To run the pipeline batch:

1. Go to `<Tenant name>/Pipeline Batches`.

2. Select the pipeline batch that you need to run.

3. On the **Data Exchange** tab, click **Run Pipeline Batch**.

> **NOTE**
> The folder infrastructure is defined in `<tenant name>/Tenant Settings/`
> `Providers/SFMC/Object Definitions/Data Folders`.

3.5. Link Sitecore data to the Salesforce data extensions

To use the Sitecore data in Salesforce Marketing Cloud (SFMC) for marketing purposes, you need to link the Sitecore data to the data extensions in Salesforce.

> **IMPORTANT**
>
> Before you do this, you must run the pipeline batches `Setup - SFMC Account Infrastructure`, `Push xConnect Contacts`, and `Push Marketing Lists` once. These pipeline batches install the necessary folders in SFMC and push contact and marketing data from Sitecore to SFMC.

To link the contacts, you must create a primary/foreign key relationship in SFMC by doing the following:

- Create a link for the contact data.

- Extend the contact data to the membership data.

3.5.1. Create a link for the contact data

To create a link for the contact data from xDB in SFMC:

1. Open your SFMC site.

2. In the top navigation bar, click **Audience Builder**, then click **Contact Builder**.
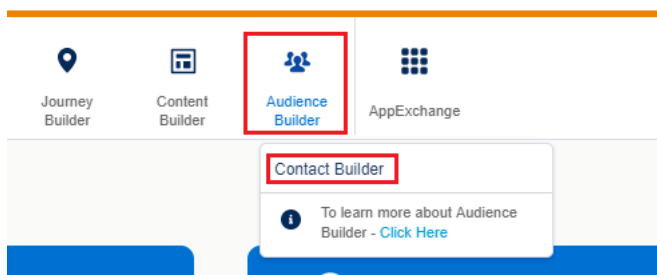
3. In the **Data Designer** tab, create an attribute group for Sitecore. Give it a name, for example, *Sitecore*.

> **NOTE**
>
> You should only have one *Sitecore* attribute group. If you have previously created a *Sitecore* attribute group, use that group instead of creating a new group.

4. Click the *Sitecore* attribute group. Click **Link Data Extension**.

5. In the new window, go to `/Data Extensions/Sitecore` and click the *xDB Contact* data extension.
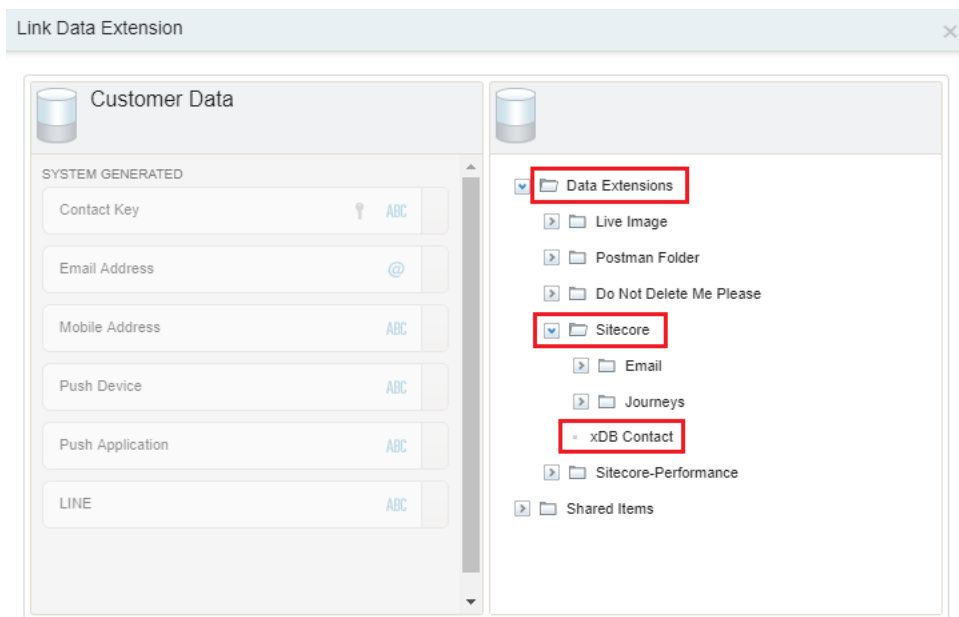
6. Create a link from *Customer Data* to *xDB Contact*. For example, you can link the `Contact Key` attribute from *Customer Data* to the `contactKey` attribute from *xDB Contact*. Make the link a one-to-one link by clicking **One** in the drop-down box on the right side.
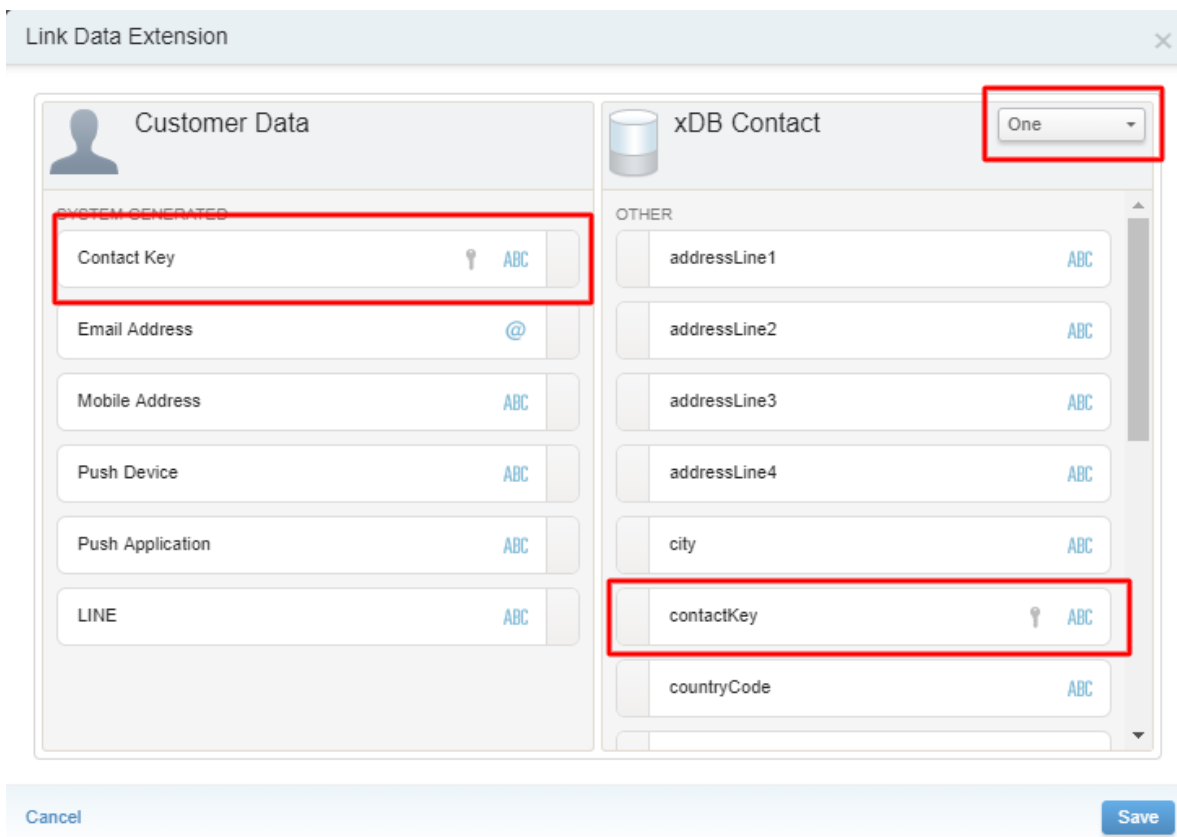
7. Click **Save**.

3.5.2. Extend the contact data to the membership data

To extend the contact data from Sitecore to the marketing lists:

1. In SFMC, open the Sitecore attribute group.

2. On the **Contacts** link definition, on the **xDB Contact** table, click the **Extend** icon to add an extension.
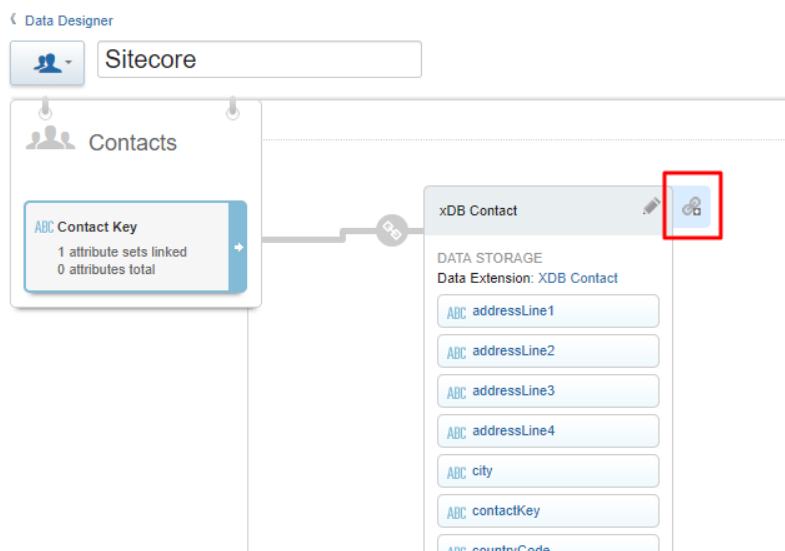
3. In the **Link Data Extension** dialogue, on the right side, go to `/Data Extensions/Sitecore/ Journeys` and select the *Audience Membership* extension.

4. Create a link from *xDB Contact* to *Audience Membership*. For example, you can link the `contactkey` attribute from *xDB Contact* to the `Contact Key` attribute from *Audience Membership*. Make the link a one-to-many link by clicking **Many** in the drop-down box on the right side. Click **Save**.
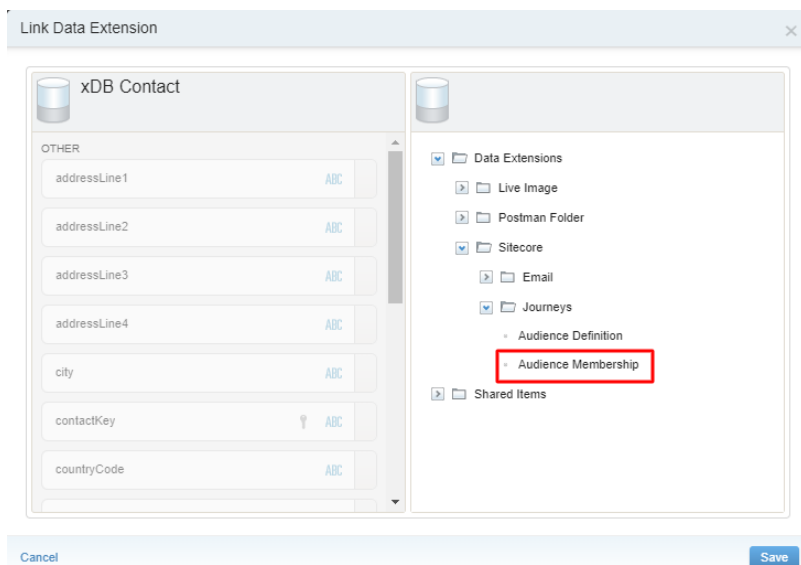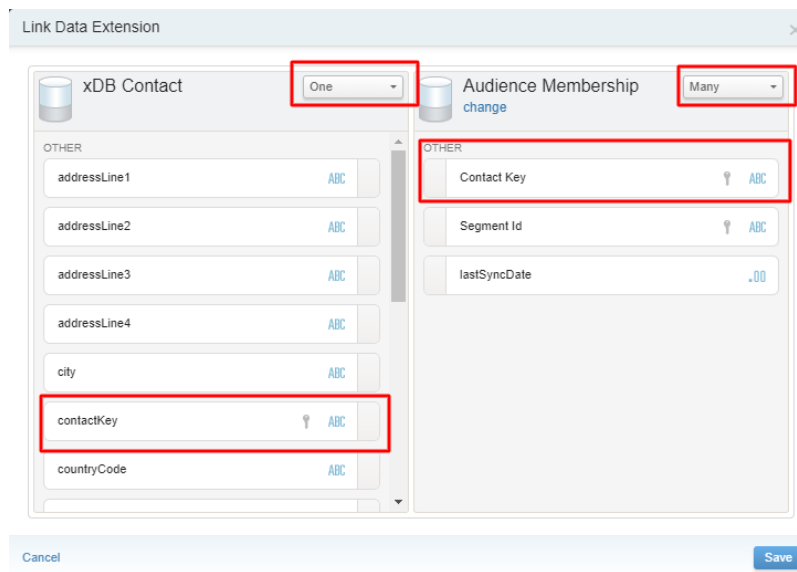
5. On the Audience membership table, click the **Extend** icon to add an extension.

6. In the **Link Data Extension** dialogue, on the right side, go to `/Data Extensions/Sitecore/ Journeys` and select the *Audience Definition* extension.

7. Create a link from *Audience Membership* to *Audience Definition*. For example, you can link the `Segment Id` attribute from *Audience Membership* to the `Segment Id` attribute from *Audience Definition*. Make the link a many-to-many link by clicking **Many** in the drop-down boxes on both sides. Click **Save**.
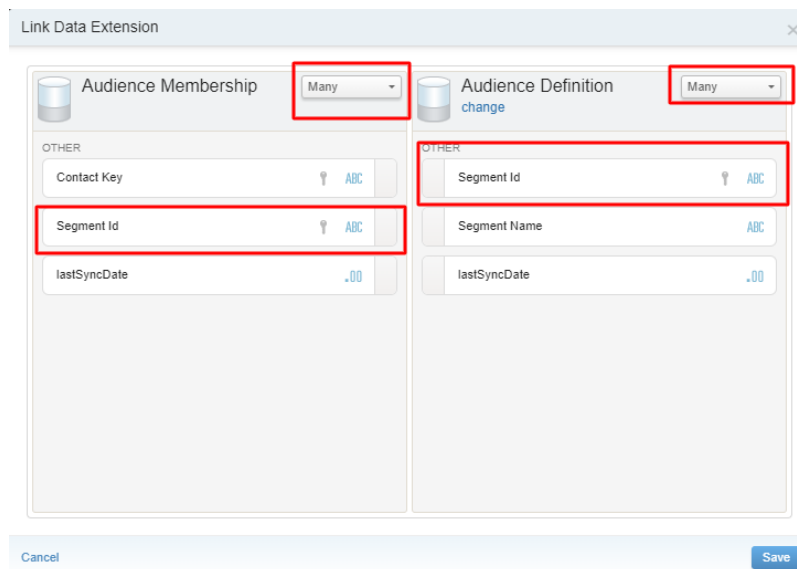
4. Pipeline batches

By default, the *Connect for SFMC* tenant includes four pipeline batches:

- `Setup – SFMC Account Infrastructure`

- `Push xConnect Contacts`

- `Push Marketing Lists`

- `Push xConnect Contacts And Marketing Lists`

4.1. Setup – SFMC Account Infrastructure

This pipeline batch creates the infrastructure needed on your Salesforce Marketing Cloud (SFMC) account. You must run this pipeline batch once before you can use the other pipeline batches. The pipeline batch uses the data folder definitions in `<tenant name>/Tenant Settings/Providers/ SFMC/Object Definitions/Data Folders`.

> **NOTE**
> The `Setup` pipeline batch only creates the folders in SFMC. After the folders have been created, the pipeline batch does not update or change them, even if the data folder definitions change.

4.2. Push xConnect Contacts

This pipeline batch pushes xConnect contacts to SFMC, where they are placed in `/Data Extension/ Sitecore`, in the data extension *xDB Contact*. By default, it includes these facets from the contact:

- Personal info

- Preferred email address

- Preferred phone number

- Preferred address

- Engagement measures

4.3. Push Marketing Lists

This pipeline batch pushes definitions and memberships for contact lists and segmented lists to SFMC. SFMC uses the data in two different applications, and each list is therefore pushed to two different targets. The following table shows where the data is stored.

SFMC Application	Pushed data	Data extension in SFMC
Journey Builder	List definitions	*Audience Definitions*, in `/Data Extensions/Sitecore/Journeys`
Journey Builder	List memberships	*Audience Memberships*, in `/Data Extensions/Sitecore/Journeys`
Email Studio	List definitions	A separate data extension for each list, in `/Data Extensions/Sitecore/Email`
Email Studio	List memberships	Contacts are stored in a flat format, in `/Data Extensions/Sitecore/xDB Contacts`

4.4. Push xConnect Contacts And Marketing Lists

This pipeline batch runs the `Push xConnect Contacts` and `Push Marketing Lists` pipeline batches in sequence.

4.5. Run a pipeline batch

To transfer data to Salesforce Marketing Cloud (SFMC), you must run the relevant pipeline batch. To run a pipeline batch:

1. Go to `<tenant name>/Pipeline Batches`. Select the pipeline batch you want to run.

2. In the menu ribbon, on the **Data Exchange** tab, click **Run Pipeline Batch**.

While the pipeline batch is running, you can click **Show Pipeline Batch Status Properties** to see the status of the pipeline batch. You can click **Stop Pipeline Batch** to stop the pipeline batch. If any data has been transferred before you stop the pipeline batch, it remains in SFMC. When you start the pipeline batch again, it updates the existing contacts and adds the new contacts.

5. Salesforce Marketing Cloud data extensions

Salesforce Marketing Cloud (SFMC) uses data extensions to store information. Sitecore stores the definitions for the data extensions in the *Connect for SFMC* tenant, in `Tenant Settings/Providers/ SFMC/Object Definitions`.

By default, there are four data extension definitions in the folder:

- *Data Extension Templates/Email Studio Template*
  This represents the data extensions that the `Push Marketing Lists` pipeline batch creates in the `/Data Extension/Sitecore/Emails` folder in SFMC.

- *Data Extensions/Audience Definition*
  This represents the data extension *Audience Definition* in the `/Data Extensions/Sitecore/ Journeys` folder in SFMC.

- *Data Extensions/Audience Membership*
  This represents the data extension *Audience Membership* in the `/Data Extensions/Sitecore/ Journeys` folder in SFMC.

- *Data Extensions/Sitecore/xDB Contact*
  This represents the data extension *xDB Contacts* in the `/Data Extensions/Sitecore` folder in SFMC.

You can customize the data extensions by adding new fields or by creating new data folders.

5.1. Walkthrough: Adding a new field to a data extension

The default data extension definitions include a number of predefined fields. If you want to add other fields to a Salesforce Marketing Cloud (SFMC) data extension, you can change the data extension definition in the tenant.

This walkthrough uses the example of adding a text field to the *xDB Contact* data extension, and describes how to:

- Add a field to the tenant

- Create a source value accessor

- Create a target value accessor

- Create a mapping between the value accessors

- Update the data extension

5.1.1. Add a field to the tenant

This example assumes you want to add a new attribute to the contact record. To do this, you must first define the new attribute by adding a new field to your tenant.

To add a field to your tenant:

1. In Sitecore, in the Content Editor, find your tenant and go to `Tenant Settings/Providers/ SFMC/Object Definitions/Data Extensions/xDB Contact`.

2. In the **Insert** menu, click **Text**. Enter a name for the field.

3. In the **Required Settings** section, fill in the following properties:

   • *Length* – the maximum length of the data in the field.

   • *Name* – a unique attribute key for accessing the attribute.

   • *Type* – the type of data the field contains.

4. In the **Optional Settings** section, fill in the following properties or leave them blank:

   • *Default Value* – enter a default value for the attribute.

   • *Primary Key* – make the attribute the primary key.

   • *Required* – make the attribute a required field.
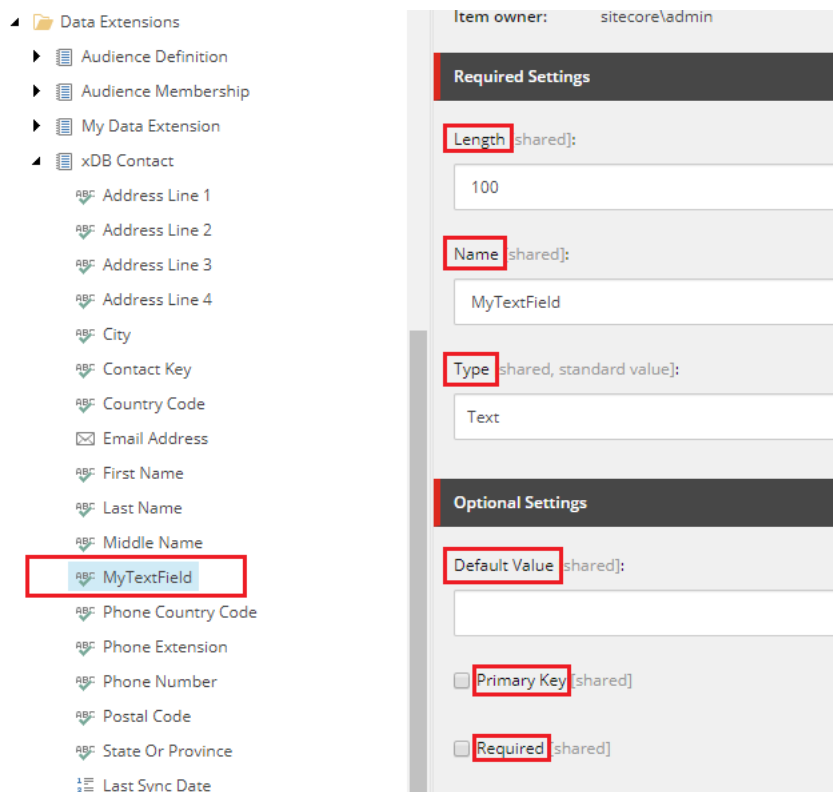
5. Click **Save**.

5.1.2. Create a source value accessor

You must add a value accessor that can read the field value in xConnect.

To add a source value accessor:

1. Go to `Data Access/Value Accessor Sets/Providers/xConnect/Contact`.

2. Right-click **Contact** and in the **Insert** menu, click **xConnect Entity Facet Property Value Accessor**.

3. Enter the item name and then click **OK**.

4. In the **Settings** section, in the **Facet Property** field, click the field that you want the accessor to connect to.

5. Click **Save**.

5.1.3. Create a target value accessor

You must add a value accessor that can update the field value in SFMC.

To add a target value accessor:
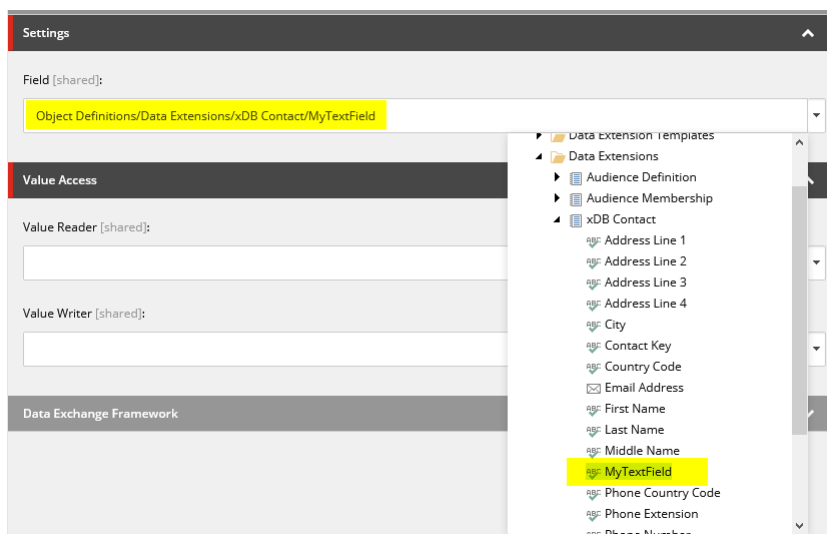
1. In your tenant, go to `Data Access/Value Accessor Sets/Providers/SFMC/Sitecore - xDB Contact`.

2. Open the **Insert** menu. Click the *Flat Object - Data Extension Template Field Value Accessor* accessor.
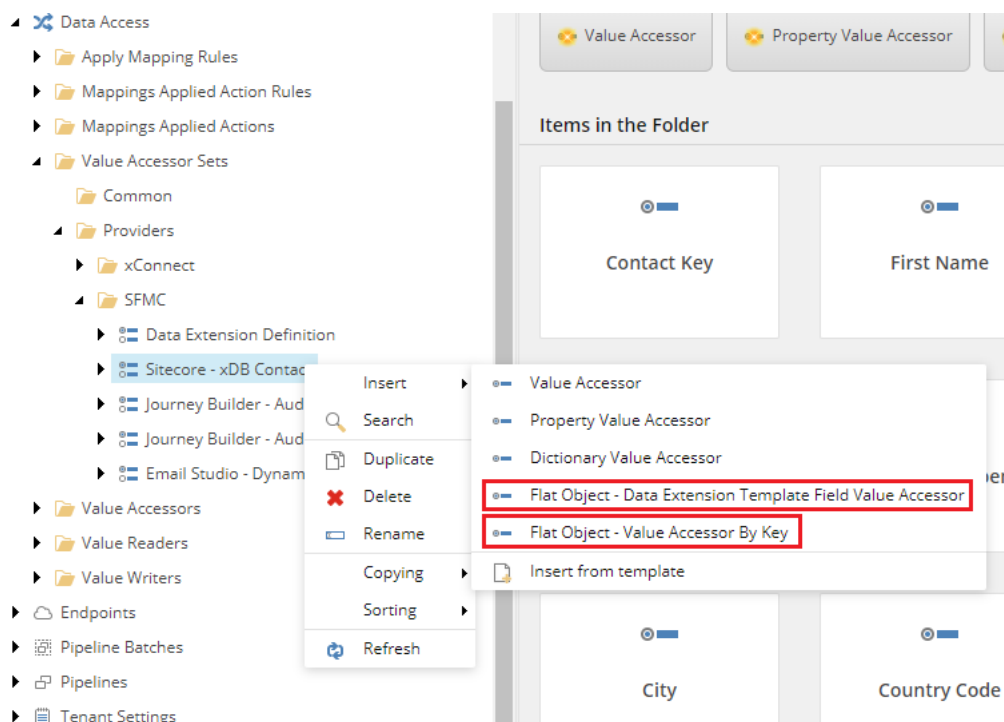
> **NOTE**
>
> You can also click the *Flat Object - Value Accessor By Key* accessor, but you must then manually maintain the field name, if it is changed in the data definition.

3. In the **Settings** section, in the **Field** field, click the field the accessor connects to.

4. Click **Save**.

5.1.4. Create a mapping between the value accessors

You must create a mapping between the source value accessor and the target value accessor.

To create a mapping:

1. In your tenant, go to `Value Mapping Sets/Sitecore - xConnect Contact To SFMC/ xConnect Contact – To Flat Object`.

2. In the **Insert** menu, click **Value Mapping**. Enter a name for the mapping.

3. In the **Source Accessor** field, select the value accessor that reads the value from xConnect.

4. In the **Target Accessor** field, select the value accessor that writes the value to SFMC.

5. Click **Save**.

5.1.5. Update the data extension

Finally, you must add the new field to the data extension in SFMC.

To add the field to the data extension, you can do one of the following two things:

- Create the field manually in the data extension in SFMC.

- Delete the data extension in SFMC and run the `Setup – SFMC Account Infrastructure` pipeline batch.
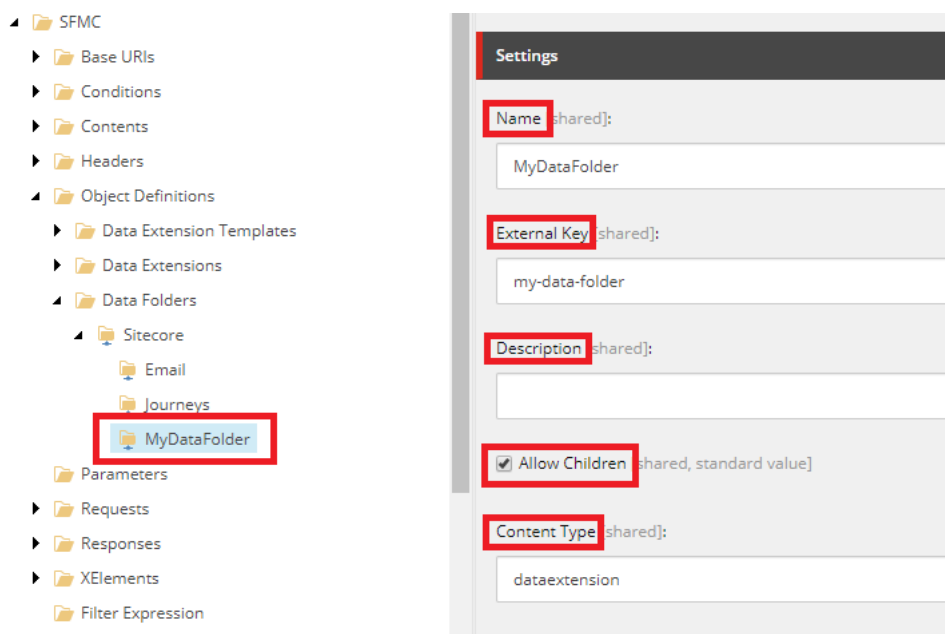
> **IMPORTANT**
>
> If you choose to delete the data extension, you must link the Sitecore data to the SFMC data extension again, as described in Link Sitecore data to the Salesforce data extensions.

5.2. Create a new data folder

By default, the `Setup – SFMC Account Infrastructure` pipeline batch creates the folders that are needed to send data to SFMC. If you want to add additional data folder in Salesforce Marketing Cloud - Behavioral Data Exchange (SFMC), you must create a definition for the folder and push it to SFMC.

1. In Sitecore, in the content editor, in the folder for the tenant, go to `Tenant Settings/ Providers/SFMC/Object Definitions/Data Folders/Sitecore`.

2. Using the Insert menu, select **Data Folder**. Enter a name for the data folder.

3. In the created item, in the **Settings** section, fill in these mandatory fields:

   - **Name** – the data folder name. This can be the same as the item name.

   - **External Key** – a unique key for accessing the data folder.

   - **Description** – a short description of the data folder.

   - **Allow Children** – select this to allow your data folder to have children.

   - **Content Type** – the type of content contained in the data folder.

4. Run the pipeline batch `Setup – SFMC Account Infrastructure` to push the changes to your SFMC account.

> **IMPORTANT**
> `Setup – SFMC Account Infrastructure` does not change existing folders in SFMC.

6. Tune the performance of the pipeline batches

You can optimize performance for your particular setup by configuring thread count and batch size for many of the pipelines that are used by the `Push xConnect Contacts` and `Push Marketing Lists` pipeline batches.

Parameter	Notes	Default setting
Thread count	The maximum number of push requests running at the same time.	8
Batch size	The number of contacts processed in each push request.	500

The optimal settings for these parameters depend on your particular setup.

The pipelines for the `Push xConnect Contacts` pipeline batch are located in your tenant, in `Pipelines/Push xConnect Contacts`.

The pipelines for the `Push Marketing Lists` pipeline batch are located in your tenant, in `Pipelines/Push Marketing Lists`, `Pipelines/Email Studio`, and `Pipelines/Journey Builder`.

6.1. Configure the batch size for a pipeline

You can configure the batch size for:

- Any pipeline whose name starts with *Add To Queue*, such as `Add To Queue - Audience Definitions For Creation`.

- The `Pipelines/Push xConnect Contacts/Read xConnect Contacts/ Read xConnect Contact` pipeline.

- The `Pipelines/Push Marketing Lists/Read Single Marketing List Memberships/ Read List Memberships` pipeline.

For example, to configure the batch size for the pipeline that reads xConnect Contacts:

1. In Sitecore, in the Content Editor, go to `/sitecore/system/Data Exchange/<tenant name>/Pipelines/Push xConnect Contacts/Read xConnect Contacts/ Read xConnect Contacts`.

2. In the **Settings** section, in the **Contact Batch Size** field, enter the number of contacts to process per batch.
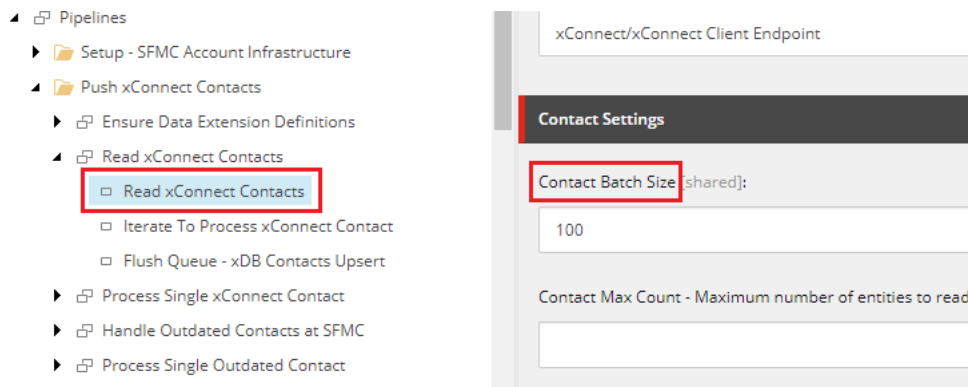
6.2. Configure the thread count for a pipeline

You can configure the thread count for any pipeline whose name starts with *Iterate*, such as `Iterate To Process xConnect Contact`.

For example, to configure the thread count for the pipeline that processes xConnect contacts after they have been read:

1. In Sitecore, in the Content Editor, go to `/sitecore/system/Data Exchange/<tenant name>/Pipelines/Push xConnect Contacts/Read xConnect Contacts/Iterate To Process xConnect Contact`.

2. In the **Contact Settings** section, in the **Max Thread Count** field, enter the number of threads.