Informatica

Informatica® PowerExchange for Salesforce Marketing Cloud

10.5.6

User Guide

Informatica PowerExchange for Salesforce Marketing Cloud User Guide
10.5.6
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Preface

Use the *Informatica® PowerExchange® for Salesforce Marketing Cloud User Guide* to learn how to read from or write to Salesforce Marketing Cloud by using the Developer tool. Learn to create a Salesforce Marketing Cloud connection, develop and run mappings in the native environment.

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CHAPTER 1

Introduction to PowerExchange for Salesforce Marketing Cloud

This chapter includes the following topics:

PowerExchange for Salesforce Marketing Cloud Overview

PowerExchange for Salesforce Marketing Cloud provides connectivity between Informatica Developer and Salesforce Marketing Cloud. You can use PowerExchange for Salesforce Marketing Cloud to read contact data from and write contact data to Salesforce Marketing Cloud. You can use Salesforce Marketing Cloud data extensions as sources or targets in a mapping and run the mapping to read or write data.

PowerExchange for Salesforce Marketing Cloud is listed under the Cloud connection category in the Developer tool and the Administrator tool.

Introduction to Salesforce Marketing Cloud

Salesforce Marketing Cloud is a Salesforce platform that you can use to manage marketing. Salesforce Marketing Cloud uses the email, mobile, and social media channels to manage marketing. You can use the Contact Builder application in Salesforce Marketing Cloud to access and manage contact data of customers. The Contact Builder application provides you with a single point view of how customer data is organized and the relationships between data. Related data are grouped as attribute groups.

Attribute groups enable you to organize your data in Contact Builder. Each attribute group includes a data model consisting of data extensions linked to either the contact record or other data extensions.

The following are the categories of the attribute groups:

- System-defined attribute groups
- User-defined attribute groups

System-Defined Attribute Groups

System-defined attributes groups are the default attribute groups in Salesforce Marketing Cloud.

The following attributes groups are examples of system-defined attribute groups:

System Data

Contains contact ID, contact key, and email details.

MobileConnect

Contains mobile demographic details, includes first name, last name, and subscription information.

Mobile Push

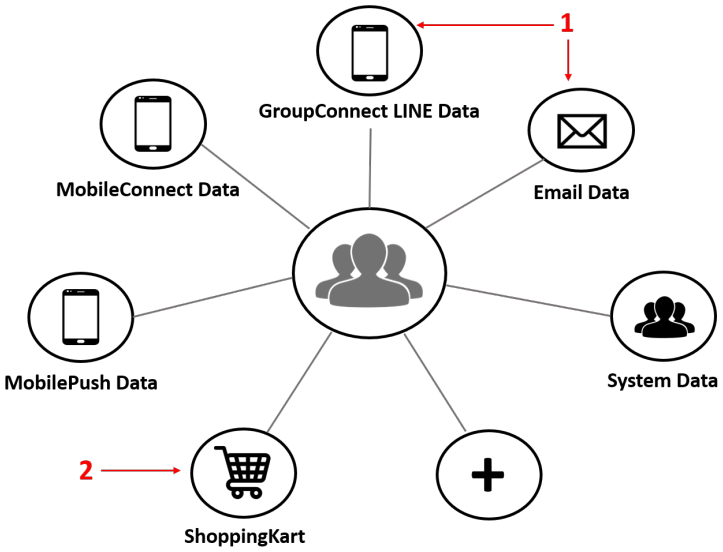
Contains customer mobile device details to which you need to send the data.

For more information about Contact Builder application, see Salesforce Marketing Cloud documentation.

User-Defined Attribute Groups

You can use Salesforce Marketing Cloud to create user-defined attribute groups. You can create customized data extensions by using user-defined attribute groups. A data extension is a data structure in Salesforce Marketing Cloud, which is similar to a relational database. You can use data extensions to store customer contact data that system-defined attribute groups do not represent.

The following image shows the system-defined attribute group and user-defined attribute group:



1. System defined attribute group
2. User-defined attribute group

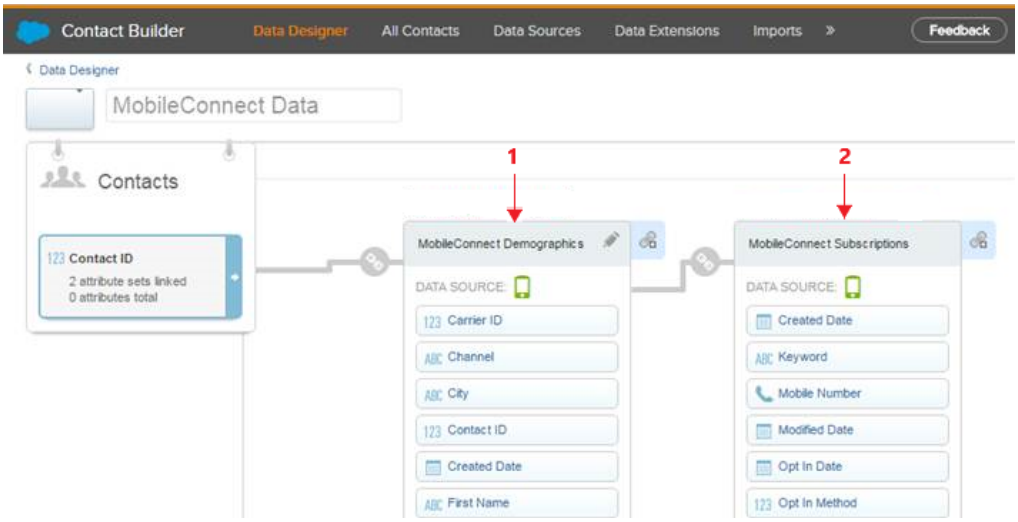
Data Extensions

Data extensions represent tables containing attributes and related values pertaining to Contact Builder.

PowerExchange for Salesforce Marketing Cloud supports the following types of data extensions:

1. System Contact Linked Data Extension: The data extension is directly or indirectly linked to the System.Contacts data extensions.
   a. Child System Contact Linked Data Extension: The data extension is directly linked to the System.Contacts data extension.
   b. Grandchild System Contact Linked Data Extension: The data extension is indirectly linked to the System.Contacts data extension.

   In the following image, **MobileConnect Demographics** is the Child System Contact Linked Data Extension and **MobileConnect Subscriptions** is the Grandchild System Contact Linked Data Extension:

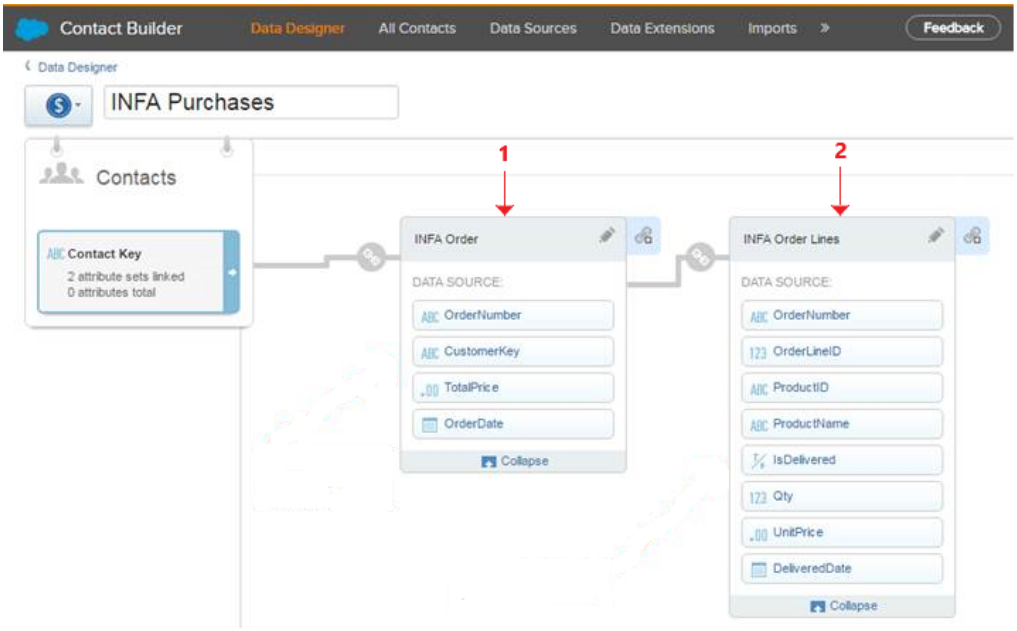


   1. Child System Contact Linked Data Extension

   2. Grandchild System Contact Linked Data Extension

2. Custom Contact Linked Data Extension: The data extension is directly or indirectly linked to the System.Contacts data extensions.
   a. Child Custom Contact Linked Data Extension: The data extension is directly linked to the System.Contacts data extension.
   b. Grandchild Custom Contact Linked Data Extension: The data extension is indirectly linked to the System.Contacts data extension.

   In the following image, **INFA Order** is the Child Custom Contact Linked Data Extension and **INFA Order Lines** is the Grandchild Custom Contact Linked Data Extension:



1. Child Custom Contact Linked Data Extension
2. Grandchild Custom Contact Linked Data Extension

3. Non-Contact Linked Data Extension: The data extension is not linked to the System.Contacts data extensions.

CHAPTER 2

PowerExchange for Salesforce Marketing Cloud Configuration

This chapter includes the following topics:

PowerExchange for Salesforce Marketing Cloud Configuration Overview

PowerExchange for Salesforce Marketing Cloud installs with the Informatica Services. You can enable PowerExchange for Salesforce Marketing Cloud with a license key.

To configure PowerExchange for Salesforce Marketing Cloud, perform the following steps:

1. Complete the prerequisites.
2. Retrieve the client ID and client secret.

This section also explains how to assign administrator role to users and disable password expiry for Salesforce Marketing Cloud account permanently.

Prerequisites

Before you can use PowerExchange for Salesforce Marketing Cloud, perform the following tasks:

- Install or upgrade the Informatica services.
- Ensure that PowerExchange for Salesforce Marketing Cloud license is activated.
- Verify that the domain has a Data Integration Service and a Model Repository Service.
- Ensure that you have a valid Salesforce Marketing Cloud account and credentials to connect to Salesforce Marketing Cloud.

- Get the client ID and the client secret from Salesforce Marketing Cloud. For more information, see "Retrieving Client ID and Client Secret" on page 12
- Create an API user and assign Administrator role to the user which is the minimum permission required to access the APIs. For more information, see "Managing Roles for User" on page 13
- Disable the Salesforce Marketing Cloud account password expiry date. For more information, see "Preventing Password Expiry of the Salesforce Marketing Cloud Account" on page 13

For more information about the Salesforce Marketing Cloud APIs, see *Salesforce documentation*.

Retrieving Client ID and Client Secret

Perform the following steps to retrieve the Client ID and Client Secret for a new package:

1. Log in to Salesforce Marketing Cloud.
2. Go to **Setup** > **Apps** > **Installed Packages**.
3. Click **New** to create a new package.
4. In the **New Package Details** window, enter the name and description for the package.

   To use OAuth 2.0, select **Create with enhanced functionality (recommended)**.
5. Click **Add Component**.
6. Select **API Integration** as the component type.
7. Click **Next**.
8. Select **Server-to-Server** as the integration type.
9. Click **Next**.
10. Select the following permissions for the Server-to-Server properties:
    - List and Subscribers - Read, Write
    - Marketing Cloud Connect - Read, Write
    - Data Extensions - Read, Write

    These are the minimum permissions required to use Salesforce Marketing Cloud Connector.
11. Click **Save**.

    The Components section displays the Client ID and Client Secret for the package.

Perform the following steps to retrieve the Client ID and Client Secret for an existing package:

1. Go to **Setup** > **Apps** > **Installed Packages**.
   The **Installed Packages** page lists all the packages installed in the Salesforce Marketing Cloud account.
2. Select a package and go to the **Components** section.
   - To add a new component, click **Add Component**.
   - To edit existing component, click **Edit**.

   The Components section displays the Client ID and Client Secret for the package.
3. Click **Save**.

Note: Informatica recommends that you upgrade to OAuth 2.0. If an existing package uses OAuth 1.0, you cannot edit the package to use OAuth 2.0. You must create a new package to use OAuth 2.0.

For information about configuring installed packages and API integration, see *Salesforce documentation*.

Managing Roles for User

Perform the following steps to assign Administrator role to users in the Salesforce Marketing Cloud account:

1. Log in to Salesforce Marketing Cloud.
2. Go to **Setup** > **Users** > **Users**

   The **Users** page lists all the users available in the Salesforce Marketing Cloud account.
3. Select the user to whom you want to assign Administrator role.
4. Click **Manage Roles** tab.
5. Click on **Edit Roles**.
6. Select **Marketing Cloud Administrator** and **Grant the user access to the web services** to assign Administrator role to the user that you selected.

Preventing Password Expiry of the Salesforce Marketing Cloud Account

Perform the following steps to disable the Salesforce Marketing Cloud account password expiry date permanently.

1. Log in to Salesforce Marketing Cloud.
2. Go to **Setup** > **Users** > **Users**.

   The **Users** page lists all the users available in the Salesforce Marketing Cloud account.
3. Select the user for whom you want to disable password expiry date.
4. Click **Edit**.
5. Specify **Yes** in the **API User** property.
6. Click **Save**.

CHAPTER 3

Salesforce Marketing Cloud Connections

This chapter includes the following topics:

Salesforce Marketing Cloud Connections Overview

Salesforce Marketing Cloud connection enables you to read data from or write data to Salesforce Marketing Cloud .

You can use Salesforce Marketing Cloud connections to create data objects and run mappings. The Developer tool uses the connection when you create a data object. The Data Integration Service uses the connection when you run mappings.

You can create an Salesforce Marketing Cloud connection from the Developer tool or the Administrator tool. The Developer tool stores connections in the domain configuration repository. Create and manage connections in the connection preferences.

Salesforce Marketing Cloud Connector supports only unauthenticated proxy.

Salesforce Marketing Cloud Connection Properties

Use a Salesforce Marketing Cloud connection to connect to a Salesforce Marketing Cloud object. You can create and manage a Salesforce Marketing Cloud connection in the Administrator tool or the Developer tool.

Note: The order of the connection properties might vary depending on the tool where you view them.

The following table describes the Salesforce Marketing Cloud connection properties:

Connection property	Description
Name	Name of the Salesforce Marketing Cloud connection.
ID	The Data Integration Service uses the ID to identify the connection.
Description	Optional. The description of the connection.
Location	Informatica domain where you want to create the connection.
Type	Connection type. Select Salesforce Marketing Cloud.

Salesforce Marketing Cloud Url	The URL that the Data Integration Service uses to connect to the Salesforce Marketing Cloud WSDL.
	The following URL is an example for OAuth 1.0 URL:
	`https://webservice.s7.exacttarget.com/etframework.wsdl`
	The following URL is an example for OAuth 2.0 URL:
	`https://<SUBDOMAIN>.soap.marketingcloudapis.com/etframework.wsdl`
	Important: Salesforce is going to deprecate the OAuth 1.0 APIs by September 30th , 2022. Informatica recommends that you upgrade to OAuth 2.0 for new and existing packages.

Username	User name of the Salesforce Marketing Cloud account.
Password	Password for the Salesforce Marketing Cloud account.
ClientId	The client ID of Salesforce Marketing Cloud required to generate a valid access token.
ClientSecret	The client secret of Salesforce Marketing Cloud required to generate a valid access token.
Enable Logging	When you enable logging you can see the session log for the tasks.
UTC Offset	The Secure Agent uses the UTC offset connection property to read data from and write data to Salesforce Marketing Cloud in UTC offset time zone.
Batch Size	Number of rows that the Secure Agent writes in a batch to the target. When you insert or update data and specify the contact key, the data associated with the specified contact ID is inserted or updated in a batch to Salesforce Marketing Cloud. When you upsert data to Salesforce Marketing Cloud, do not specify the contact key.
Enable Multiple BU	Select this option if there are multiple business units in your Salesforce Marketing Cloud account. You can use the Salesforce Marketing Cloud connection to access data across all business units.

Creating a Salesforce Marketing Cloud Connection in the Administrator Tool

Create a connection before you import Salesforce Marketing Cloud data objects, preview data, or run mappings. When you create a Salesforce Marketing Cloud connection, you enter information such as a connection ID and the URL of the Salesforce Marketing Cloud service you want to access.

1. In the Administrator tool, click the **Domain** tab.
2. Click the **Connections** view.
3. In the Navigator, select the domain.
4. In the Navigator, click **Actions** > **New** > **Connection**.

   The **New Connection** dialog box appears.
5. In the **New Connection** dialog box, select **Cloud** > **Salesforce Marketing Cloud**, and then click **OK**.

   The **New Connection** wizard appears.
6. Enter a connection name.
7. Enter an ID for the connection.
8. Optionally, enter a connection description.
9. Enter the connection properties.
10. Click **Test Connection** to verify that you can connect to Salesforce Marketing Cloud.
11. Click **Finish**.

Creating a Salesforce Marketing Cloud Connection in the Developer Tool

Use the Salesforce Marketing Cloud connection to connect to Salesforce Marketing Cloud from the Developer tool to import Salesforce Marketing Cloud data objects, preview data, or run mappings.

Perform the following steps to create a Salesforce Marketing Cloud connection in the Developer tool:

1. Click **Window** > **Preferences**.
2. Select **Informatica** > **Connections**.
3. Expand the domain in the available connections.
4. Select **Cloud** > **Salesforce Marketing Cloud** and click **Add**.
5. Enter a connection name and an optional description.
6. Select **Salesforce Marketing Cloud** as the connection type.
7. Click **Next**.
8. Configure the connection properties.
9. Click **Test Connection** to verify that you can connect to Salesforce Marketing Cloud.
10. Click **Finish**.

CHAPTER 4

Salesforce Marketing Cloud Data Objects

This chapter includes the following topics:

Salesforce Marketing Cloud Data Object Overview

A Salesforce Marketing Cloud data object is a physical data object that uses Salesforce Marketing Cloud as a source or target. A Salesforce Marketing Cloud data object is a representation of data that is based on a Salesforce Marketing Cloud object.

You can configure the data object read and write operation properties that determine how data can be read from Salesforce Marketing Cloud sources and loaded to Salesforce Marketing Cloud targets. You first create a connection to create a Salesforce Marketing Cloud data object. When you create a data object, the read and write operations are created by default.

Salesforce Marketing Cloud Data Object Properties

Specify the data object properties when you create the data object.

The following table describes the properties that you configure for the Salesforce Marketing Cloud data objects:

Property	Description
Name	Name of the Salesforce Marketing Cloud Data Object.
Location	The project or folder in the Model Repository Service where you want to store the Salesforce Marketing Cloud data object.
Connection	Name of the Salesforce Marketing Cloud connection.

Salesforce Marketing Cloud Data Object Read Operation

The Data Integration Service reads data from a Salesforce Marketing Cloud object based on the data object read operation. The Developer tool displays the data object read operation properties of the Salesforce Marketing Cloud data object in the Data Object Operation view.

You can view or configure the data object read operation from the source and output properties.

Source Properties

Represents data that the Data Integration Service reads from the Salesforce Marketing Cloud object. Select the source properties to view data such as the name and description of the Salesforce Marketing Cloud object and the column properties.

Output Properties

Represents data that the Data Integration Service passes into the mapping pipeline. Select the output properties to edit the port properties of the data object read operation.

Source Properties of the Data Object Read Operation

The source properties are populated based on the Salesforce Marketing Cloud object that you added when you created a data object. The source properties of the data object read operation include general and column properties that apply to the Salesforce Marketing Cloud object.

You can view the source properties of the data object read operation from the General, Column, and Advanced tabs.

General Properties

The general properties display the name and description of the data object read operation.

Column Properties

The column properties display the data types, precision, and scale of the source property in the data object read operation.

The following table describes the source column properties of the data object read operation:

Property	Description
Name	Name of the column.
Type	Native data type of the column.
Precision	Maximum number of significant digits for numeric data types, or maximum number of characters for string data types. For numeric data types, precision includes scale.
Scale	Maximum number of digits after the decimal point for numeric values.
Required Level	Sets the property for the data entry requirement level that is enforced for the attribute.
FieldType	The type of data the field holds. For example, text, number, date, email address.
FieldNativeOrder	The order in which the fields are stored in Salesforce Marketing Cloud.
Key	The unique identifier for records in an object.
Filterable	Indicates whether the field can be used in the FROM or WHERE clause of an SOQL query.
Label	Field label in Salesforce Marketing Cloud.
Access Type	Indicates whether the field has read and write permissions.
Description	Description of the column.

Output Properties of the Data Object Read Operation

The output properties represent data that the Data Integration Service passes into the mapping pipeline. Select the output properties to edit the port properties of the data object read operation.

The output properties of the data object read operation include general properties that apply to the data object operation. The output properties also include port, source, query, and advanced properties that apply to the Salesforce Marketing Cloud object.

General Properties

The general properties display the name and description of the data object read operation.

Ports Properties

The output ports properties display the data types, precision, and scale of the data object read operation.

The following table describes the output ports properties that you configure in the data object read operation:

Property	Description
Name	Name of the port.
Type	Data type of the port.
Precision	Maximum number of significant digits for numeric data types, or maximum number of characters for string data types. For numeric data types, precision includes scale.

Property	Description
Scale	Maximum number of digits after the decimal point for numeric values.
Description	Description of the port.

Sources Properties

The sources properties list the Salesforce objects in the data object read operation.

Query Properties

Use the **Query tab** to specify a platform filter expression.

Platform expression uses Informatica transformation language. Use the platform filter expression to select specific records from Salesforce resources based on the filter condition that you specify.

The following table describes the properties that you can specify when you use the platform expression filter:

Property	Description
Left Field	Column on which you want to apply the filter condition.
Operator	Simple operators that you can use to filter records. You can select one of the following operators: =, !=, <, <=, >, >=
Right Field	Value based on which you want to filter the records. You can also parameterize the value.

Note: You cannot use platform filter expression for case-sensitive filtering because Salesforce Marketing Cloud does not support case-sensitive filtering.

Advanced Properties

Use the advanced properties to specify the data object read operation properties to read data from Salesforce Marketing Cloud objects.

The following table describes the advanced properties that you configure in the data object read operation:

Property	Description
Batch Size	Number of rows that the Data Integration Service writes in a batch to the Salesforce Marketing Cloud target.

Salesforce Marketing Cloud Data Object Write Operation

The Data Integration Service writes data to a Salesforce Marketing Cloud object based on the data object write operation. The Developer tool displays the data object write operation properties for the Salesforce Marketing Cloud data object in the **Data Object Operation** section.

You can view the data object write operation from the Input and Target properties.

Input properties

Represent data that the Data Integration Service reads from an enterprise resource planning (ERP) system or a relational data object. Select the input properties to edit the port properties and specify the advanced properties of the data object write operation.

Target Properties

Represent data that the Data Integration Service writes to Salesforce Marketing Cloud. Select the target properties to view data, such as the name, description, and the relationship of the Salesforce Marketing Cloud object.

Input Properties of the Data Object Write Operation

Input Properties represent data that the Data Integration Service reads from an enterprise resource planning (ERP) system or a relational data object. Select the input properties to edit the port properties and specify the advanced properties of the data object write operation.

The input properties of the data object write operation include general properties that apply to the data object write operation. Input properties also include port, target, and advanced properties that apply to the data object write operation.

You can view and change the input properties of the data object write operation from the General, Ports, Targets, run-time, and Advanced tabs.

General Properties

The general properties list the name and description of the data object write operation.

Ports Properties

The input ports properties list the data types, precision, and scale of the data object write operation.

The following table describes the input ports properties that you must configure in the data object write operation:

Property	Description
Name	Name of the port.
Type	Data type of the port.
Precision	Maximum number of significant digits for numeric data types, or maximum number of characters for string data types. For numeric data types, precision includes scale.
Scale	Maximum number of digits after the decimal point for numeric values.
Description	Description of the port.

Target Properties

The target properties list the Salesforce Marketing Cloud resource in the data object write operation.

Run-time Properties

The run-time properties displays the name of the connection that the Data Integration Service uses to write data to Salesforce Marketing Cloud.

Advanced Properties

Salesforce Marketing Cloud data object write operation properties include advanced properties that apply to the Salesforce Marketing Cloud data object.

The Developer tool displays advanced properties for the Salesforce Marketing Cloud data object write operation in the **Advanced** tab.

You can configure the following advanced properties in the data object write operation:

Property	Description
Batch Size	Number of rows that the Data Integration Service writes in a batch to the Salesforce Marketing Cloud target.

Target Properties of the Data Object Write Operation

The target properties represent the data that is used to populate the Salesforce Marketing Cloud data object that you added when you created the data object. The target properties of the data object write operation include general and column properties that apply to the Salesforce Marketing Cloud objects. You can view the target properties of the data object write operation from the General, Column, and Advanced tabs.

General Properties

The general properties display the name and description of the Salesforce Marketing Cloud objects.

Column Properties

The column properties display the data types, precision, and scale of the target property in the data object write operation.

You can view the following target column properties of the data object write operation:

Property	Description
Name	Name of the column.
Type	Native data type of the column property.
Precision	Maximum number of significant digits for numeric data types, or maximum number of characters for string data types. For numeric data types, precision includes scale.
Scale	Maximum number of digits after the decimal point for numeric values.
Primary Key	Determines whether the column property is a part of the primary key.
Description	Description of the column property.

Advanced Properties

The advanced properties displays the physical name of the Salesforce Marketing Cloud objects.

CHAPTER 5

Salesforce Marketing Cloud Lookup

This chapter includes the following topics:

Salesforce Marketing Cloud Lookup Overview

You can use a Salesforce Marketing Cloud data object read operation to look up data in Salesforce Marketing Cloud.

You can add a Salesforce Marketing Cloud data object read operation as a lookup in a mapping. You can then configure a lookup condition to look up data in Salesforce Marketing Cloud.

You can configure a cached lookup operation to cache the lookup data in the native environment.

Note: Uncached lookup is not supported.

For more information about cached lookup, see *"Lookup Transformation" in the Developer Transformation Guide*.

General Properties

The general properties display the name and description of the Salesforce Marketing Cloud lookup.

The following table describes the general properties that you can view and edit for an Salesforce Marketing Cloud lookup:

Property	Description
Name	Name of the Salesforce Marketing Cloud lookup.
Description	Description of the Salesforce Marketing Cloud lookup.
Physical Data Object	Name of the Salesforce Marketing Cloud data object read operation.
On multiple matches	Determines which row the Salesforce Marketing Cloud lookup returns when it finds multiple rows that match the lookup condition. You can select one of the following options: - Return first row - Return last row - Return any row - Return all rows - Report error **Note:** When you configure an uncached lookup operation in the native environment and select the **Return last row** option, the Data Integration Service returns the first row that matches the lookup condition and generates an error message in the session log.

Ports Properties

The ports properties display the input ports from the source in the mapping to the Salesforce Marketing Cloud lookup. You can specify the ports to be available as output ports from the Salesforce Marketing Cloud lookup. The ports properties display the data types, precision, and scale of the source port.

The following table describes the ports properties:

Property	Description
Name	Name of the source port.
Type	Data type of the source port.
Precision	Maximum number of significant digits for numeric data types, or maximum number of characters for string data types. For numeric data types, precision includes scale.
Scale	Maximum number of digits after the decimal point of numeric values.
Output	Specify the ports that must be available as output ports from the Salesforce Marketing Cloud lookup.

Property	Description
Description	Description of the port.
Input Rules	A set of rules that filter the ports to include or exclude in the transformation based on port names or data type. Configure input rules when you define dynamic ports.

Run-time properties

Set the run-time properties to configure a cached lookup in a mapping.

When you enable lookup caching, the Data Integration Service caches the lookup values. The Data Integration Service queries the lookup source once, caches the values, and looks up values in the cache. Caching the lookup values can increase performance on large lookup tables. By default, the **Lookup caching enabled** check box is selected.

When you disable caching, the Data Integration Service does not cache the lookup values. The Data Integration Service queries the lookup source instead of building and querying the lookup cache. Each time a row passes, the Data Integration Service issues a SELECT statement to the lookup source for lookup values.

Lookup Properties

Specify the lookup properties and configure a lookup condition to look up data in Salesforce Marketing Cloud.

There are two types of option that you must select in the **Specify by** property to configure a lookup condition:

- **Value**: Select this option if you want to configure a lookup condition using the column name.
- **Parameter**: Select this option if you want to parameterize the lookup condition.

The following table describes the lookup properties that you can specify for an Salesforce Marketing Cloud lookup if you select the **Value** option:

Property	Description
Lookup Column	The name of the columns that you want to look up.
Operator	Operators that you can use to filter records. You can select one of the following operators: `=, !=, <=, >=, and`
Input Port	The input source port.

The following table describes the lookup properties that you can specify for an Salesforce Marketing Cloud lookup if you select the **Parameter** option:

Property	Description
Parameter	The name of the parameter that you want to use to look up. You can also create a new parameter. Click **New** to create a new parameter. Enter the parameter name and specify an expression in the **New Parameter** dialog box. Click **Validate** to check if the expression that you specified is valid or not.

Adding a Salesforce Marketing Cloud Data Object Read Operation as a Lookup in a Mapping

You can add an Salesforce Marketing Cloud data object read operation as a lookup to look up data in Salesforce Marketing Cloud.

1. Open a mapping from the **Object Explorer** view.
2. From the **Object Explorer** view, drag an Salesforce Marketing Cloud data object read operation to the mapping editor.
   The **Add to Mapping** dialog box appears.
3. Select **Lookup** to add the data object read operation as an operation to the mapping.
4. Select the Salesforce Marketing Cloud data object read operation and connect the lookup input ports and the lookup output ports.
5. In the **Properties** view, configure the following parameters:
   a. On the **General** tab, select the option that you want the Data Integration Service to return when it finds multiple rows that match the lookup condition.
   b. On the **Ports** tab, configure the output ports and input rules.
   c. On the **Run-time** tab, lookup caching is enabled by default.
   d. On the **Lookup** tab, configure the lookup condition.
6. When the mapping is valid, click **File** > **Save** to save the mapping to the Model repository.

CHAPTER 6

Salesforce Marketing Cloud Mappings

This chapter includes the following topics:

Salesforce Marketing Cloud Mapping Overview

After you create a Salesforce Marketing Cloud data object read or write operation, you can create a mapping to extract data from a Salesforce Marketing Cloud source or load data to a Salesforce Marketing Cloud target.

You can define properties in an operation to determine how the Data Integration Service must extract data from a Salesforce Marketing Cloud source or load data to a Salesforce Marketing Cloud target. You can extract data from one or more Salesforce Marketing Cloud sources, and load data to one or more Salesforce Marketing Cloud targets. When the Data Integration Service extracts data from the source or loads data to the target, it converts the data based on the data types associated with the source or the target.

Salesforce Marketing Cloud Mapping Example

Your organization has a large amount of customer data from across regions stored in flat files. You organization needs to analyze data in the APAC region. Create a mapping that reads all the customer records from the flat file and write those records to Salesforce Marketing Cloud.

You can use the following objects in a Salesforce Marketing Cloud mapping:

Flat file input

The input file is a flat file that contains customer names and their details.

Create a flat file data object. Configure the flat file connection and specify the flat file that contains the customer data as a resource for the data object. Use the data object in a mapping as a read data object.

Transformations

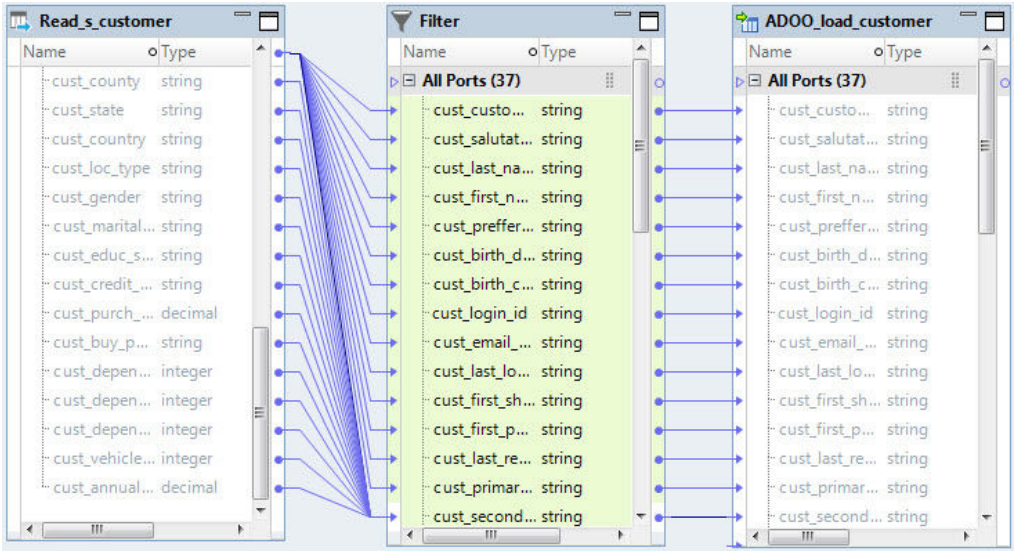
Add a Filter transformation to extract customer data in the APAC region.

The Filter transformation filters the source data based on the value you specify for the region ID column. The Data Integration Service returns the rows that meet the filter condition.

Salesforce Marketing Cloud output

Create a Salesforce Marketing Cloud data object write operation. Configure the Salesforce Marketing Cloud connection and specify the Salesforce Marketing Cloud object as a target for the data object. Use the data object in a mapping as a target data object.

The following image shows the Salesforce Marketing Cloud mapping example:



When you run the mapping, the Data Integration Server reads customer records from the flat file and writes to Salesforce Marketing Cloud.

CHAPTER 7

Dynamic Mappings

This chapter includes the following topics:

Dynamic Mappings Overview

You can use Salesforce Marketing Cloud data objects as dynamic sources and targets in a mapping in the native environment.

Use the Salesforce Marketing Cloud dynamic mapping to accommodate changes to source, target, and transformation logics at run time. You can use a Salesforce Marketing Cloud dynamic mapping to manage frequent schema or metadata changes or to reuse the mapping logic for data sources with different schemas. Configure rules, parameters, and general transformation properties to create the dynamic mapping.

If the data source for a source or target changes, you can configure a mapping to dynamically get metadata changes at runtime. If a source changes, you can configure the Read transformation to accommodate changes. If a target changes, you can configure the Write transformation accommodate target changes.

You do not need to manually synchronize the data object and update each transformation before you run the mapping again. The Data Integration Service dynamically determines transformation ports, transformation logic in the ports, and the port links within the mapping.

You can select one of the following options to enable dynamic mapping:

- In the **Data Object** tab of the data object read or write operation, select the **At runtime, get data object columns from data source** option when you create a mapping.
  When you enable the dynamic mapping using this option, you can refresh the source and target schemas at runtime.
- In the **Ports** tab of the data object write operation, select the value of the **Columns defined by** property as **Mapping Flow** when you configure the data object write operation properties.

For information about dynamic mappings, see the *Informatica Developer Mapping Guide*.

Developing and Running Dynamic Mappings

Perform the following tasks to develop and run a dynamic mapping to read from or write to Salesforce Marketing Cloud. The tasks and the order in which you perform the tasks depend on the mapping scenario and the transformations that you plan to use in the mapping.

1. Create a Salesforce Marketing Cloud mapping and add the Salesforce Marketing Cloud objects.
2. Configure a Salesforce Marketing Cloud dynamic source for the Read transformation to get metadata changes from the Salesforce Marketing Cloud source at run time. Select the Salesforce Marketing Cloud source object and perform one of the following tasks based on your requirement:
   - Use a parameter as a source for a dynamic mapping source object.
   - Configure data sources for source objects in mappings to get metadata changes at run time. To dynamically get columns from the data source file at run time, select **At run time, get data object columns from the data source**.
3. Create dynamic ports in transformations and link ports.
4. Define input rules for dynamic ports to determine which generated ports to create.

   Note: Do not add a lookup condition for dynamic ports in a dynamic mapping.
5. Configure a Write transformation to write to a Salesforce Marketing Cloud dynamic target. Select the Salesforce Marketing Cloud target object and perform one of the following tasks based on your requirement:
   - Use a parameter as the data object for the transformation and then change the parameter at run time.
   - To dynamically get data object columns from the data source at run-time, enable the option **At run time, get data object columns from the data source**.
   - Define target object columns by mapping flow to enable upstream mapping objects to update the incoming ports for the Write transformation.
     To do this, select **Columns defined by: Mapping flow** in the **Ports** tab of the Properties view.
6. Create and configure a run-time link to determine which ports to link at run time.
7. Validate and run the mapping.

Dynamic Mapping Example

Your organization has metadata that changes frequently and you need to incorporate all the updated metadata in a short span of time. Create a dynamic mapping where you can refresh the source schema dynamically to fetch the updated metadata. Add all the dynamic ports to the target to override the metadata of the existing ports.

1. Import the Salesforce Marketing Cloud read and write data objects.
2. Select a project or folder in the **Object Explorer** view.
3. Click **File** > **New** > **Mapping**.
   The **Mapping** dialog box appears.
4. Enter the name of the mapping in the **Name** field.
5. Click **Finish**.
6. Drag the data object into a mapping.
   The **Salesforce Marketing Cloud Data Object Access** dialog box appears.

7. Select the **Read** option and click **OK**.
8. In the **Data Object** tab, select the **At runtime, get data object columns from the data source** check box.
9. Drag the data object into a mapping.
   The **Salesforce Marketing Cloud Data Object Acess** dialog box appears.
10. Select the **Write** option and click **OK**.
11. In the **Ports** tab, select the value of the **Columns defined by** as **Mapping Flow**.
12. Select all the source incoming ports and add the ports to the target.
13. Save and run the mapping.

CHAPTER 8

Data Type Reference

This chapter includes the following topics:

Data Type Reference Overview

The Developer tool uses the following data types in Salesforce Marketing Cloud mappings:

- Salesforce Marketing Cloud native data types. Salesforce Marketing Cloud data types appear in Salesforce Marketing Cloud definitions in a mapping.
- Transformation data types. Set of data types that appear in the transformations. They are internal data types based on ANSI SQL-92 generic data types, which the Data Integration Service uses to move data across platforms. They appear in all transformations in a mapping.

When the Data Integration Service reads source data, it converts the native data types to the comparable transformation data types before transforming the data.

Salesforce Marketing Cloud and Transformation Data Types

The following table lists the Salesforce Marketing Cloud data types that the Developer tool supports and the corresponding transformation data types:

Salesforce Marketing Cloud Data Type	Transformation Data Type	Range and Description
Text	String	1 to 104,857,600 characters
Number	Integer	-2,147,483,648 to 2,147,483,647 Precision of 10, scale of 0

Salesforce Marketing Cloud Data Type	Transformation Data Type	Range and Description
Date	Date/Time	**Date Range**: Jan 1, 0001 A.D. to Dec 31, 9999 A.D. **Time range**: 00:00:00 to 23:59:59.9999999 Precision 29, Scale 9
Boolean	Integer	-2,147,483,648 to 2,147,483,648
Email Address	String	1 to 104,857,600 characters
Phone	String	1 to 104,857,600 characters
Decimal	Decimal	Precision 1 to 28, Scale 0 to 28
Locale	String	1 to 104,857,600 characters

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