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Marketing Cloud Automation Studio Implementation Guide

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AUTOMATION STUDIO IMPLEMENTATION GUIDE

Automation Studio is a Salesforce Marketing Cloud application used to execute multi-step marketing and data management activities on an immediate, triggered, or scheduled basis. Use Automation Studio's workflow canvas to build simple or multi-step automations. Automation Studio is designed to handle ETL (Extract, Transform, Load) tasks. Use Automation Studio to import data from any external data source and segment that data for marketing purposes.

Who This Guide Is For

This guide is for Marketing Cloud admins, partners, and developers to implement Automation Studio.

Before You Start

Review the Automation Studio help pages for information. Automation Studio supports all Marketing Cloud editions.

Some Automation Studio activities are only available when other products are provisioned. Activity availability is documented in the More Activities section on the Automation Studio Activities Reference help page.

SEE ALSO:

[Automation Studio Roles](#)

[Automation Studio](#)

[Automate Processes in Automation Studio](#)

[Automation Studio Activities](#)

[Automation Studio Errors](#)

[Salesforce Marketing Cloud YouTube Channel](#)

SET UP AUTOMATION STUDIO

Automation Studio is provisioned automatically. Standard Automation Studio activities are available without further configuration. Some Automation Studio activities are only available when other products are provisioned. Activity availability is documented in the More Activities section on the Automation Studio Activities Reference help page.

Considerations Before You Begin

- Especially if you have a separate database of record, review how your customer data enters the Marketing Cloud. Is your customer data logged in an external data store that the Marketing Cloud consumes?
- Store and update your data in a timely fashion that matches the expected automation output.
- Consider what the consequence of a failed transfer or import would be. What is the contingency plan?
- Include the specific fields required for segmentation or personalization.
- Forecast downstream Marketing Cloud dependencies on updates to the data.
- Identify the contact or subscriber database of record and Subscriber Key (primary contact ID).

Automation Studio and Journey Builder

Automation Studio excels with Extract, Transform, and Load activities and providing advanced segmentation capabilities. Journey Builder was designed for sending messages and designing multi-step marketing journeys.

Journey Builder is the Marketing Cloud's primary platform for sending messages and designing multi-step marketing journeys. It's the single stop for messaging and includes everything you need for marketing orchestration.

Journey Builder and Automation Studio are designed to complement each other. You can define an audience in Automation Studio, then admit it into a journey according to the automation's schedule. When using both tools, use Automation Studio to import and transform customer data. This data transformation prepares the data to be used for sending in Journey Builder.

SEE ALSO:

[Journeys and Messages](#)

[How to Optimize Journey Builder Performance](#)

Automation Studio and Triggered Sends

Emails sent through Automation Studio are user-defined email message interaction and don't rely on send definitions. Automation Studio can send emails through a triggered process in batch via SFTP file drop. The dropped file triggers the automation. If a non-batch experience is preferable, use Journey Builder.

 **Note:** If you are using Marketing Cloud Connect to connect a Sales or Service Cloud org with a Marketing Cloud account, Salesforce APEX triggers can use this functionality to send through the Connector App.

SEE ALSO:

[Messages](#)

Automation Studio Overview Page and Tabs

Access details for up to 50 automations, see error information, and run or delete automations on the Overview page. In an automation, click each tab to access all aspects of automation design.

- [The Automation Studio Overview Page](#)
- [Use an Automation's Tabs](#)

SEE ALSO:

[Run an Automation from the Overview Page](#)

[Delete an Automation from the Overview Page](#)

Creating an Automation

When you create an automation, choose a file drop or a scheduled automation.

Considerations

- If the automation's current run overlaps with the automation's next scheduled run due to wait activities, Automation Studio skips the next scheduled run.
- Scheduled runs that are skipped due to overlap are logged as errors and shown under Health.
- Runs skipped due to running wait activities are shown in the Run Log.
- You can use a file directory to trigger multiple automations only if you specify a filename pattern when you create the automation.

SEE ALSO:

[Automate Processes in Automation Studio](#)

[Automation Starting Sources](#)

[Configure a File Drop Automation](#)

[Configure a Scheduled Automation](#)



[FTP and File Drop Automation Example](#)

[Run a Subset of Activities](#)

Automation Studio Activities

Activities in Automation Studio are independent of the automations that use them and can be reused across multiple automations.

Considerations

- Each Automation Studio activity is documented in the Automation Studio Activities help pages. Reviewing Considerations on SQL Query and Wait Activity pages is especially recommended.
 - From the Activities screen within Automation Studio, you can run each individual activity once if necessary. You don't have to put an activity into an automation before you can run the activity.
 - The refresh group activity is for customers who are using groups (lists) to manage subscribers. Most customers use data extensions instead of lists.
 - To reuse sFTP folders for more than a single file drop automation, use a file naming pattern when importing files.
 - In the file transfer activity, the transfer begins immediately when a file matching the file naming pattern is dropped in the sFTP folder. Select to use the local time zone to ensure that date or time-based file naming patterns adhere to your server timezone.
 - The filter activity always overwrites records in its target data extension.
 - A SQL query activity attempts to execute your SQL statements for up to 30 minutes. Query activities that exceed 30 minutes are marked with an error status and do not output results.
 - If a wait activity has not completed by the time the next scheduled automation is set to start, the scheduled automation's next run is skipped.
-  **Note:** Some Automation Studio activities are only available when other products are provisioned. Review the More Activities section on the Automation Studio Activities Reference for details.
-  **Note:** Some activities have functionality extended by other applications or configuration. For example, when MC Connect is implemented, the import file activity allows users to import from Salesforce Objects & Reports in addition to standard FTP options.

SEE ALSO:

- [Automation Studio Activities](#)
- [Start an Automation Studio Activity](#)
- [Automation Studio Activities Reference](#)
- [Wait Activity](#)
- [SQL Reference](#)
- [Optimizing a SQL Query Activity](#)

Non-Standard Activities in Automation Studio

Some Automation Studio activities are only available when other products are provisioned. These activities are available for Audience Builder customers only.

Activity	Description
Data Factory Utility	This activity moves and transforms data from a source database to the target Audience Builder database for applications running on that target database.
Publish Audience	This activity publishes an audience from an audience definition as a sendable data extension.
Refresh Segment Template	This activity refreshes the counts of a segment template created in Audience Builder

Activity	Description
Verify Audience Count	This activity refreshes the count of a published audience. Like a group refresh activity, this activity reapplies the rules created to define a subset of subscribers.

SEE ALSO:

[Get Started with Audience Builder](#)[Define Segments](#)

AUTOMATION STUDIO USE CASE

Create an automation that sends emails to people who signed up for them at a company event. Emails containing promotional or coupon codes generate more engagement than other emails, building brand loyalty and increasing open and click-through rates.

Prerequisites and Context


Your account must have an export file with contact information, a customer master record data extension, and two event follow-up emails before you start.

Context

Your CRM holds the master customer record. New customers are added to the Marketing Cloud every day and their data is updated through a file placed on the FTP site. This file is imported into the Marketing Cloud master contact data extension, which contains contact information and list preferences.

Subscribers first receive an email with post-event information. If they open that email, they get a second email containing a coupon code.

1. When the file is dropped on the customer's enhanced FTP, the automation triggers.
2. Contact information is added on a customer master record data extension in the Marketing Cloud.
3. Subscribers who have opted in to the event receive one email.
4. Subscribers who have opened an email within the last month receive a coupon code email 48 hours after the Welcome email is sent.

 **Note:** New customers must open the initial Welcome email to receive the followup email.

Prerequisites

- A contact file has been created with CustomerID (Subscriber Key), FirstName, LastName, Email, Age, Birthdate, State, Interest, and Gender columns. The contact file can be created by exporting data from your CRM.
- A customer master record data extension has been created in the Marketing Cloud. The data extension includes CustomerID (Subscriber Key), FirstName, LastName, Email, Age, Birthdate, State, Interest, and Gender columns.
- Two event follow-up emails have been created in your account. The first is a Welcome email. The second is a marketing email with a coupon code.

CustomerID	FirstName	LastName	Email	Age	Birthdate	State	Interest	Gender	EventInformation	BirthdayClub	DateAdded
CID-0001	Marcus	Ellis	customer01@nto.com	57	5/8/1960	IN	Hiking	Male	Y	Y	
CID-0002	John	Rogers	customer02@nto.com	37	5/8/1980	OH	Backpacking	Male	Y	N	
CID-0003	Wanda	Stamps	customer03@nto.com	42	5/8/1975	TN	Camping	Female	N	Y	
CID-0004	Shawn	Ellis	customer04@nto.com	58	5/8/1959	IL	Hiking	Female	Y	N	
CID-0005	Glenda	Stamps	customer05@nto.com	43	5/7/1974	TN	Fishing	Male	Y	Y	
CID-0006	Karla	Alas	customer06@nto.com	44	5/3/1973	AK	Fishing	Female	N	Y	
CID-0007	Kim	Switzer	customer07@nto.com	22	5/9/1995	MD	Backpacking	Male	Y	Y	

Create Data Extensions

Create two data extensions called Welcome Audience and Coupon Audience.

Use the instructions on the Create a Data Extension page to create a data extension called Welcome Audience. Then, use the same steps to create a data extension called Coupon Audience.

- Create a filtered data extension called Welcome Audience.
- Make both data extensions sendable and do not assign a campaign.
- Set the data retention policy to 30 days.
- Create the fields required for this audience data extension: CustomerID (primary key linked to Subscriber Key), Email, FirstName, LastName, EventInformation, and Interest. The data extension must also have a field called DateAdded, which defaults to current date.
- Create the Coupon Audience data extension using **Create from Existing** so the same fields are included in both data extensions. Remove the default values that were copied over from the Welcome data extension.

SEE ALSO:

[Create a Data Extension in Contact Builder](#)

Create a Filter Activity

Create a filtered data extension, then populate it with a filter activity. Use this data extension to send the initial email only to new contacts since yesterday.

- When creating the filter activity, select the Welcome Audience data extension as the source data extension.
- Set the filter conditions so that DateAdded is equal to Today and EventInformation = Y. Since DateAdded defaults to the current date, this condition includes records added since the last import.



Note: The filter activity overwrites any rows in the data extension.

SEE ALSO:

[Create a Filter Activity](#)

Create Query Activities

Create a query to copy records over from Master Contacts where EventInformation = True. Then, create a separate query to populate the Coupon Audience data extension.

- In the first query, select the Welcome Audience data extension as the data extension to update.
- Set the Data Action to **Append**.
- Write a query to create a filtered subset of records that have been added within the last day. This step allows the Coupon Audience data extension to get records that were created in the previous 48–72 hours.
- In the second query, select the Coupon Audience data extension.
- Set the Data Action to **Overwrite**.

- Write a query to pull all records from the Welcome Audience data extension where DateAdded is between 2-3 days and the user opened the Welcome email.

SEE ALSO:

[Retrieving and Segmenting Data with a SQL Query Activity](#)[Build a SQL Query Activity](#)[Optimizing a SQL Query Activity](#)

Create Welcome and Coupon Email Activities

Use Automation Studio's Send Email activity to select two emails, a Welcome Message and a Coupon Offer, that you created as a prerequisite for this use case.

Use the instructions on the Send Email Activity page to find and select the email.

- When you define the audience for the Welcome email, select the data extension containing the Welcome Yesterday filtered data extension.
- Drag it into the Targeted list.
- Select **All Subscribers**.
- Repeat these steps when you define the Coupon Offer email activity, dragging the Coupon Offer data extension as the Targeted list.

SEE ALSO:

[Send Email Activity](#)[Create Emails in Content Builder](#)

Create an Import Activity

Create an import activity to get records from the contacts data extension to add or update in a file location.

- Select the Master Contacts data extension as the destination data extension.
- Select a notification email address for the import.
- Select the File Location and define the File Naming Pattern.
- Select **Add and Update** for the Data Action
- If your file column headers match the data extension column names, select **Map by Header Row**. If not, use **Map Manually**.



Note: If the remote FTP server is not using Coordinated Universal Time (UTC), consider adjusting the limits specified on the Properties page, including system buffer, during activity setup. This action ensures that the activity runs on schedule.

SEE ALSO:

[Import File Activity](#)[Filename Patterns Reference](#)[System Buffer Example](#)

Use Activities to Create an Automation

Create a file drop automation, then build the automation with the activities configured in previous steps.

To configure the file drop, specify whether you are using a filename pattern. Select the file location where you are dropping the file on the eFTP.



Note: File queuing is enabled by default. An automation finishes importing a file before importing the next file that is dropped. To immediately stop any currently running import and move on to the latest file dropped, disable queuing.

Build the automation's workflow in this order.

1. Add an import activity that points to the import activity definition you created.
2. Add an SQL query activity that points to the welcome query.
3. Add a filter activity that points to the Welcome Yesterday filter.
4. Add a Send Email activity that points to the Welcome Email user-initiated send definition.
5. Add an SQL Query activity that points to the coupon query
6. Add a Send Email activity that points to the Coupon Offer send definition.
7. Save the automation.

SEE ALSO:

[Configure a File Drop Automation](#)

Start the Automation and Drop Your File

Activate the automation. Dropping a file matching the specified file naming pattern triggers the automation and begins the process.

- Drop a file with the matching file name pattern into the correct FTP folder.
- To see the automation in process, navigate to Automation Studio.

AUTOMATION STUDIO IMPLEMENTATION BEST PRACTICES

Link automations, avoid timeouts and dependencies, and troubleshoot.

Automation Studio Troubleshooting

Use these questions to guide your troubleshooting.

- If you are using a file naming pattern, did you create a file location pointing to the correct subfolder in the FTP?
- If you aren't using a file naming pattern, is another automation already configured to use that folder?

Query or Filter Issues


- Do all fields specified in the Select or Filter criteria exist in the source and target data extension?
- Have the data extensions changed configuration?
- Are field type values being respected?
- Confirm that the correct Data Action is set for your use case.

Linking Automations Using a File Transfer Activity

A file drop automation can be configured to react to a file transfer activity from another scheduled or file drop automation.

Considerations

- Smaller, more focused automations are easier to manage.
- Before opting to create a single complicated automation, review an automation for same-step dependencies, other dependent automations, and multi-purpose automations. If multiple activities in the automation depend on the same data, one failed activity can cause subsequent activities to fail. To avoid this situation, separate dependent activities into different automations, or add wait activities to ensure that data updates have time to complete.
- Scheduled automations that depend on data updates do not run at the scheduled time if the data update has not completed.
- Kick off automations at the child business unit-level based on imports at the parent level. To trigger a child-level automation, link a file transfer activity in a parent-level automation to a folder that is shared to the child business unit .
- With Audience Builder implementations, tracking data is imported at the parent level, but updates to the data must occur to trigger child business unit-level automations.

 **Note:** You can link automations in the opposite direction, too. For example, drop a file in a file location that the parent level can access. This action kicks off an automation at the parent level from the child business unit level.