IBM Distributed Marketing
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Corporate Marketer's Guide

IBM
Note
Before using this information and the product it supports, read the information in “Notices” on page 239.
Adding workflow to templates

Template Campaign tab

Template Tabs tab for customizing the user interface

Adding tabs to templates

Moving tabs and forms on templates

Deleting custom forms and tabs from templates

Template Attachments tab for adding folders and files

Template Custom Links tab for accessing other websites

Workflow Templates page

Exporting workflow templates

Data Mapping Definitions

Adding data mapping files

Editing data mapping files

Icons page

Adding and editing icons

About importing and exporting templates

To import templates

About exporting templates

Template validation

Database validation

Attribute validation

Chapter 13. Form Editor

How forms and Campaign flowcharts relate

About offer integration in On-demand Campaigns

Adding a form generated from Campaign

About invalid forms

Form Definitions page

Editing a form

Reverting a form

Deleting a form

About Run History series

About merging forms

Republishing a form

Changing values displayed in forms

Form status

Form Editor page

Add an Element tab

Element Properties tab

Form Properties tab

Removing a custom attribute from a form

About Single Select Database

About Single Select Database Object Reference

About Single Select Database Attribute Reference

Appendix A. Defining campaign logic in flowcharts

Flowchart workspace overview

Creating flowcharts

Flowchart design considerations

Creating flowcharts

Adjusting flowchart appearance

Copying flowcharts

Copying flowcharts

Viewing flowcharts in Read-Only mode

To view a flowchart

Viewing two flowcharts side-by-side

Reviewing flowcharts

To review the processes in a flowchart

Editing flowcharts

Opening a flowchart for editing

Editing a flowchart's properties

Flowchart validation

Validating flowcharts

Test runs for flowcharts

Testing a flowchart

Testing a flowchart branch

Running flowcharts

Running a flowchart

Running a flowchart branch

To run a flowchart process

Pausing a flowchart run

Continuing a paused flowchart run

Stopping a flowchart run

Continuing a stopped flowchart run

Troubleshooting runtime errors

Deleting flowcharts

Deleting flowcharts

Printing flowcharts

Using in-database optimization to improve flowchart performance

To set in-database optimization

Packaging flowchart files for troubleshooting

To package flowchart files for troubleshooting

Transmitting the flowchart data package to IBM Technical Support

Options for packaging flowchart data

Flowchart reference

Flowchart tab icons (View mode)

Flowchart page icons (Edit mode)

Appendix B. List of processes

Data manipulation processes

The Audience process

The Extract process

The Merge process

The Sample process

The Segment process

The Select process

Run processes

The Call List process

The Create Seg process

The Cube process

The Mail List process

The Schedule process

The Snapshot process

Optimization processes

The Response process

The Track process

Appendix C. About processes

Types of processes

Contact processes

Data manipulation processes

Run processes

Working with process boxes
Adding processes to flowcharts ........................................ 211
Copying processes within a flowchart .............................. 212
To cut a process ......................................................... 212
Pasting processes from the template library ....................... 212
Moving processes in flowcharts ..................................... 213
Deleting processes from flowcharts ................................ 213
Connecting processes in flowcharts ................................. 213
Deleting a connection between two processes .................... 214
Example: process connections ..................................... 214
Configuring processes ............................................... 215
Running or testing a process ....................................... 216
Data sources for processes .......................................... 218
To select an incoming cell, segment, or table as the input to a process .................................................. 218
Selecting multiple tables as the input to a process ............. 218
To map a new table for selecting as a source ..................... 218
Creating queries to identify contacts ............................. 218
How queries are evaluated in Campaign processes ............ 219
To create a query with Point & Click ............................ 219
To create a query with Text Builder ............................. 220
To create a query with Formula Helper ......................... 221
Specification of pre- or post-processing SQL statements .... 222
Creating queries using SQL ......................................... 222
Previewing field values from your user data ..................... 226
To profile a field ......................................................... 226
Restricting input for profiling ...................................... 227
Disallowing profiling ................................................ 228
Setting profiling options .......................................... 228
To refresh a profile count ......................................... 230
To insert a profile category into a query ......................... 230
To print the results of a profile ................................... 230
To export profile data .............................................. 230
Specifying an output file or table for contact logging ........ 231
Defining the output file for contact logging ...................... 231
Defining a database table for contact logging ................... 232
Changing the seed for random selection ......................... 232
Changing the random seed for record selection ................. 232
Skipping duplicate IDs in process output ......................... 233

Appendix D. User variables .......................................... 235
Creating user variables .............................................. 235

Before you contact IBM technical support .......................... 237

Notices ..................................................................... 239
Trademarks .............................................................. 241
Privacy Policy and Terms of Use Considerations .............. 241
Chapter 1. IBM Distributed Marketing

IBM® Distributed Marketing provides marketing organizations with the ability to distribute the execution of centrally managed marketing campaigns throughout the enterprise.

It allows centralized marketers to maintain control over corporate standards and business rules, while it allows remote users to tailor or provide input to the campaign for greater local customization and relevance, ultimately increasing response rates and revenue.

Distributed Marketing supports campaign customization by remote users; however, the remote users can change only those parameters that are specified by the campaign designer.

For example, a retail company might want to centrally control certain selection criteria, but allow individual store owners to control selections that are related to their stores or locations.

**Distributed Marketing use cases**

Distributed Marketing enables organizations to accomplish their goals by supporting multiple distributed marketing use cases.

Specifically, Distributed Marketing enables you to:

- Centralize marketing efforts while it ensures that corporate business rules, logic, and best practices are enforced, allowing execution and controlled customization throughout the organization.
- Promote field compliance by having corporate marketers centralize campaign design with corporate business rules (such as opt-outs) and customer preferences.
- More efficiently design, conduct, manage, and measure both global and localized cross-channel marketing initiatives.
- Increase the number of users who are able to contribute to and execute campaigns, providing more flexibility within an organization and enabling measurement and management of marketing efforts.
- Provide "self-serve" customer interaction management within an enterprise, for less technical-oriented marketers and individuals closest to the customer, without compromising corporate rules, goals, or objectives.
- Manage customer interactions in real-time through email and the web.
- Allow marketing decision-making and campaign management to be handled by field marketers, while corporate marketers manage corporate marketing communication and policies.

**Corporate marketers**

Corporate marketers develop templates for reusable campaign logic and lists of customer contacts.
Corporate marketers manage corporate campaigns and oversee marketing activities of field marketers. They also specialize in designing and generating campaigns from which the field marketer can choose.

**Primary corporate marketer tasks**

In Distributed Marketing, corporate marketers perform the following tasks:

- Design campaign flowcharts.
- Create corporate campaigns.
- Manage campaign workflow.
- Create reports that are used to assess campaign success.
- Design templates for Corporate Campaigns, On-demand Campaigns, and Lists, for use by field marketers and other corporate marketers.

**Corporate marketer tasks in Campaign**

Corporate marketers also frequently use Campaign, through which they design and build flowcharts that are associated with Lists, On-demand Campaigns, and Corporate Campaigns.

**Corporate marketer roles**

Corporate marketers must be assigned the Corporate Marketer role in the Global security policy, or its equivalent, to perform their tasks.

To work in Campaign, corporate marketers must be assigned the following roles:

- Global Policy Execute
- Global Policy Design
- Global Partition Design or Execute

---

**Field marketers**

Field marketers create and run local or regional marketing activities for a territory or line of products.

Field marketers work directly with customers, understand their needs, and can make good decisions on how best to reach their customers with on-demand or corporate marketing campaigns.

Field marketers may be line-of-business users, partners, branch office managers, retail store managers, or members of local sales forces. Field marketers create on-demand (local) campaigns that they can run at any time to target a local customer base.

**Field marketers tasks**

In Distributed Marketing, field marketers work with:

- Lists
  
  Field marketers typically create Lists in Distributed Marketing and define criteria to select contacts for the Lists. These Lists can then be used by one or more On-demand Campaigns as needed.

- On-demand Campaigns
Field marketers can create and run On-demand Campaigns to target their set of customers.

- Corporate Campaigns
  
  Field marketers subscribe to the Corporate Campaigns they want to participate in. For those Corporate Campaigns, field marketers review and choose which of their customers are targeted by the Corporate Campaign.

**Field marketer roles**

Field marketers must be assigned the Field Marketer role in the Global security policy, or its equivalent, to perform their tasks.

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**To log in to IBM EMM**

This procedure assumes that you know the website address (or URL) to your server and you have an assigned user name and password. If you need help, contact your IBM EMM administrator.

1. Open a supported browser and enter the URL to the IBM EMM server. The prompts that display vary based on the security settings that are defined for your installation.
2. If prompted, accept the digital security certificate.
3. On the login page, enter your user name and password, then click **Sign In**.
   
   If you are prompted to accept the digital security certificate, click **Yes** to accept the certificate.

The dashboard or the default start page displays. The options that are available to you depend on the permissions that are assigned to you by your IBM EMM administrator.

**Note:** For a list of supported browsers, see the *IBM EMM Enterprise Products Recommended Software Environments and Minimum System Requirements* guide.
Chapter 2. About customizing Distributed Marketing

You can customize the Distributed Marketing interface to meet your needs. Customization settings are available in Distributed Marketing when you click Settings or Settings > Distributed Marketing Settings.

The following table describes what you can customize.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set current page as Home</td>
<td>Set the current page to display automatically as soon as you log in to Distributed Marketing.</td>
</tr>
<tr>
<td>Basic Settings</td>
<td>Set the security policy to apply to new items by default.</td>
</tr>
<tr>
<td>Instances Options</td>
<td>Customize your default view of Lists, On-demand Campaigns, and Corporate Campaigns.</td>
</tr>
<tr>
<td>Calendar/ Timeline Settings</td>
<td>Select options to customize how you view the calendar and task milestones.</td>
</tr>
</tbody>
</table>

Setting your basic settings

The basic settings option allows you to choose the security policy that is used by default when you create new items.

1. Select Settings > Distributed Marketing Settings.
   The Administrative Settings page opens.
2. Click Basic Settings.
   The Basic Settings page opens.
3. Select the security policy that you want to use by default when you create new items in Distributed Marketing in the Default Security Policy field.
   You can leave Global selected, which is the default, to use the global security policy that is defined by your administrator, or you can select a security policy that your administrator instructed you to select. As a best practice, do not change the security policy without the guidance of your administrator.
4. Click Save Changes to save your changes.

Setting your instance options

Instance options allow you to customize your default views of Lists, On-demand Campaigns, and Corporate Campaigns.

For example, you might want to specify that the On-demand Campaigns list that opens by default only shows On-demand Campaigns set to run in the current week.

1. Select Settings > Distributed Marketing settings.
   The Administrative Settings page opens.
2. Click Instances Options.
   The Instances Options page opens.
3. In each of the List, On-demand Campaign, and Corporate Campaign sections, select the default view.
4. Click **Save Changes** to save your changes.

When you open the Lists, On-demand Campaigns, or Corporate Campaigns page, your default list is shown.

---

**To set your start page**

The start page is the page that displays when you log in to IBM EMM. The default start page is the default dashboard, but you can easily specify a different start page.

If you do not want a dashboard page to display when you first log in to IBM EMM, you can select a page from one of the installed IBM products as your start page.

To set a page you are viewing as your start page, select **Settings > Set current page as home**. Pages available for selection as a start page are determined by each IBM EMM product and by your permissions in IBM EMM.

On any page you are viewing, if the **Set current page as home** option is enabled, you can set the page as your start page.

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**The calendar**

Field marketers and corporate marketers can use the Distributed Marketing calendar to view the time horizon for marketing campaigns.

Historically, organizations produced paper-based calendars and updated them with the latest calendar-driven data. The calendar feature provides marketing groups with an electronic means of viewing and updating this data.

You can use the calendar as an aid for planning marketing campaigns as follows.

- You can view and update the timelines for Lists, On-demand Campaigns, or Corporate Campaigns.
- You can get an up-to-date view of planned or executed marketing efforts over time.

You can customize the appearance of the calendar in the following ways.

- You can set a default view of the calendar: Click **Settings > Distributed Marketing Settings > Calendar/Timeline Settings**.
- You can choose the look of the calendar by using the Set View Options dialog box.
- You can filter the items that are displayed on the calendar by using an Advanced Search.

**About calendar features**

The calendar in Distributed Marketing displays Lists, On-demand Campaigns, or Corporate Campaigns. You can also edit the views.

The Distributed Marketing calendar has the following features:

- The calendar includes start and end dates for the displayed items.
- You can display Corporate Campaigns and On-demand Campaigns on the same calendar in different colors for easy differentiation.
• You can open a Corporate Campaign, List, or On-demand Campaign directly from the calendar.

Default and per session calendar views

You can use one of two types of settings when you view the calendar:
• The default calendar settings, which are in effect every time you log in.
• The per session calendar settings. The per session calendar is the calendar that results from making temporary changes to the calendar view, without changing the default settings.

Objects displayed in a calendar

You can display any of the following objects in a calendar:
• Corporate Campaigns
• On-demand Campaigns
• Lists
• Corporate Campaigns and On-demand Campaigns

Calendar item dates

Each List, On-demand Campaign, or Corporate Campaign that is displayed in a calendar has a start and end date. These are the target start and end dates you set when you create the object.

About display options for the calendar

You can modify the calendar display in the following ways:
• You can modify the default calendar settings.
• You can set the calendar view for the current session.
• You can toggle between calendar views:
  – Timeline view
  – Calendar grid view
  – Text view
• You can use the advanced search feature to filter the Lists, On-demand Campaigns, or Corporate Campaigns that are displayed in the calendar.

Timeline view

This view displays a time-based view of the Lists, On-demand Campaigns, or Corporate Campaigns you select to display. You can select the time range for the calendar items you select to display in a timeline view.

In a timeline view, each calendar item is displayed as a horizontal bar across its date range. If you enable color coding, each calendar item is colored according to attributes you select.

You can select the date range for the timeline from the following options:
• Week displays one week. Each day is listed as a column. The starting day is either Sunday or Monday, depending on the default calendar settings.
• Month displays a single calendar month. Each day is listed as a column, and days are grouped into weeks.
Quarter displays three calendar months. Each week is listed as a column, and weeks are grouped into months.

Fiscal Year displays a fiscal year. Your administrator can configure the starting month for a fiscal year. Each month is listed as a column, and the months are grouped into quarters.

Calendar Year displays a calendar year that starts in January and ends in December. Each month is listed as a column, and the months are grouped into quarters.

Note: Any day that is specified as non-work time is disabled in a timeline view.

Month-based text or calendar grid view

A month-based calendar view displays a calendar for a selected month.

In addition to a month-based timeline view, you can select from the following month-based calendar views:

• 1-Month Text: Each day contains a text listing of selected, Lists, On-demand Campaigns, or Corporate Campaigns.

• 1-Month Calendar Grid: Each calendar item is displayed as a horizontal bar that begins on the item start date and ends on the item end date. If you enable color coding, each calendar item is colored according to attributes you select.

Note: Any day that is specified as non-work time is indicated by a gray X in the background in a calendar grid view.

Color-coded by attribute view

You can color-code the calendar display for Lists, On-demand Campaigns, or Corporate Campaigns by selected attributes. You can apply color-coding to a calendar grid view or to a timeline view.

You can filter the calendar display for Lists, On-demand Campaigns, or Corporate Campaigns according to the values of a selected attribute, such as the following.

• Execution status
• Schedule status
• Template type

The calendar displays a legend in the lower-right corner of the screen.

For example, consider the following On-demand Campaign attribute and its possible values:

• Attribute name: Campaign Execution Status
• Valid attribute values: Active, Complete, Under development

If you group and display On-demand Campaigns by Campaign Execution Status, the resulting calendar is displayed with four colors in the legend. There is one color for each valid attribute value, and one for N/A.

Note: The color that is assigned to N/A is displayed in the calendar when calendar items are not assigned a value for the selected attribute.
About the horizontal bars used in calendars

The timeline view and calendar grid view display calendar items as horizontal bars.

Note the following about the bars:

- The bars represent the date range for objects that are displayed on the calendar.
- The bar color depends on values of an attribute you optionally select for color coding.
- The shape of the bars determines the following about item start and end dates:
  - Rounded left end: The start date is the date indicated by the left end of the bar.
  - Rounded right end: The end date is the date indicated by the right end of the bar.
  - Flat left end: The start date is before the visible date range.
  - Flat right end: The end date is beyond the visible date range.

Accessing the calendar

You can access the calendar for Lists, On-demand Campaigns, or Corporate Campaigns by clicking the Set View Options icon.

1. From the Distributed Marketing menu, select Lists, On-demand Campaigns, or Corporate Campaigns.
2. From the View menu, select Set View Options.
3. Set the view options. You can display the calendar as a Timeline, a Text Calendar, or a Graphical Calendar.
4. Click Apply.

Navigating the calendar

All calendar/timeline views contain the following icons:

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Icon]</td>
<td>Opens the Set View Options dialog box. Use this link to change the way that the calendar is displayed.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Opens the Advanced Search dialog box.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Changes the date range that is displayed, moving back one unit in time. For example, if your current calendar view is a monthly timeline of September 2009, clicking displays August 2009.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>Opens a drop-down list of available date ranges. Use this link to quickly change to any other date range. For example, if you are viewing a monthly calendar for July 2009, you can change the view to January 2010 by clicking this link and then choosing January 2010 from the drop-down list.</td>
</tr>
<tr>
<td>Icon</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td><img src="image" alt="Icon" /></td>
<td>Changes the date range that is displayed, moving forward one unit in time. For example, if your current calendar view is a weekly timeline from 7/20/2009 through 7/26/2009, clicking displays 7/27/2009 through 8/2/2009.</td>
</tr>
</tbody>
</table>

### Setting per-session calendar views

You can change the views of the calendar from default settings by clicking View from the Calendar page or a listing of Lists, On-demand Campaigns, or Corporate Campaigns.

1. Access the calendar.
2. Click **View**.
   - The Set View options dialog box opens.
3. Select options to change the view.
4. Click **Apply**.

### Accessing calendar objects by date

You can filter the calendar to display all of the Distributed Marketing objects for a selected date.

This allows you to view all the objects at a more granular level. For example, if the calendar is displaying Corporate Campaigns for June 2009, you can click 7 to open a list page that contains all Corporate Campaigns whose date ranges contain June 7th, 2009.

Click the date in an open calendar that displays Lists, On-demand Campaigns, or Corporate Campaigns.

### Accessing an object from the calendar

You can view the List, On-demand Campaign, or Corporate Campaign from its calendar.

Click the List, On-demand Campaign, or Corporate Campaign on the calendar.

The List, On-demand Campaign, or Corporate Campaign opens.

### Exporting the calendar

You can save a snapshot of the current calendar in HTML format.

1. With the calendar open, click the menu next to the print icon (printer) and select **Export**.
2. Choose one of the following options:
   - Click **Open** to open the compressed file of the calendar.
   - Click **Save** and choose a location to save the calendar to disk.
   - Click **Cancel** to return to the Calendar screen without publishing.

The system publishes the calendar into a compressed file archive.
To publish the calendar

To get a snapshot of the current calendar, save it in HTML format (into a ZIP compressed archive file).

1. Choose the calendar view to publish.
   - Select the objects, time range, and appearance for the calendar view. You can make selections in either of the following ways:
     - From the Local Marketing menu, select Calendar, then select items to view.
     - At a list page for Lists, On-demand Campaigns, or Corporate Campaigns, click the View icon ( ) and choose a calendar view.

2. Click the Print icon ( ) and select Export.

3. Do one of the following.
   - Click Open to open the compressed file of the calendar.
   - Click Save and choose a location to save the calendar to disk.
   - Click Cancel to return to the Calendar page without publishing.

The system publishes the calendar into a compressed file archive. You can use any application for working with compressed files to access the calendar HTML pages. You can go to the next and previous pages of the calendar view in your web browser. If you exported any project data, you can also go to that data from the calendar HTML pages.

Viewing the timeline

If you choose a timeline view, you can choose from several date ranges. The screen can display data for a single week all the way up to data for an entire year.

About timeline view of the calendar

The timeline view displays a grid-like view of the objects by some unit of time, depending on which timeline view you selected.

Each object is displayed in a horizontal bar across its date range. The name of the object displays on the bar.

Note: If you select Enable Color Coding from the calendar view options screen, the bar for each object is displayed in a color that is based on an attribute you chose.

Choose a date-range for the timeline.
- **Week:** displays one week, with each day listed as a column. The starting day is either Sunday or Monday depending on the option that is selected in the Calendar/Timeline Settings screen.
- **Month:** displays a single calendar month. Each day is listed as a column, and days are grouped into weeks.
- **Quarter:** displays three calendar months. Each week is listed as a column, and those weeks are grouped into months.
- **Fiscal Year:** displays a fiscal year (starting month depends on a configuration setting, firstMonthInFiscalYear). Each month is listed as a column, and the months are grouped into quarters.
• **Calendar Year**: displays a calendar year (starts in January and ends in December). Each month is listed as a column, and the months are grouped into quarters.

**Note**: Any day that is specified as non-work time has its column disabled. Additionally, the name of the non-work time (for example, Labor Day) displays when you point to the date.

**Navigating the timeline view**

You can navigate the timeline by doing any of the following:

- Click the expand icon (+) next to an object to display objects that are contained in the hierarchy. For example, clicking + next to a program displays projects that participate in that program.
- Click the expand icon (+) next to an object to display tasks within the workflow for that object.
- Click the object name to drill down to a timeline that contains the objects contained in its hierarchy.

**Note**: Clicking a task opens the Workflow page of the project with which the task is associated.

- Click the zoom in ( ) and zoom out ( ) icons. These icons are displayed above the timeline. Zooming changes the date range of the timeline. For example, zooming in from a monthly timeline takes you to a weekly timeline. The top level is yearly, and the lowest level is weekly.

**Viewing the text or graphical calendar**

The calendar views display data for a selected month. The page displays a grid that contains a column for each day of the week: either five columns that represent the weekdays, or seven, if you choose to display weekend days. You set this option on the Calendar/Timeline Settings page. The page contains either five or six rows, each representing a week.

The view contains a cell for each day of the selected month. The cell for a day contains either a list of items active on the day (text) or a portion of a horizontal bar for each active item (graphical).

**About the monthly calendar**

The monthly calendar view displays a calendar of the selected month. It lists the objects you selected and filtered on.

Choose either of these monthly calendar views.

- **1-Month Text**: Each day contains a list of objects. An object is displayed for all days in its date range.
- **1-Month Graphical**: Each object is displayed in a horizontal bar that begins on its start date and ends on its end date. If you select Enable Color Coding from the calendar view options page, the bar for each object appears in a different color.

**Note**: Any day that is specified as non-work time is indicated by a gray X in the background. Additionally, the name of the non-work time (for example, Labor Day) displays when you point to the date.
Navigating the text/graphical calendar

Navigate the calendar by performing any of the following actions:

- Click the object to display its summary page. For example, clicking a List opens the List's Summary page.
- Click the date to display a list page that contains objects that fall on that date. For example, if the calendar is displaying Lists for June 2009, clicking 9 opens a page that contains all Lists whose date ranges contain June 9, 2009.

About calendar color coding

You can display objects in a color-coded manner on either the graphical calendar or in the timeline views.

You first select the Enable Color Coding check box in either the Calendar/Timeline Settings page or the Set View Options dialog box. After you check the box, the Based on values for menu displays. This list contains attributes for your Lists, On-demand Campaigns, and Corporate Campaigns.

From this list, you can choose any attribute that is an enumerated type. For example, consider the following attribute:

- Name: Product Family
- Valid values: CDs, Credit Card, Home Mortgage

If you choose to group objects by this attribute, your calendar contains four colors: one for each valid value plus N/A, corresponding to any objects that do not contain a value for the Product Family attribute.

The calendar also displays a legend in the lower-right corner of the screen. The legend lists all valid values (plus N/A) along with the color corresponding to that value.

About horizontal bars on the calendar

The timeline view and graphical calendar view display horizontal bars.

Note the following:
- The bars represent the date range for objects that are displayed on the calendar.
- The name of the object displays on the bar.
- The bars can be colored based on an attribute you select.
- The shapes of the bars indicate the following:
  - Rounded-end "start": indicates that the object starts on the date where the bar has a rounded end.
  - Rounded-end "end": indicates that the object ends on the date where the bar has a rounded end.
  - Flat-end "start": indicates that the object starts before the visible date range.
  - Flat-end "end": indicates that the object ends after the visible date range.

Color-coding calendar items

You can use color-coding to display objects in a calendar according to a selected attribute.

You can display different colors of Corporate Campaigns, according to whether the Corporate Campaign is active or not.

Note: You can also set color-coding for the default calendar settings.
1. Open one of the following:
   - Calendar
   - Lists
   - Corporate Campaigns
   - On-demand Campaigns
2. Click View.
   The Set View Options dialog box opens.
3. Check Enable Color Coding.
4. Choose a calendar item and corresponding attribute on which to base color-coding from the lists that are displayed.
5. Click Apply.

**Zooming in or out of a timeline view**
When you select a timeline view, you use the zoom feature to expand or collapse the date range for the view.

The top level for zooming out displays a year-based date range.

The lowest level for zooming in displays a week-based date range.

For example, zooming in from a monthly timeline takes you to a weekly timeline.

Click the zoom in icon (+) or zoom out icon (−) to change the view.
Chapter 3. About Corporate Campaigns

Corporate Campaigns are marketing campaigns that are planned, scheduled, and executed by a centralized marketing team.

Corporate Campaigns are campaigns that present a corporate marketing message to targeted contacts. In Distributed Marketing, Corporate Campaigns execute on a fixed schedule, which you specify by using scheduled workflow tasks in the Corporate Campaign Workflow tab.

Corporate marketers typically use Distributed Marketing to incorporate recommendations about which target customers to include with a Corporate Campaign from field marketers throughout an organization. A Corporate Campaign allows corporate marketers and field marketers to collaborate on a corporate-level campaign.

Why field marketers participate in Corporate Campaigns

By participating in Corporate Campaigns, field marketers help distribute the marketing campaign effort, enabling the organization to take advantage of the marketing design and strategy expertise that is provided by a central team of marketing specialists, as well as the familiarity field marketers have with their personal contacts.

Corporate marketer's role in a Corporate Campaign

Using Distributed Marketing, corporate marketers present the following to field marketers:

- The campaign marketing initiative, in the form of marketing messages and other materials
- The portions of a proposed target list that are assigned to each field marketer

Field marketer's role in a Corporate Campaign

Field marketers participate in specific Corporate Campaigns. Optionally, you can use the Subscription feature to manage field marketers’ participation in Corporate Campaigns. Participating field marketers review their portions of the proposed target list and provide input to corporate marketers about whom to add or delete from the campaign. After each field marketer provides final feedback on their portion of the list, the corporate office fulfills the campaign.

Examples

The following examples illustrate situations in which field marketers decide which customers to include in a Corporate Campaign:

- One field marketer may decide that a particular corporate initiative is not appropriate for some of their assigned customers and removes those customers from the proposed target list.
- Another field marketer may not have enough resources to handle the demand that is generated by the corporate initiative. In this case, the field marketer decides to remove some customers from the proposed target list.
Another field marketer may want to include customers that are not originally targeted by the corporate marketing campaign, and adds them to the proposed target list.

How Corporate Campaigns link to campaigns in Campaign

You create a Corporate Campaign in Distributed Marketing. Then, through the Corporate Campaign user interface, you create a linked campaign in Campaign.

The values of the following attributes of the campaign that is created in Campaign match the values in the Corporate Campaign you created in Distributed Marketing:

- Campaign name
- Campaign code
- Target start and end dates
- Any custom fields that are assigned in the data mapping between Distributed Marketing and Campaign.

Matching campaign codes

Corporate marketers must ensure that the Corporate Campaign code matches that of the campaign in Campaign.

Corporate Campaign template designers can create the templates so that these two codes match automatically when:

1. Corporate marketers create the Corporate Campaign before they create the linked campaign in Campaign.
2. Corporate marketers use Distributed Marketing to initially create the linked campaign in Campaign.

Note: In order for corporate marketers to create linked campaigns, the corporate template developer must map the data between Campaign and Distributed Marketing.

About the Corporate Campaign workflow

The workflow for a Corporate Campaign includes designing the campaign, creating a proposed target list, and incorporating field marketer feedback.

Corporate and field marketers typically work on Corporate Campaigns as follows:

1. Corporate marketers design the corporate marketing campaign.
2. Corporate marketers create a Corporate Campaign in Distributed Marketing.
3. Using the optional Subscription workflow task, corporate marketers invite appropriate field marketers to subscribe to the Corporate Campaign.
4. Field marketers subscribe to the Corporate Campaign.
5. Corporate marketers create the proposed target list for the campaign.
6. Corporate marketers notify field marketers of the availability of the List.
7. Field marketers review the Corporate Campaign and provide feedback to corporate marketers on the target list.
8. Corporate marketers can check field marketer review status.
9. Corporate marketers incorporate field marketer feedback to generate the final target list.
10. Field marketers optionally analyze campaign success.
Example flow for creating a Corporate Campaign target list

Corporate marketers generate a proposed target list that field marketers review and revise. Then, the corporate marketer generates the final target list.

In this example, the corporation is a financial institution. A corporate marketer is introducing a new financial product and expects marketing decision feedback from a team of field marketers.

The corporate marketer generates a proposed target list

After you design a marketing campaign for the new financial product, the corporate marketer selects customers from the corporate database who are appropriate recipients of this campaign.

The corporate marketer may use the optional Subscription task in the workflow to invite the appropriate field marketers to participate in the Corporate Campaign.

If the corporate marketer does not use the Subscription task, all field marketers who have access to any records in the original target list (as defined by Data Level Filters) are invited to participate in the Corporate Campaign through its Field Marketer Notify task. If there are no data level filters, all field marketers are automatically invited to participate in the Corporate Campaign, and they receive notifications to review of the target list.

Field marketers review the proposed target list

Field marketers subscribe to the Corporate Campaign. They then review their portions of the target list.

Field marketer target assignments are made through the corporate database. For this example, assume the following target assignments for two field marketers within the same corporation:

- Field_Marketer_1 is responsible for target_FM11 and target_FM12.
- Field_Marketer_2 is responsible for target_FM21, target_FM22, and target_FM23.

Field marketers can view only those target customers that are assigned to them from a Corporate Campaign, as defined through data level filters.

In this example, the following occurs:

- Field_Marketer_1 accepts both of their target customers on the proposed list.
- Field_Marketer_2 declines all of their target customers on the proposed list because of business constraints.
- Both field marketers finalize their customer selection for the Corporate Campaign.
- Final customer selections that are made by the field marketers are recorded in the database that is used by Campaign.

The corporate marketer generates the final target list

After the field marketers review the proposed customers and make their final decisions, the corporate marketer generates a final target list that incorporates field marketer feedback. When they are satisfied that the list review is complete, they can click Verify and Lock, and mark the Review List task as complete in the
workflow, to enable the Fulfillment tasks to begin.
Chapter 4. Corporate Campaign tasks

The goal of a Corporate Campaign is to target customers that local field marketers approved.

To reach the fulfillment of the Corporate Campaign, corporate marketers perform the following tasks:
1. “About creating Corporate Campaigns.”
2. “About assigning and inviting people to a Corporate Campaign” on page 20.
3. “About linking a Corporate Campaign to Campaign” on page 23.
4. “About generating the target list from the flowchart” on page 23.
5. “About submitting the target list to field marketers” on page 24.
6. “About checking the validation status for target lists” on page 25.
7. “About fulfilling the Corporate Campaign” on page 25.

About creating Corporate Campaigns

Corporate marketers create Corporate Campaigns with a Wizard that guides them through the required steps.

In the first step, corporate marketers select a Corporate Campaign template on which the new Corporate Campaign is based. The template should have the required tabs, workflow, people, and other settings for the Corporate Campaign. Corporate marketers can then modify the Corporate Campaign as necessary.

Required information

The following information is required when you create a Corporate Campaign:

- Target start date
- Target end date
- Corporate Campaign code, which you can generate automatically

Post-creation tasks

After you create the Corporate Campaign, corporate marketers can do the following.

- Attach campaign messages or other information about the initiative.
- Assign participants to the Corporate Campaign.

Creating a Corporate Campaign

You can create a Corporate Campaign by selecting a template and following the steps of the Wizard.

1. From the Local Marketing menu, select Corporate Campaigns.

2. Click the Add icon (➕).

   The Select a Corporate Campaign Template dialog box opens. Templates are listed on the left. If you select a template, information about that template appears on the right.
3. Select a template from the list on the left, and click **Continue**.
4. Continue through the Wizard pages, entering all required information, and optional information as needed.
5. Click **Finish** after you enter the necessary information.

The new Corporate Campaign is saved.

You can modify the Corporate Campaign as necessary now.

---

**About assigning and inviting people to a Corporate Campaign**

You can manually assign users to participate in a Corporate Campaign, as well as automate the invitation process.

**Manually assigning users to a Corporate Campaign**

You can manually assign users as participants in a Corporate Campaign in either of these ways:

- When you create a Corporate Campaign, you can select participants through the Corporate Campaign Wizard.
  
  Assigning field marketers to the Corporate Campaign is automated through the Notify Field Marketer task in the workflow.
- You can view and assign Corporate Campaign participants from the People tab of a Corporate Campaign after you create the Corporate Campaign.

You can assign participants as individuals, or by role. When you assign participants by role, you can assign an entire group of field marketers to participate in a Corporate Campaign at once.

**Automatically inviting field marketers to a Corporate Campaign**

You can automate the field marketer invitation process by using one of two tasks in the Corporate Campaign workflow:

- Notify Field Marketer task
- Subscription task

**Note:** If you are manually inviting field marketers, ensure that you do not include these tasks in Corporate Campaign workflow, so that field marketers do not receive automatic invitations.

**About the People tab**

Each Corporate Campaign contains its own People tab. Use this screen to do the following.

- Manage the members of a Corporate Campaign.
- Edit access level for a member.
- Replace a person in a role when a user becomes unavailable.
- Add or remove a role.

A Corporate Campaign template can contain information about the functional roles for the project. A template can reduce some of the work necessary to assign people or teams to units of work within the Corporate Campaign.
Note: By default, the People tab is available only for Corporate Campaigns. For information about making it available for Lists or On-demand Campaigns, see the Distributed Marketing Administrator’s Guide.

To manage Corporate Campaign members

1. Navigate to the People tab of the Corporate Campaign.

2. Click the Edit Member/Role Settings icon ( ). The Select Team Members dialog box opens.

3. Do one of the following.
   a. To add a person, select the name from the left pane of the dialog, and click >>.
   b. To remove a person, select the name in the Select Team Members list box and click <<.
   c. To change the role for a person, select the name in the Select Team Members list box then click Up and Down to move it to the required role.

   Note: You cannot remove a user assigned to a task.

4. Click Save Changes.
   The Select Team Members dialog box closes. The People tab becomes the active window.

The changes that you make are reflected in the list of people and roles. For example, if you added a creative lead, the screen would contain a line similar to the following.

<table>
<thead>
<tr>
<th>Member/Access Level</th>
<th>Role</th>
<th>Email Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>P Picasso (participant)</td>
<td>Creative Lead</td>
<td><a href="mailto:ppicasso@mycompany.com">ppicasso@mycompany.com</a></td>
</tr>
</tbody>
</table>

Selecting team members for a Corporate Campaign

You can select other Distributed Marketing users to participate in the Corporate Campaign.

You can assign participants as individuals, or by role. When you assign participants by role, you can assign an entire group of field marketers to participate in a Corporate Campaign at one time.

1. Open the Corporate Campaign.

2. Open the People tab.

3. Click the Edit Member/Role Settings icon ( ). The Select Team Members dialog box opens.

4. To assign team members by role:
   a. In the upper left of the dialog box, click Roles.
   b. Select roles to assign to the Corporate Campaign from the list on the left.
   c. Click the right-pointing arrow button to move the selected roles to the Selected Team Members list on the right.

5. To assign individual users:
   a. In the upper left of the dialog box, click Folders.
   b. Expand the folder entries and select individuals to assign to the Corporate Campaign from the list on the left.
c. Click the right-pointing arrow button to move the selected users to the Selected Team Members list on the right.

6. Click **Save Changes**.

You can now assign work for the Corporate Campaign by role.

**Editing Corporate Campaign member access levels**

You can control the access level other Distributed Marketing users have to the Corporate Campaign.

You can specify whether users are Owners or Participants of the Corporate Campaign. The specific privileges of Owners and Participants are determined by the user permissions that are defined by the Distributed Marketing administrator.

1. Open the Corporate Campaign.
2. Open the **People** tab.
3. Click the **Edit Member/Role Settings** icon ( ).
   The Select Team Members dialog box opens.
4. To add users:
   a. Expand the folder entries and select individuals to assign to the Corporate Campaign from the list on the left.
   b. Click the right-pointing arrow button to move the selected users to the Selected Team Members list on the right.
5. To make a user an owner of the Corporate Campaign:
   a. In the Selected Team Members list, select the user.
   b. Click **Up**.
      Repeat this step until the user appears under **Owner** in the list.
6. To make a user a participant in the Corporate Campaign:
   a. In the Selected Team Members list, select the user.
   b. Click **Down**.
      Repeat this step until the user appears under **Participant** in the list.
7. Click **Save Changes**.

**Assigning work by role**

You can add a user to any list of existing users that are assigned to a task or replace any existing assigned users by clicking the **Assign Work by Role** icon.

Before completing this task, you should select team members for the Corporate Campaign.

1. Open the Corporate Campaign.
2. Open the **People** tab.
3. Click the **Assign Work by Role** icon ( ).
   A dialog box opens asking how you want to assign work. You can choose to do the following.
   • Add the new user to any existing users assigned to the task.
   • Replace any existing assigned users with the new user.
4. Select **append the new user** to add the new user to any existing users assigned to the task, or select **replace the existing assignment** to replace any existing assigned users with the new user.

5. Click **Apply**.
   
   Users are assigned to tasks as you specified.

6. Click **Close**.

---

**About linking a Corporate Campaign to Campaign**

After you create a Corporate Campaign and assign members, you must create a campaign in Campaign that is linked to the Corporate Campaign.

You must link a Corporate Campaign to a campaign in Campaign so that flowchart run tasks in the workflow of a Corporate Campaign can execute flowcharts that are part of the campaign.

You can create a linked campaign directly from Distributed Marketing. After you do this, you can create and run the flowchart for the linked campaign in Campaign.

After you link a campaign in Campaign to a Corporate Campaign, you can open the campaign in Campaign from the Corporate Campaign.

**Creating a campaign linked to a Corporate Campaign**

You can create a campaign that is linked to a Corporate Campaign in Campaign while you work directly with a Corporate Campaign.

1. Open the Corporate Campaign.

2. In the Summary tab, click the **Create a Linked Campaign** icon ( ![Create a Linked Campaign icon](image))
3. From the icon’s drop-down list, select **Create a Linked Campaign**.

   The linked campaign is created in Campaign.

**Accessing a Corporate Campaign from Campaign**

If you are working on a campaign in Campaign, you can open a Corporate Campaign.

1. Open the Summary tab of the campaign.

2. Click the Distributed Marketing link in the tab list ( ![Distributed Marketing icon](image)).

   The Summary page of the Corporate Campaign opens.

---

**About generating the target list from the flowchart**

After you create a Corporate Campaign and link it to a campaign in Campaign with the same ID, you must create and publish the campaign flowchart in Campaign to generate the list of proposed targets for the Corporate Campaign.

**Opening a linked campaign in Campaign**

The **Implementation** icon shows you the summary page of the campaign.
Click the Implementation icon in the tabs at the top of the Corporate Campaign page. The Summary page of the campaign in Campaign opens.

Creating and running the flowchart for the linked campaign

From the Flowchart tab for the linked campaign, you can create a flowchart with the same name and run the flowchart.

1. In Campaign, select the Flowchart tab for the linked campaign.
2. Create the flowchart with the same name as defined in the Corporate Campaign workflow to select the target list according to your corporate campaign strategy.
3. Publish the flowchart.

You can now confirm the target start and end dates and start the Corporate Campaign.

About submitting the target list to field marketers

You can notify field marketers that you are distributing the target list for them to review their portion.

You can use the field marketer notification feature to notify participant field marketers who are responsible for targets on the list.

Notifying field marketers

Note the following about notifying field marketers to review a proposed target list for a Corporate Campaign:
- You must first generate the proposed target list.
- You must be the Corporate Campaign owner.
- Only field marketers responsible for targets on the proposed target list are notified.
- Each field marketer who is responsible for targets in the list receives a personalized message you type, along with a message similar to the following.

The campaign Name has just started. You have until Date to validate the list content.

Note: A field marketer becomes responsible for target records through data level filters. If data level filters are not defined, then all field marketers are notified during the execution of the Notify Field Marketer system task.

Notifying field marketers to review a proposed target list using notifications

You can use notifications to alert field marketers to review the Corporate Campaign proposed target list.

1. Open the Summary tab of the Corporate Campaign.
2. Click Notify the Field Marketers.

Note: This task is dependent on a List Generation task.
3. Optionally, select a role to assign the Corporate Campaign review to a group of field marketers.
About checking the validation status for target lists

You can check the review status for a Corporate Campaign to see that participating field marketers made final decisions on the proposed target list before you generate the final target list.

Checking the validation status for Corporate Campaign lists

You can check the validation status for Corporate Campaign lists by viewing the data.

1. Open the Summary tab of the Corporate Campaign.
2. Open the Analysis tab.
3. View the validation data.
   The work of each field marketer is complete when the status of all records is Validated or Added.

About fulfilling the Corporate Campaign

After your participating field marketers finalize selections for the proposed target list, the field marketers' choices are recorded in the uacc_corporate_lists table in the Campaign database.

In this table:
- Records with a value of A in the status column were added by field marketers.
- Records with a value of V in the status column were validated by field marketers. Validated records are accepted in the target list, and locked.

The final stage of the Corporate Campaign consists of running the campaign to deliver the offer to the final targets through a selected channel such as mail or email.

You fulfill the Corporate Campaign by running the fulfillment flowchart in Campaign.

Selecting the finalized list for the new flowchart

1. Open the linked campaign in Campaign.
2. Create a flowchart.
3. Select target records from the uacc_corporate_lists database table for which the status is A (for added records) or V (for validated (accepted and locked) records from the original list).
4. Complete the flowchart with any required exclusion rules with processes for any of the following:
   - Generating targets
   - Generating output data
   - Response tracking

Fulfilling a Corporate Campaign

To fulfill a Corporate Campaign, you must set the dates for the campaign and run it.
1. In the workflow for the Corporate Campaign, create the flowchart run task.
2. In Campaign, create and publish the flowchart.
3. Set the dates for the Corporate Campaign and run it.
Chapter 5. Corporate Campaigns and field marketers

When a corporate marketer uses the Subscription task in the workflow for a Corporate Campaign, invited field marketers choose whether to subscribe to the Corporate Campaign.

When field marketers subscribe to a Corporate Campaign, they provide corporate marketers with recommendations about which target customers to include in the campaign or wave.

By using field marketer recommendations, central marketing teams can run programs on behalf of some or all of their field marketing teams, while they allow field marketers to provide input about specific individuals to contact.

**Multi-wave Corporate Campaigns and field marketers**

When a Corporate Campaign contains multiple waves, and uses the Subscription system task in the workflow, invited field marketers choose which waves to subscribe to. A field marketer can subscribe to any subset of waves in the Corporate Campaign.

**Field marketer access to Corporate Campaigns**

By default, only corporate marketers are authorized to create and modify all aspects of Corporate Campaigns. As a field marketer, you can view Corporate Campaigns to which you subscribed.

You can view proposed target customers that are assigned to you. You cannot view target customers that are assigned to other field marketers.

You can typically perform the following tasks:
- View the Corporate Campaign summary.
- View any attachments included with the Corporate Campaign.
- Review, accept, add, or remove target customers from the proposed target list.
- Finalize your portion of the proposed target list.
- View the calendar to see the Corporate Campaign schedule.

For more information about your access privileges, see your administrator.

**About Corporate Campaign proposed target lists**

The proposed target list for a corporate marketing campaign is the initial list of customers for whom the campaign is intended when the campaign is first designed by a corporate marketer.

These customers are associated with field marketers in the corporate database; for example, the associations may be based on the customer’s region.

Field marketers are assigned those proposed target customers in a Corporate Campaign to whom they are associated. They must then review those customers and decide on the final list for the Corporate Campaign.
Field marketers can:
- Accept or decline each customer.
- Add target customers to the list of proposed customers.
- Finalize the target list for the Corporate Campaign.

About reviewing the Corporate Campaign proposed target lists

There are several tasks field marketers can perform for Corporate Campaigns. Field marketers typically perform the following tasks for Corporate Campaigns to which they are subscribed:
- Review Corporate Campaign status information and other data in the Corporate Campaign Summary page.
- Review attachments to the Corporate Campaign.
  Corporate marketers may include attachments to provide field marketers with information that is relevant to the Corporate Campaign. For example, an attachment may contain marketing messages.
- Review their portion of the proposed target list.
- Provide the corporate marketer with recommendations for modifications to the proposed target customer list.

Note the following:
- The changes field marketers make to the proposed target customer list are stored in the corporate database; corporate marketers access the changes there.
- When field marketers finalize their portions of the proposed target list, target customer review data status is updated in a database table.

About adding customers to Corporate Campaign

Field marketers can add target customers to a proposed list for a Corporate Campaign to which they subscribe.

Corporate marketers may propose that the list targets previous customers, for example, while field marketers have new target customers in mind. Field marketers can filter their lists of personal contacts to select target customers to add.

When field marketers add customers to the proposed list for a corporate marketing campaign, they can select a set of customers with specific characteristics. For example, corporate marketers can allow field marketers to select from the following criteria when adding customers to a proposed list:
- Name
- Age
- Income range

About making permanent additions and deletions to a list

When you work with a recurring workflow, you might be tasked with several list review steps within the course of a single Corporate Campaign.

If wanted, you can make permanent additions or deletions from the list; these additions or deletions remain in effect for all future occurrences of the List Review task.
Note: The ability to make permanent additions or deletions to a contact list is controlled by the Review List task in the Corporate Campaign workflow. If this option is not selected for a List Review task, you are not able to add or delete contacts permanently in the corresponding list.

When to add or remove contacts permanently

You should make permanent additions or deletions to a list when the following statements are true:
• You are using a recurring workflow.
• The recurring workflow includes several List Review tasks.
• You know that the list as generated is incomplete; you need to add or delete contacts. You want these additions and deletions to remain in effect for each future occurrence of the recurring campaign.

Reviewing proposed target customers for a Corporate Campaign

When you participate in a Corporate Campaign, you must review the proposed target customers for that campaign.

When you are presented with a proposed list of target customers for review, you must either accept or decline each customer before you can finalize your target list selections for the corporate campaign.

You can accept or decline proposed target customers individually, or all at one time. You can also add one or more of your customers to the proposed list.

In recurring Corporate Campaigns, if you are allowed to do so by the campaign creator, you can add to or exclude contacts from a list for each recurrence of the workflow. When you add or remove contacts in this way, the changes you make remain in effect throughout all list review tasks within the recurring workflow. If you are not allowed this option, you can modify only the target list for the current occurrence of the workflow.

1. Open the Corporate Campaign.
2. In the Summary page, click Waiting items.
   The Contact to Validate page opens.
3. Accept or decline customers as needed.
   • To accept all proposed customers, click Accept All Records.
   • To decline all proposed customers, click Decline All Records.
   • To accept specific customers only, check the Accept column in the rows for those customers.
   • To decline specific customers only, check the Decline column in the rows for those customers.
   • To decline specific customers permanently, check the Dec. Perm. column in the rows for those customers.
   • To add customers:
     a. Click Search and Add Records.
        Records added using this link get added to the Newly Added by Field Marketer list.
Note: This link is not available on the list manager screen for Declined Records.

b. Select one or more target list filtering criteria from the options that are presented on the form, then click Search.
   The target records resulting from your search are displayed.

c. Check one or more of the customer records to add to the target list.

d. Click Accept Selected.
   If you selected to add or delete contacts permanently, a message opens asking whether you want to add the contacts permanently for recurring campaigns.

e. Click OK to make the additions permanent.
   Or click Cancel to make the additions apply to the current occurrence only.

4. Optionally check After the next save, consider my review complete to validate and lock this list when you save changes.

   Note: If you do not check this option, any customer records that you do not accept or decline are displayed when you next review the target contacts.

   Note: Added contacts do not display until you close the window and click Newly added by Field Marketer.

5. Click Save to save changes and complete your review of the proposed target list.
   Accepted and removed contacts disappear from the list, and are only viewable in the Accepted/removed lists page.

**Viewing or accepting previously declined targets**
You can view previously declined target customers before you finalize your portion of the proposed target list, and, if wanted, accept those customers.
1. Open the Corporate Campaign for which you declined target customers on the proposed list.
2. Click View Declined.
3. You can accept any declined target customers from this list by checking the customer entries under the Accept column.
   You can also select Accept All Records or Set All Records to Review to accept or review all the previously declined records.

Those customers are now included in the list.

You must now finalize the list.

**Viewing or declining previously accepted targets**
You can view previously accepted target customers before you finalize your portion of the proposed target list, and, if wanted, decline those customers.
1. Open the Corporate Campaign for which you accepted target customers on the proposed list.
2. Click View Accepted.
3. You can decline any accepted target customers from this list by checking the customer entries under the Decline column.
   You can also select Decline All Records or Set All Records to Review to decline or review all the previously accepted records.
Those customers are now removed from the list.

You must now finalize the list.

**Viewing or removing added targets**
You can view previously added target customers before you finalize the proposed target list. You can also remove previously added target customers.
1. Open the Corporate Campaign for which you added customers to the proposed list.
2. Click View Additions.
3. You can remove any added target customers from the list by checking the customers under the **Remove** column.
   
   You can also select **Decline All Records** to decline all the previously accepted records.

Those customers are now removed from the list.

You must now finalize the list.

**Finalizing your portion of a Corporate Campaign target list**
You can finalize the proposed target list for a Corporate Campaign by validating and locking the target list.

You can finalize the proposed target list after you have:
• Reviewed the proposed target list.
• Accepted or declined each customer in the proposed target list.
• Optionally, added target customers to the proposed list.
1. Open the Corporate Campaign.
2. In the Summary page, click **Validate and lock list**.

   **Note:** You cannot reverse this action.

The list is now finalized.
Chapter 6. About subscriptions

A subscription is the invitation to a field marketer to include their territory in a Corporate Campaign, or a wave of a multi-wave Corporate Campaign.

Through subscriptions, field marketers can control which Corporate Campaigns and waves, and potentially which territories within a campaign or wave, they participate in.

In addition, supervisors can control the Corporate Campaigns or waves their staffs participate in. When a supervisor subscribes to a Corporate Campaign, field marketers that are under the supervisor in a defined territory hierarchy are also subscribed to the campaign. For example, if the territory supervisor for New England subscribes to a corporate campaign, the state manager for Vermont also participates in the campaign.

Subscriptions and data level filters

Subscriptions can be used in combination with data level filters to control both what data is included in the generated list of customers for a Campaign, and who is invited to review the list of customers that is generated.

Example

If MA_FM is the field marketer for Massachusetts (MA), you can use a state-level subscription to invite MA_FM to include or exclude Massachusetts customers from the Corporate Campaign contact list. If MA_FM accepts the invitation, MA customers are on the contact review list. Using data level filters, MA_FM can also be configured to see only MA customers, thus limiting their view to those customers of interest to them. When data level filters are present, only Field Marketers who have data of interest on the generated list are invited by the Notify Field Marketer system task.

Subscriptions can operate at multiple levels. So for example, NE_FM might be the Northeast Regional FM who supervises the state field marketers in their region, which might include Massachusetts. The corporate marketer can invite regional field marketers to subscribe for their region.

If NE_FM is invited to subscribe, they can accept or decline. If they accept, data for all customers in their region are included in the list generation. So continuing the example above, data for Massachusetts’s customers would be included in the list. In this case, the MA_FM has no control over whether MA data is included, because the subscription invitation is issued at the region level. However, if the data level filters are configured to allow MA_FM to see MA customers, MA_FM is invited to review the MA customers when the Corporate Campaign contact list is generated.

Defining territories

To support subscriptions, the administrator must define a territory hierarchy on the Distributed Marketing server. For more information, see the Distributed Marketing Administrator’s Guide.
The Subscription task in a Corporate Campaign workflow

Corporate marketers enable subscriptions by adding the Subscription task to the Corporate Campaign workflow or to each occurrence in a recurring workflow.

By defining Subscriptions tasks in workflows, as opposed to the Corporate Campaign as a whole, you enable field marketers to subscribe to individual waves, drops, and lots of recurring Corporate Campaigns.

The Subscription task is a system task and starts and stops automatically according to its target start and end dates.

The Subscription task and territories

Subscription invitations are sent to field marketers based on their associated territories.

Territories are defined in a hierarchical relationship. For example, a typical hierarchy would be:

Country
Region
State

In this scenario, there could be a Country manager for each country, under which there would be several region managers for the regions in the country. Under each region manager, there would be managers for each state in the region.

When a corporate marketer configures the Subscription task, the specify the following.

1. Selection Level
2. List of Territories
3. Subscription Level

About Selection Levels

The Selection Level in a Subscription task filters territories and subscription levels that are available to the corporate marketer.

All levels of the defined territory hierarchy are available values for the Selection Level.

For example, the corporate marketer might select one of the following.

- **Country**, in this case the top level in the territory hierarchy. These countries, for example the United States, France, and Germany among others, become the options in the List of Territories field.
- **Region**, the second level in the territory hierarchy. Each country contains multiple regions; each region contains multiple states.
- **State**, the bottom level in the territory hierarchy. Each state is grouped under a region.
About the List of Territories

The Selection Level determines the territories that appear as options in the List of Territories field.

All territories that are defined at the selected level are shown.

For example, if you select Region as the Selection Level, all regions, from all countries, are listed as options in the List of Territories field.

You must select one or more of the territories listed.

About Subscription Levels

The Subscription Level is the level in the hierarchy for which users receive subscription invitations.

The Subscription Level can be at the level of the Selection Level, or beneath that level, but not above that level. For example:

If you select Region as the Selection Level, you can select Region or State as the Subscription Level:
- If you select Region, regional managers for the regions you select in the List of Territories field receive a subscription invitation.
- If you select State, state managers for the states within the regions you select in the List of Territories field receive a subscription invitation.
- You cannot select Country as the Subscription Level, as it is a higher level than the Selection Level.

Subscription example

A corporate marketer can specify a country or region for a Subscription task.

A corporate marketer may specify that for a Subscription task:
1. The Selection Level is Country.
2. The List of Territories is the United States
3. The Subscription Level is State

When this Corporate Campaign starts, each user that is designated as a state manager for a state within the United States receives an invitation to subscribe to the Corporate Campaign.

The corporate marketer might instead set the Subscription Level to Region. In this case, each user that is designated as a region manager receives an invitation to subscribe to the Corporate Campaign. State managers, lower in the territory hierarchy than region managers, do not receive the invitation. However, if the region manager subscribes to the Corporate Campaign, managers of states within that region also participate in the Corporate Campaign.

Subscriptions and user variables

When a Corporate Campaign has a Subscription system task that is linked to a Flowchart Run system task, the Flowchart Run system task needs to have an associated flowchart that makes use of the subscription response information. You
do this by defining a user variable in the flowchart called SubscriptionList. This user variable can then be used in a query such as the following:

```
Contact_Info.State IN (UserVar.SubscriptionList)
```

When the flowchart is run from Distributed Marketing, the list of states or regions that are subscribed is sent as a parameter to Campaign, and the query above is executed as something like:

```
Contact_info.state in ('MA', 'VT')
```

**How territories, hierarchies, and user associations are defined**

The Distributed Marketing administrator defines the territories, hierarchical relationships, and territory managers by loading an XML file on the Distributed Marketing server.

For more information, see the *Distributed Marketing Administrator’s Guide*. 
Chapter 7. Workflows

You can manage tasks that are associated with an Advanced List, On-demand Campaign, or Corporate Campaign. The Workflow tab provides a spreadsheet on which you can list all tasks. You can assign dates and team members to each task.

When a project manager creates a Corporate Campaign, On-demand Campaign, or Advanced List, the selected template can provide an initial workflow. The project manager can then use the Workflow tab to customize the workflow that is provided by the template to meet specific needs.

Team members that are assigned to a Corporate Campaign, On-demand Campaign, or Advanced List use the Workflow tab to track their work. Any team member that is involved in the Advanced List, On-demand Campaign, or Corporate Campaign (with the appropriate access permission) can edit any value on the Workflow tab.

To help you complete different workflow-related efforts, the Workflow tab offers different view modes and an edit mode.

Workflow concepts

Workflows organize the tasks, approval tasks, stages, and milestones for each project. Workflows measure the time that is spent on each part of the project and the people who are assigned to work on it.

Tasks

Tasks are steps in the workflow where a user or the system acts. The task is not complete until the action is complete.

Stages

You can group tasks together under headings called stages. Stages can help you with task organization. For example, you can create a stage that has all tasks your field marketers-specific do. In spreadsheet view mode or edit mode, stages are the headings in bold that group the tasks together.

Dates

Workflows contain the following types of dates.

- **Actual** dates specify when tasks start and finish.
- **Target dates** are dates that are used to plan the schedule. Typically, they are set at the beginning of the project.
- **Anchored dates** are fixed dates that cannot change, even if the dates of the tasks upon which they are dependent change.
- **Non-work time** represents dates when people do not work, so the system skips those dates when it calculates durations for tasks. Distributed Marketing currently supports system-wide non-work time that applies to all tasks. It is up to the List, On-demand Campaign, or Corporate Campaign manager to determine whether overriding any of these dates is necessary. System administrators enter and maintain these dates.
• **Weekend dates** are dates that you use to specify work that occurs on a
  weekend on a per-task basis. You can schedule work on a weekend date by
  using the Schedule Through option for each task.

**Duration**

Duration is the actual number of days that are assigned to a task. If you assign
actual start and end dates, the system automatically calculates the difference
between the actual start date, and the actual end date for a task. You can assign
duration by using any non-negative number. For example, you can use 0.25 to
assign a quarter of a day for the task duration.

**Effort**

The work effort in days (as opposed to duration) that it takes a user to complete a
task. For example, a task takes three calendar days to complete, but the task owner
spends only half a day on the task for each of the three days. The effort for the
task is one and a half days even though the duration is three days.

**Locked tasks**

When you edit a task, the task is locked so no other user can edit it at the same
time.

If anyone attempts to edit a locked task, they receive a warning message,
indicating that it is in use.

**People and roles**

You can assign tasks to individual team members or you can assign tasks to all
team members in each role. When you assign a task to one or more team members,
they are considered to be task owners. You assign roles to team members on the
People tab of the List, On-demand Campaign, or Corporate Campaign.

Workflows use the following concepts to identify people in the workflow.
• **Task owners** are the people responsible for running or managing workflow
tasks.
• **Roles** are used as a bridge between tasks and people. When a role is assigned to
  a task in a List, On-demand Campaign or Corporate Campaign, all users that are
  associated with that role are owners of the task. Templates can contain roles for
  certain tasks. Then, when you create a List, On-demand Campaign or Corporate
  Campaign, some (or all) of the tasks have a default role that is already
  associated with them.

**System tasks**

System tasks are workflow tasks that start automatically, based on a combination
of start date and completion of tasks on which they are dependent.

You can create these types of system tasks:
• Subscription
• Flowchart Run
• Notify Field Marketers
• List Review
• Recurrence

**Note:** When you pause a workflow, system tasks that are scheduled during the time the workflow is paused do not execute until the workflow resumes.

**Subscription system task**

A Subscription system task allows you to have field marketers subscribe to, and participate in, a Corporate Campaign.

The Subscription system task is only used in Corporate Campaigns.

A Subscription system task starts and finished automatically, according to the target start and end date. You can also mark it complete manually.

**Flowchart Run system task**

A Flowchart Run system task allows you to specify a flowchart that should run at a particular place in the workflow.

When you create a Flowchart Run system task, you specify one of the following:

• For corporate marketers that are working with Corporate Campaigns, the name of the flowchart in the linked campaign (in Campaign) in the workflow.

• For field marketers that are working with On-demand Campaigns and Lists, the name of the tab that is associated with the flowchart in the On-demand Campaign or List that you want to use to gather data.

When Distributed Marketing executes a Flowchart Run system task, flowchart run is started in Campaign.

Flowchart Run system tasks start and finish automatically when there is a matching flowchart in Campaign, when the target start date is reached and when all tasks it depends on are finished; you do not need to manually start or stop a Flowchart Run system task. The % Complete field fills in automatically as the task proceeds.

**Flowchart Run tasks with no assigned flowchart**

The icon for the Flowchart Run system task displays red when no known flowchart is assigned to the task. After you assign a flowchart, the color of the icon changes to black.

**Flowchart Run tasks and Corporate Campaigns**

For Corporate Campaigns, for the Flowchart Run system task to run correctly, you must save and publish the flowchart of the linked campaign in Campaign.

**Notify Field Marketers system task**

The Notify Field Marketers system task allows you to include automatic notification to Field Marketers within the workflow.

This type of system task is used only with Corporate Campaigns.
When a Notify Field Marketers system task starts, Distributed Marketing sends notification to Field Marketers, informing them that contact lists are ready for their review. Distributed Marketing also adds all selected Field Marketers to the People tab of the Corporate Campaign.

The Notify Field Marketers system task starts and finishes automatically; you do not need to manually start or stop a Notify Field Marketers system task. The % Complete field fills in automatically as the task proceeds.

Note: A Notify Field Marketers system task must be dependent on a Run Flowchart system task.

**List Review system task**

The List Review system task allows you to identify time within the workflow during which Field Marketers review contact lists that result from a flowchart run.

Unlike any other Workflow Task, this task can be finished by a link present on Summary Tab of On-demand Campaign. Without going to workflow tab, you can finish this task directly from Summary Tab.

Note: A List Review system task must be dependent on a Flowchart Run system task.

List Review system tasks start and finish automatically. You can manually finish a List Review system task when you are sure that all Field Marketers completed the review. After you manually finish the List Review task, the next dependent task (if any) in the workflow starts when its target start date is reached.

When the List Review is completed, manually or automatically, the List is locked to field marketers; field marketers can no longer change their portions of the List.

The two permissions, Update System Task status and Update all System Task, are applied to all Workflow System Tasks along with List Review Task. If these permissions are not granted, then a task cannot be completed from workflow along with List Review Task. List Review can be finished from the summary tab of an On-demand Campaign by using the Finish List Review link, even if these security permissions are not granted in the Security Policy.

To specify the number of records to show, you can use the Limit List View option. In List Manager, only the number of records that are specified in the List Review Task are displayed.

The fields to limit additions are as follows:

- On list review pop-up for templates of On-demand Campaign, Corporate Campaign, and Advanced Lists.
- Corporate Campaign – it is displayed and editable for corporate marketers only. In the case of corporate campaigns, field marketers cannot access this pop-up based on security settings. Even if they are allowed access, they can view but cannot edit the settings.
- On-demand Campaigns and advanced lists - these fields are displayed but cannot be edited

If the value of Limit List View option is set to limit the number of records that can be viewed, then the field is automatically set to select the second radio button option with value set to “0.” You get an explicit message that no records can be
added when the list view is limited. If Unicode characters are present in the List code either by adding an ID prefix or entering manually, then you are not able to export a customer list from List Manager window.

**Note**: User cannot set both number and percent. For example, to limit to 10% with a maximum of 100.

In the List Manager task, you can specify the available Display Formats. You can identify or filter by Audience Level. Only formats selected in the List Review Task are available.

**List Review system tasks and recurring workflows**

In recurring On-demand Campaigns or Corporate Campaigns, you can enable permanent updates so that any additions or removals that take place during List Review are applied automatically in all occurrences.

**List Review system tasks and multi-offer campaigns**

In multi-offer On-demand Campaigns or Corporate Campaigns, you can divide a list that is generated by a single Flowchart Run system task into several segments. The results of the Run Flowchart system task are presented as several Lists.

**Recurrence system task**

Recurrence starts when predecessors are complete. It then recalculates previous dependent tasks that target the start date when these previous tasks are set.

The available recurrence types are Monthly, Weekly, Daily, and Hourly. Date and time calculations must apply to working hours and business days.

On the **Recurrence** tab, you are given the option to choose the Campaign Workflow Type (Nonrecurring or Recurring). After selecting the workflow type, you are able to choose Frequency and Time between occurrences.

There can be only one recurrence task in a sequence of dependant tasks. A control is made when saving the workflow.

**Hourly recurrence**

For Template Run Flowchart Task Recurrence, you have the Ending option where you can choose No End or Total number of occurrences. You also choose Permissions to modify the recurrence in the instance (All options, No option, and All options but frequency). Run Flowchart Task properties if the recurrence on task is chosen. You can also get a preview of the next occurrences.

**Note**: All options allow you to turn from Not recurring to Recurring.

For Instances Run Flowchart Tasks, under the Recurrence tab, you have a start date to choose along with the Ending (no end, total number of occurrences, and end by).

**Creating a flowchart run task**

You create a flowchart run task through the workflow spreadsheet.

1. In the workflow spreadsheet, in Edit view, select the row after which you want the Flowchart Run task to appear.
2. Click the Add Task Row icon ( ).
   A new task row is added to the flowchart.
4. In the Flowchart Name column, perform one of the following tasks:
   - For Corporate Campaigns, enter the name of the flowchart from your linked campaign.
   - For On Demand Campaigns and Lists, select the name of the tab that runs the Campaign flowchart.
5. Complete the Schedule Through, Target Start, Target End, Duration, and Member Role fields as desired.
   You can also change the name of the task.
6. Click Save and Finish.

If the workflow is part of a Corporate Campaign, you must save and publish the associated flowchart in Campaign.

Creating a Notify Field Marketers system task
You can create a Notify Field Marketers system task through the workflow spreadsheet.
1. In the workflow spreadsheet, in Edit view, select the row after which you want the Flowchart Run task to appear.
2. Click the Add Task Row icon ( ).
3. Select Notify Field Marketers.
   A new task row is added to the flowchart.
4. Complete the Schedule Through, Target Start, Target End, Duration, and Member Role fields as desired.
   You can also change the name of the task.
5. Make the new Notify Field Marketers system task dependent on a Run Flowchart system task.
6. Click Save and Finish.

Creating a List Review system task
You can create a List Review system task through the workflow spreadsheet.
1. In the workflow spreadsheet, in Edit view, select the row after which you want the Flowchart Run task to appear.
2. Click the Add Task Row icon ( ).
3. Select List Review.
   A new task row is added to the flowchart.
4. Complete the Schedule Through, Target Start, Target End, Duration, and Member Role fields as desired.
   You can also change the name of the task.
5. Make the new List Review system task dependent on a Run Flowchart system task.
6. Click Save and Finish.
7. if you are working on a multi-offer campaign:
a. Click the name of the List Review system task.
   The Task properties screen opens.
b. In the Segment Code field, enter the name of the segment as it appears in
   the flowchart in your linked campaign.
c. Click Save and Return.

You can now enable permanent updates to a list.

**Enabling permanent updates to a list**

To enable permanent updates to a list, check the Allow permanent updates check box.

1. In the workflow spreadsheet, in Edit view, double-click the List Review system
   task that you want to change.
   The Post Task dialog box opens.
2. Check the Allow permanent updates check box.

**Creating a Subscription task**

You can create a Subscription task through the workflow spreadsheet.

1. In the workflow spreadsheet, in Edit view, select the row after which you want
   the Flowchart Run task to appear.

2. Click the Add Task Row icon ( ).
3. Select Subscription.
   A new task row is added to the flowchart.
4. Complete the Schedule Through, Target Start, Target End, Duration, and
   Member Role fields as desired.
   You can also change the name of the task.
5. Click Save and Finish.

You must now configure the Subscription task.

At least one flowchart run task must depend on the subscription task. You must
add the flowchart run task with this dependency.

**Configuring the Subscription task**

When you configure the Subscription task, in addition to setting the target task
dates, you set the subscription Selection Level, the List of Territories, and the
Subscription Level.

Before you complete these instructions, you must create the Subscription task.

These settings determine which field marketers receive invitations to subscribe to
the Corporate Campaign.

1. View the workflow spreadsheet, not in Edit mode.
2. Double-click the Subscription task.
   The Post Task dialog box opens.
3. Enter the Target Start and Target End dates as needed.
4. Select a Selection Level.
5. Select one or more territories in the List of Territories field.
6. Select a Subscription Level.
7. Click Save and Finish.

Example of a Corporate Campaign workflow with system tasks

A typical workflow for a Corporate Campaign might include two flowcharts: one that initially selects a list of contacts, and another that fulfills the campaign after Field Marketers reviewed and approved the initial list.

**Task 1: Subscription**

Task 1 is a Subscription system task. You configure a subscription task to invite relevant field marketers to participate in the Corporate Campaign.

**Task 2: Flowchart Run**

Task 2 is a Flowchart Run system task. The Flowchart Name column identifies the name of the flowchart in the linked campaign (in Campaign) that should be run to complete this task. When task 2 runs, the flowchart Corporate Campaign Selection runs in the linked campaign in Campaign to create a list that Field Marketers should review. Task 2 starts and finishes automatically.

**Task 3: Notify Field Marketers**

Task 3 is a Notify Field Marketers system task. This task notifies Field Marketers that the flowchart run is complete and a list is ready for their review. This task starts automatically when Task 2 completes. Task 3 also finishes automatically.

**Task 4: List Review**

Task 4 is a List Review system task. This task identifies time within the workflow during which Field Marketers should be reviewing the list that is generated in Task 2. Task 4 starts automatically when Task 3 finishes and finishes automatically when its target end date is reached; however, you can still manually finish the task when all Field Marketers complete their reviews.

**Task 5: Flowchart Run**

Task 5 is a Flowchart Run system task. The Flowchart Name column identifies the name of the flowchart in the linked campaign (in Campaign) that should be run to complete this task. When task 5 runs, the flowchart Corporate Campaign Fulfillment runs in the linked campaign in Campaign. This fulfillment flowchart creates the final list of contacts by using the results of the Field Marketer review that occurred in Task 4. Task 5 starts and finishes automatically.

**Task 6: Recurrence**

Task 6 is a Recurrence system task. This task identifies how often a flowchart is run. Acceptable recurrences are hourly, daily, weekly, and monthly. By choosing All Options under Permissions, Field Marketers can turn recurrence from not recurring to recurring.

**User tasks**

User tasks are workflow tasks that you define and that must be started manually.
You can add a user task to the workflow to accommodate the time necessary to develop creative material for the campaign, followed by a user task to approve the creatives.

Users must manually update the status and progress for user tasks.

---

**About task status**

Each task in a workflow has a status, which is shown in the spreadsheet view.

You can also view and modify the status by clicking the task to open the Post Task dialog box.

The task status can be:
- Active
- Pending
- Finished
- Skipped

**Important:** If you change the status of a task from Finished to Pending, you must change the percent complete value to 0%.

---

**To edit a workflow spreadsheet**

Before you can edit a workflow, the Advanced List, On-demand Campaign, or Corporate Campaign must not be in the In Progress state. If it is, you must pause it.

When you create a Corporate Campaign, Advanced List, or On-demand Campaign, a wizard that is based on the template you selected collects information. When you complete the wizard pages, you can customize the default workflow that is provided by the template.

The ability to customize template-supplied workflows is controlled by your user permissions. If toolbar icons are disabled or values are read-only, you do not have the appropriate permissions to edit the workflow.

1. Open the new Advanced List, Corporate Campaign, or On-demand Campaign and click the Workflow tab. The workflow displays as supplied by the template.

2. Click Edit ( ). The spreadsheet displays in edit mode. For information about the options in this mode, see “About the edit mode toolbar” on page 67.

3. To change default task and stage names to reflect your specific tasks and stages, click in the cells in first column to make your edits. You can also change task dependencies. For more information about dependencies, see “Managing task dependencies” on page 60.

4. Add any stages or tasks as necessary.
   - To add a stage, click the Add Stage Row icon ( ).
   - To add a user task, click the Add Task Row icon ( ).

5. Enter target or actual dates for the tasks.
You can enter a start date, end date, and duration for a task. If you enter any two of these values, the system calculates the third value automatically. For example, if you enter a target start and a target end date, the system calculates the duration.

While the Schedule Through column indicates work days for a task, you can enter any date as a start or end date. For example, for a task that is not scheduled to include weekends you can still pick a Sunday as the end date.

6. To specify that a task is a milestone, such as a drop date, click the Milestone Type column and select a milestone from the list.
   
   Your administrator sets the milestones options in this list.

7. Select members or roles to assign the task to in the Members and Member Roles columns. For more information, see “Adding roles and members to tasks.”

8. Make other selections and entries in the spreadsheet to reflect the workflow for your Advanced List, Corporate Campaign, or On-demand Campaign. For more information, see the other topics in this chapter.

9. Enter any instructions or notes about a task in the Notes column.

10. Click Save to save your changes.
    - Click Save and Finish to save your changes and return to spreadsheet view mode.
    - Click Save and Resume to change the status to In Progress and return to spreadsheet view mode.
    - Click Cancel to undo any changes and return to view mode.

### Adding roles and members to tasks

When you create a Corporate Campaign, Advanced List, or On-demand Campaign, the workflow automatically includes member and reviewer roles for all tasks if the template you selected provides this information. However, you can edit workflow tasks to assign different roles.

1. Navigate to the Workflow tab of your Corporate Campaign, Advanced List, or On-demand Campaign.

2. Click Edit ( ).

3. To select or change the member roles, click in the Member Role cell for the task you want to change.

4. Click the turndown icon ( ) to view the list of available roles.

5. Click to select one role, or Ctrl+click to select more roles to assign to this task.

6. To select or change specific members, click in the Member cell for the task you want to change.

7. Click the turndown icon to view the list of available members.

8. Save your work.

### To fill data into a range of cells

To reduce data entry time, you can copy data that is entered for one or more tasks and supply it for another task or tasks by using Tools options. For example, you have 10 consecutive tasks with the same values for target start, target end, target duration, and target effort. You enter the data for the first task. To copy the values in the first row into the remaining nine rows, you use Shift+click to select the cells in these four columns for all 10 tasks, then use the Fill Down option.
You can also copy the data in one or more adjacent cells and paste it into one or more adjacent cells. See “About copying and pasting” on page 58.

**Note:** The options for working with a range of cells apply to adjoining cells only: use Shift+click to select the cells.

1. Open the Advanced List, On-demand Campaign, or Corporate Campaign that has the task values to duplicate, and click the **Workflow** tab.
2. Click **Edit**.
3. Shift+click in the first cell to select it.
4. Move the cursor to the last cell you want to include, then Shift+click in this cell.
   The range of cells you selected is highlighted.

**Note:** You must select a continuous range of cells, rather than selecting multiple, disconnected cells.

5. Click **Tools** and select one of the following options.
   - **Fill Down** copies the values in the top-most selected cell (or cells) to all the other selected cells, including the bottom-most.
   - **Fill Up** copies the values in the bottom-most selected cell (or cells) to all the other selected cells, including the top-most.
6. Click **Save**.

**To print the Workflow tab**

You can print all information found on your Advanced List, On-demand Campaign, or Corporate Campaign Workflow tab, or select certain columns of information to print.

1. From the Workflow tab, click **Print**.
   A dialog opens with a list of the spreadsheet columns. By default, all columns are selected.
2. Click to clear any columns you do not want to include when you print.
3. Optionally, clear the **Shrink to Fit Landscape Page Width** check box to print the columns at a size of 100%.
   If you keep this option checked, all selected columns print on a single page. If you use this feature, change your printing preference (for this print job) to landscape.
4. Click **Print Selected Columns**. A preview dialog opens.
5. Click **Print**.
7. Click **Print** to print the selected workflow columns.
8. In the preview dialog, click **Close** to close the print preview.

**To add an attachment to a task**

To add attachments for a task, a project owner must enable adding attachments for the task. The following users can add or remove task attachments.

- Task owners can only add attachments to their tasks.
- Task owners and users with the **Delete Attachment** security permission for projects can delete task attachments.
Note the following.

- You cannot use markup on task attachments.
- There is no versioning for task attachments: uploading a new version overwrites the existing version of the attachment.
- It is possible to have multiple task attachments with the same name for the same task. This situation can occur if multiple owners of the task each upload a file with the same name. You can differentiate the files by the user who created the attachment.
- You can add and remove attachments no matter the state of the task. That is, even if a task is marked complete or skipped, you can still add and remove attachments.
- The Attachments tab for a Corporate Campaign, On-demand Campaign, or Advanced List is divided into two sections: one for files that are attached directly to the Corporate Campaign, On-demand Campaign, or Advanced List, and one for files that are attached to the tasks.
- If a task owner adds task attachments, and later the Corporate Campaign, On-demand Campaign, or Advanced List owner sets the Enable Task Attachment flag to false, attachments can no longer be added or removed from the Post Task Update dialog. However, task attachments for the Corporate Campaign, On-demand Campaign, or Advanced List can still be removed from the Attachments tab.

1. Navigate to the task to which you would like to add an attachment.
   - Click the task from a project workflow or from the Tasks list page. The Post Task Update dialog box opens.
2. Click the Attachments tab.
   - The tab displays any attachments that exist for the task.
3. In the File to Attach field, select From My Computer, From the Asset Library, or URL.
4. Do one of the following:
   - Click Browse to attach a file that is on your computer. When the dialog box appears, navigate to the file you want to attach and click Open.
   - Click Browse Library to attach a file in an asset library. Click the library that contains the file you want to add. Use the tree in the left pane of the screen to navigate to the folder and then the asset that you want to attach. Click Accept Asset when viewing the asset in the right pane.
     - Enter the URL in the field provided.
5. Add any comments about the attachment.
6. Click Add More to display an additional set of fields for each additional attachment you want to add.
7. After you add all your attachments, click Save and Return to close the dialog box.

Any new attachments are added to the Attachments tab for the task.

**Milestones**

A milestone is a point in time within workflow at which all tasks until that time must be complete in order for work to continue.

Your system relies on the display order of the task to find out the prior tasks. All tasks that are displayed before the milestone task on the workflow screen are
assumed to be a part of that milestone. If tasks before the milestone are not complete, then the milestone is not met and the next task cannot begin. If the prior tasks are not complete, your system shows the appropriate error message, saying all prior tasks in the milestone should be complete to mark the milestone as complete or active. In that case, the system stops you from updating the milestone task.

**Why use milestones**

By using milestones within a workflow, you can better enforce process for your lists and campaigns, so that tasks take place in the intended order. In addition, the specific milestones you select in a workflow aid in reporting.

**How available milestones are defined**

To add milestones, click **Distributed Marketing Settings > List Definitions > Workflow Milestone Types**.

**Note:** You must have administrative privileges to define milestones. Specific milestones are also available for selection as defined in a database table by your administrator.

A milestone cannot be removed if it is used in an instance (Corporate Campaign, On-demand campaign, or Advanced List).

**Note:** A milestone can be removed if it is used in template, but it cannot be removed if it is used in instance.

Disabled milestones are not shown while you create an instance or template. They are shown in instances or templates where they are already used, however.

**Setting milestones in a workflow**

You can set milestones for tasks within a workflow for an Advanced List, On-demand Campaign, and Corporate Campaign from the Milestone Type column.

When you set a milestone, the next task in the workflow cannot begin until the milestone is reached.

**Example**

Consider a scenario of three user tasks followed by flowchart run system task. A milestone is declared at 1.3 task.

If you try to update the status of the milestone task (1.3 in this case), your system performs a check to ensure that all prior tasks are complete.

When your system tries to start Task 1.4, it checks the status of the earlier milestone task. If milestone is complete, only then can task 1.4 begin. Otherwise, the appropriate error message would be shown to you and the task does not start.

By using a milestone at task 3, you can ensure that all creatives for the On-demand Campaign are approved by the necessary people before campaign fulfillment begins.
Defining a milestone for a task

You can set a milestone for a task to ensure that task is complete before the workflow proceeds.

Before you can define a milestone for a task:

- You must define milestones by going to Distributed Marketing Settings > List Definitions > Workflow Milestone Types.

  **Note:** You must have administrative privileges to define milestones.

- The **Milestone Type** column must be present in the workflow layout. You can ensure that it is present by basing the Advanced List, On-demand Campaign, or Corporate Campaign on a template that uses milestones or by editing the workflow layout.

  1. Open the Advanced List, On-demand Campaign, or Corporate Campaign, then open the Workflow tab.
  2. If necessary, change the layout of the spreadsheet view to show the **Milestone Type** column.
  3. Click **Edit** to make the workflow spreadsheet editable.
  4. In the **Milestone Type** column, in the task row for which you want to set a milestone, select a milestone from the drop-down list.
  5. Click **Save** or **Save and Finish** to save the milestone you set.

The milestone is now in effect for the Advanced List, On-demand Campaign, or Corporate Campaign.

About date dependency calculations

When you enter or change the date for a task, Distributed Marketing can calculate other dates that are based on your entry. It uses an internal algorithm to bidirectionally calculate the dates of dependencies, starting with the cell where you entered the date.

When you initiate date dependency calculations for a workflow, note the following.

- In addition to factoring in non-work days and hours, date dependency calculations use two additional system-wide properties: start time of day and number of hours per day. Your system administrator configures these settings.
- If a task row is anchored, the date dependency calculation does not update its dates (even if the date columns are empty).
- Date dependency calculations do not affect active and finished tasks; only tasks with a status of **Pending**.
- Date dependency calculations observe the per-task options for non-work time. The calculation algorithm takes into account whether a task is scheduled to progress during non-work time, weekends, or both.
- Do not log target times outside of business hours if you intend to do date dependency or other automatic calculations afterward. That information is overwritten by the automated process.

To automatically calculate workflow dates

When you enter or change the date of a task, Distributed Marketing can calculate other dates that are based on your entry.

1. Enter or change the date for a task in any of the date fields.
2. Select the date and click anywhere on the screen except for another date field.

The Date Dependency Calculation icon ( ) is displayed next to the end date.

3. Click the Date Dependency Calculation icon. Alternatively, you can select one of the toolbar icons for recalculating dependency dates.

The other dates in the workflow change, based on the new entry.

**To calculate date dependencies above a locked task**

If a workflow has a locked task, and you change the date of a task that is located above that task, you receive a warning when you calculate date dependencies.

To clarify this task, the procedure that follows assumes:
- Task 1.8 is locked.
- You need to change the duration of task 1.5 from five days to 10 days.
- All tasks are dependent on the previous task.

1. Open the workflow for editing, and change the duration on task 1.5 from five days to 10 days.

2. Click the Date Dependency Calculation icon ( ) next to the end date of task 1.5.

   The system displays a warning message, saying you cannot recalculate through the locked row.

3. Click the start date of task 1.8
4. Click the Date Dependency Calculation icon.

The system calculates the dates below the locked task.

---

**About schedules**

There are two options for scheduling in workflows.
- Baseline
- Up-to-date

**Baseline scheduling**

You use baseline scheduling when you want to compare actual dates to fixed target dates. With baseline scheduling, you never change the target dates, allowing them to serve as a baseline. Users who are assigned tasks receive reminders on completing the actual dates.

While you work with a baseline schedule, the owner of the Advanced List, On-demand Campaign, or Corporate Campaign sets the initial Target Start and End dates for each task. These dates stay fixed throughout the entire workflow. As the List, On-demand Campaign, or Corporate Campaign progresses, the owner can update the actual dates with real data based on status information received from team members.
Up-to-date scheduling

You use up-to-date scheduling when you want to use actual dates to update the official schedule (defined by the Target Start and End dates) regularly. This mode enables project managers to capture the most up-to-date, official schedule; however, it does not provide an easy way of viewing a baseline version of the schedule.

To use a baseline schedule

Before you create your Lists, On-demand Campaigns, or Corporate Campaigns, have the system administrator set up permissions and reminders as follows.

- Set permissions so that only List, On-demand Campaign, or Corporate Campaign owners can update Target dates.
- Set reminders (alerts) based on the Actual dates.

While you work with a baseline schedule, team members perform the following high-level steps.

1. The owner sets the Target Start and End dates for each task.
   These dates stay fixed throughout the entire List, On-demand Campaign, or Corporate Campaign.
2. As the List, On-demand Campaign, or Corporate Campaign progresses, team members update the Actual dates with real data.

To keep an up-to-date schedule

Before you create your Lists, On-demand Campaigns, or Corporate Campaigns, have your system administrator set up permissions and reminders as follows.

- Set permissions so that only List, On-demand Campaign, or Corporate Campaign owners can update Target dates.
- Set reminders (Alerts) based on the Target dates.
- Set reminders to be sent only to the owner or owners.
- Optionally, set reminders on the Actual dates to be sent to team members.

While you work with an up-to-date schedule, team members perform the following high-level steps.

1. The owner sets the initial Target Start and End dates for each task.
2. As the List or On-demand Campaign progresses, team members update the Actual dates with real data.
3. If a task is delayed (the owner receives reminders that are based on Target dates), the owner assesses the situation and adjusts the Target dates and durations as necessary.

About designing for multiple drops, lots, waves, and offers

With Distributed Marketing, you can design Corporate Campaigns, On-demand Campaigns, and Lists that fulfill a number of business needs.

About multi-drop design

Multi-drop Corporate Campaigns, On-demand Campaigns, or Lists are recurring campaigns or lists that run at specified intervals (each month, for example) over a defined time.
Multi-drop campaigns and lists use a workflow or a workflow stage that is configured to repeat at specified intervals. Each drop, or stage, in the workflow is made up of the tasks necessary to fulfill one complete drop, or stage, of the campaign.

**When to use a multi-drop design**

Organizations use multi-drop campaigns or lists to manage campaigns that span time and require multiple contact points, usually at regular intervals. Examples of multi-drop campaigns are:

- Newsletter campaign: You might create a multi-drop Corporate or On-demand Campaign to manage distribution of newsletters at regular intervals on an ongoing basis.
- Birthday campaign: You might create a multi-drop Corporate or On-demand Campaign to manage a campaign where some offer and greeting are sent to contacts during the months of their birthdays.

**Setting up multi-drop Corporate Campaigns, On-demand Campaigns, and Lists**

Multi-drop Corporate Campaigns, On-demand Campaigns, and Lists use recurring templates. In the multi-drop template, you must:

- Define the stage of your workflow that contains the tasks you want to recur (only one stage can be recurring)
- Define properties for recurrence by using the Recurrence tab

Multi-drop design is applied when you create a Corporate Campaign, On-demand Campaign, or List by using the recurring templates that you established.

**About multi-lot design**

Multi-lot Corporate Campaign and On-demand Campaigns are campaigns that distribute the effort of customer contact over time when you deal with a large list of targeted customers.

**When to use a multi-lot design**

Organizations use multi-lot features to manage customer lists that are too large to handle at one time. A multi-lot design allows Field Marketers to accept a subset of a list for contact in one "lot." Field Marketers can then accept more contacts for contact at subsequent lots, distributing the effort over time.

**Setting up multi-lot Corporate Campaigns and On-demand Campaigns**

To achieve a multi-lot design, your Corporate Campaigns or On-demand Campaigns must use flowcharts in Campaign that are designed specifically for each lot. You can use a single flowchart for all lots or a separate flowchart for each lot. In either case:

- The list generation task for the initial lot selects from your Campaign database to create the first list for Field Marketer review.
- The list generation task for the second lot targets those contacts that were left in the Waiting state after the first list review, as well as any new contacts included from the latest list generation.
### About multi-wave design

A multi-wave design for Corporate Campaigns and On-demand Campaigns allows you to distribute offers through several waves of contact. Multi-wave Corporate Campaigns and On-demand Campaigns are typically nonrecurring campaigns, with workflows made up of different stages, or waves.

Multi-wave campaigns take advantage of Campaign response tracking. You can design a "second wave" of offers to be sent to contacts who did not respond to the initial offer.

### When to use a multi-wave design

Use a multi-wave design when you want to manage campaigns that present a series of offers to customers. For example, an organization may want to create a multi-wave Corporate Campaign to:

1. Send an offer to a list of contacts.
2. Send a second offer to contacts who did not respond to the initial offer.

   For example, Field Marketers may use the same flowchart each month to identify prospects who have birthdays in the current month. In this case, the first wave of the campaign must complete, so that you can identify the non-responders. After this wave is complete, the second wave of the campaign can be used to distribute the second offers to the non-responders.

### Understanding multi-wave Corporate Campaigns and On-demand Campaigns

To achieve a multi-wave design, your Corporate Campaigns and On-demand Campaigns must use flowcharts in Campaign that are designed to accommodate each wave of contact. You can use a single flowchart for all waves, or create a separate flowchart for each individual wave. In either case:

- The list generation task for the initial wave selects from your Campaign database and creates the first list for Field Marketer review.
- The list generation task for all subsequent waves should select from only those contacts that are generated by the previous wave as input. For example, if you want to send an offer to contacts who did not respond to the first wave, the flowchart that is used for the second wave filters out the responders and select the non-responders from the first wave.

### About multi-offer design

A multi-offer design for Corporate Campaigns, On-demand Campaigns, and Lists allows you to create a campaign or List that sends different offers to different customers.

Multi-offer Corporate Campaigns, On-demand Campaigns, or Lists can be nonrecurring or recurring. These campaigns take advantage of the segmenting capabilities in Campaign to target different contact segments with different offers.

### When to use a multi-offer Corporate Campaign, On-demand Campaign, or List

Organizations use multi-offer design to manage campaigns and Lists that target different segments of the customer population. Examples of multi-offer design include:
Offers for responders and non-responders: You might create a multi-offer campaign to provide one offer to those who respond to a campaign, and another separate offer to those who do not respond.

Offers for different audiences: You might create a multi-offer campaign to manage different offers for different audiences. For instance, a financial institution might send one offer to college students and another offer to individuals who are head-of-household.

Flowchart design in Campaign for multi-offer campaigns and Lists
Corporate Campaigns, On-demand Campaigns, and Lists must use Campaign flowcharts that divide contacts into Segments to achieve multi-offer design.

Each segment represents a different customer list; each customer list is paired with a different offer in Campaign.

You can use Distributed Marketing to ensure that each customer list is reviewed by the right Field Marketers.

The List Review task matches the segment code in the task with the code written into the List Manager table; it can then filter the list by segment code.

**Note:** The flowchart must be configured to write the Segment Code for a segment into the List Manager table.

List Review task/segment association for multi-offer campaigns and Lists
For multi-offer campaign and Lists, you create a workflow that consists of user and system tasks, just as you would for any other Corporate Campaign, On-demand Campaign, or List.

With multi-offer campaigns and Lists, however, you must ensure that all customer lists created by the flowchart are reviewed. You do so by associating each List Review task in your workflow with each segment created by the flowchart in the campaign in Campaign.

The **Segment Code** field that is displayed allows you to identify the appropriate segment for the review.

**Note:** The Segment Code that you enter must match the segment name as it is displayed in Campaign.

Creating a multi-offer Corporate Campaign
You can create a multi-offer Corporate Campaign by creating your linked campaign in Campaign and starting it in Distributed Marketing.

1. Create a Corporate Campaign.
2. Modify the workflow.
   - Enter the flowchart names that are used for each Flowchart Run task. For each List Review system task:
     a. Click the task name.
     
        The task properties window is displayed.

     b. Complete the task properties window as wanted.
In the **Segment Code** field, enter the appropriate segment name as it is displayed in the flowchart in your linked campaign (in Campaign).

3. Create the linked campaign in Campaign.

4. Create the flowcharts corresponding to one or more Flowchart Run tasks in the workflow.
   - Ensure the following:
     - The flowcharts create different segments.
     - The Segment Codes are written to the List Manager table.

5. Save and publish each flowchart.

6. Start the Corporate Campaign in Distributed Marketing.

### Creating a multi-offer On-demand Campaign or List

Field marketers can create multi-offer On-demand Campaigns and Lists by selecting a template in which a corporate marketer or administrator already set up the necessary segments, flowcharts, and workflows.

The instructions below describe the steps to take before the field marketer actually creates the On-demand Campaign or List, to be performed by others that are working with Campaign and Distributed Marketing templates.

1. Create flowcharts and forms for your On-demand Campaign or List.
   - Ensure the following:
     - The flowcharts create different segments.
     - The Segment Codes are written to the List Manager table.

2. Create an On-demand Campaign or List template and add forms as a custom tab.

3. Modify the workflow.
   - For each List Review system task:
     a. Click the task name.
        - The task properties window is displayed.
     b. Complete the task properties window as desired.
        - In the **Segment Code** field, enter the appropriate segment name as it is displayed in the flowchart that is used to create your forms/tabs.

4. Create an On-demand Campaign or List by using the template.

5. Start the On-demand Campaign or List.

---

**To change the status of a task**

Each new workflow task has a status of **Pending**. As project managers and participants work on tasks, they update the status to indicate the current progress.

You can change the status of a task when you are working in spreadsheet view mode or timeline view mode by clicking the task name. For more information, see “To update a task from view mode” on page 58. You can also change the status of a task when you are in edit mode: Click the **Status** column of the task, then choose the appropriate status from the drop-down list.
### Table 2. Task statuses

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pending</td>
<td>Indicates that a task is not yet in progress. When you create a task, it defaults to the pending state. The pending state is symbolized by a blank status field.</td>
</tr>
<tr>
<td>Active</td>
<td>Indicates that a task is in progress. Symbolized by the 🏃️ icon. You can also type A to place a task in the active state</td>
</tr>
<tr>
<td>Skipped</td>
<td>Indicates that a task was skipped. Symbolized by the ❌ icon. Skipped tasks are tasks for which members no longer do work. Any dependencies of this task are also disregarded. You can also type S to place a task in the skipped state.</td>
</tr>
<tr>
<td>Finished</td>
<td>Indicates that a task is complete. Symbolized by the ✔️ icon. You can also type F to place a task in the finished state.</td>
</tr>
</tbody>
</table>

**Note:**
- If you enter 100 as the % Complete for a task, the status is updated to Finished.
- If you enter 0 as the % Complete for a task (if it was previously finished), the status is updated to Pending.
- If you enter any number from 1 to 99 as the % Complete for a task (if it was previously finished), the status is updated to Active.
- If you mark the status for a task as Skipped, all of the dates for the task are cleared. Until you click Save (or Save and Finish), you can retrieve the dates by canceling the editing session. However, after you save the spreadsheet with the dates cleared you cannot retrieve them.

### To complete multiple tasks

You are assigned tasks for one or more Advanced Lists, On-demand Campaigns, or Corporate Campaigns.

1. Open the Tasks list page to view all of your assigned tasks.
2. Select the check box for each task you want to complete.
3. Click Complete Selected.
4. In the Complete Selected Tasks dialog box, select one of the following:
   - Leave all dates as they are. The tasks are marked as complete, but no end dates are modified.
   - Set all actual end dates to now. Each selected task is marked complete, and its actual end date field is set to the current date and time.
5. Click Continue to complete the selected task or tasks, or Cancel to return to the list page without making any changes.

Any tasks that you selected are removed from the Tasks list page, and their status is changed to complete. Additionally, their end dates are set, if you selected that option.

### To skip multiple tasks

You can perform this task when you are assigned tasks for one or more Advanced Lists, Corporate Campaigns, or On-demand Campaigns.

1. Open the Tasks list page to view all of your assigned tasks.
2. Select the check box for each task to skip.
3. Click **Skip Selected**.
4. In the confirmation dialog box, click **OK** to skip the selected tasks, or **Cancel** to return to the list page without making any changes.

Any tasks that you selected and skipped are removed from the Tasks list page, and their status is changed to Skipped.

**About copying and pasting**

When you are copying and pasting tasks, note the following.
- For copying, you must select a continuous range of cells by using Shift+click, rather than selecting multiple, disconnected tasks (by using Ctrl+click).
- To select a single cell, you must use Shift+click.
- If you do not insert enough blank tasks to correspond to the ones you are copying, existing task values are overwritten.
- To paste rows at the insertion point, you can click **Paste** from the **Tools** menu or press Ctrl+V. To paste rows after the selected row, you must click **Paste Rows After** from the **Tools** menu.

**To copy data in Internet Explorer**

You can copy data from a continuous group of cells to another place in the same workflow, or into the workflow for another Advanced List, On-demand Campaign, or Corporate Campaign.

1. Open the Advanced List, On-demand Campaign, or Corporate Campaign that has the tasks to copy and click the **Workflow** tab.
2. Click **Edit**.
3. Shift+click to select the first source cell. If this value is the only one that you are copying, skip to step 5.
4. Point to the final source cell, then press Shift+click over this cell. A range of cells you selected is highlighted.
5. From the workflow toolbar **Tools** menu, select **Copy** to copy the selected task or tasks.
   - If you are pasting the tasks into the same workflow, skip to step 7.
6. If you are copying the tasks to another project workflow, navigate to the destination Workflow tab, and open it for editing.
7. Optionally, insert enough blank rows below the destination to act as placeholders for the task values you are copying.
   - For example, if you copied data from six tasks, make sure that there are six consecutive task rows available. If you do not create the necessary rows, existing values for tasks below the insertion point are overwritten.
8. Shift+click the destination cells.
9. From the workflow toolbar, select **Paste** from the **Tools** menu item to paste the values.

The source data is placed in the workflow, starting from the selected destination task.

**To update a task from view mode**

To provide a quick update for a workflow task when the Workflow tab is in spreadsheet view mode or timeline view mode, click the task name. The Post Task Update dialog opens. Use this dialog as a quick alternative to editing the entire
workflow, when you need to update a single task only. From this dialog, you can update a subset of task values, add attachments, and add comments.

The Post Task Update dialog box contains two tabs, **Status** and **Attachments**.

**Note:** When you open the Post Task Update dialog for a task, the system locks the task to prevent anyone else from editing it. Make sure that you close this dialog by clicking either **Save and Return** or **Cancel**; otherwise, the task can remain locked and no one else can edit it.

### To update task status

The **Status** tab contains the following fields.

**Table 3. Fields on the Status tab**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner(s)</td>
<td>Display only. The task owner or owners. At the task level, Advanced List, On-demand Campaign, or Corporate Campaign members are identified as task owners. To change the task owners, you use workflow spreadsheet edit mode: in the <strong>Members</strong> column, add people to a task.</td>
</tr>
<tr>
<td>Actual Dates</td>
<td>Display only. Calculated start and end dates and duration for the task. To update these values, change the values in the date and time fields.</td>
</tr>
<tr>
<td>Status</td>
<td>The status of the task. Select a value from the supplied list.</td>
</tr>
<tr>
<td>% Complete</td>
<td>Progress for the task. Enter a whole number from 0 to 100.</td>
</tr>
<tr>
<td>Note:</td>
<td>To change the state of a task marked as finished back to active, you must change the <strong>Status</strong> to <strong>Pending</strong> and the <strong>% Complete</strong> to a number less than 100. If you do not change both values, the task remains marked as completed after you save.</td>
</tr>
<tr>
<td>Actual Effort</td>
<td>The time that is spent on the task. Click the field to enter a value in days, hours, and minutes, for example, <strong>03D-02H-00M</strong>.</td>
</tr>
<tr>
<td>Target date and time</td>
<td>The begin and end dates and times for the task.</td>
</tr>
<tr>
<td>Note:</td>
<td>Begin and end dates are required; an error message displays if you attempt to save without entering both values. Additionally, the system checks to ensure that the end date is not earlier than the begin date.</td>
</tr>
<tr>
<td>Comments</td>
<td>Enter notes to include in the revision history of the project and in any notifications that are sent about the task.</td>
</tr>
</tbody>
</table>

### To add attachments

The **Attachments** tab contains the following fields.

**Note:** Only the owner of a task can add an attachment. You can identify member roles and members for tasks in edit mode.
Table 4. Fields on the Attachments tab

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachments</td>
<td>The top of the page lists current task attachments. The following information displays for each attachment:</td>
</tr>
<tr>
<td></td>
<td>• The attachment name, which is a link to the attachment.</td>
</tr>
<tr>
<td></td>
<td>• The file type and size.</td>
</tr>
<tr>
<td></td>
<td>• A description, including the date and time the attachment was added, the name of the person who added it, and the comments that are supplied with it.</td>
</tr>
<tr>
<td></td>
<td>• Links for removing attachments.</td>
</tr>
<tr>
<td>File to Attach</td>
<td>Select the source of the file to attach.</td>
</tr>
<tr>
<td>Browse</td>
<td>Click to browse your computer for the file to attach. Supported file formats include DOC, PPT, XLS, PDF, GIF, JPEG, PNG, and MPP.</td>
</tr>
<tr>
<td>Comments</td>
<td>Enter text to describe the attachment.</td>
</tr>
<tr>
<td>Save Attachment</td>
<td>Click to attach the selected file or URL.</td>
</tr>
</tbody>
</table>

Managing task dependencies

IBM Distributed Marketing offers different options for managing task dependencies as new rows are added to a workflow spreadsheet and existing rows are removed.

In spreadsheet edit mode, you click the **In Series** icon, then select:

- **No Dependencies**: the system does not create dependencies for new rows automatically. If you need dependencies for the new tasks and stages, edit the task name to add them manually.
- **In Series**: the system inserts new rows into an existing chain of tasks.
- **In Parallel**: the system inserts new rows in a dependency branch that is parallel to an existing chain of tasks.

Inserting tasks in series

Insertion **in series** makes a new task dependent on the task before it, and then makes all items that were dependent on that task dependent on the new task.

You insert a task in series when it can start only after the previous task is complete. For example, in this figure, if task X cannot be worked on until task B is complete, you insert task X in series.
Inserting tasks in parallel

Insertion in parallel makes the task dependent on the items (tasks or stages) that the task before it was dependent on, and makes the items dependent on the previous task dependent on the new task as well.

You insert a task in parallel when it can be worked on at the same time as another task. For example, in this figure, if task X can be worked on simultaneously with task B, you insert task X in parallel.

Deleting tasks

Deleting a task removes the selected task from the chain, and then the system relinks the two remaining segments of the chain together so that it is one continuous chain again.

When a task is deleted its dependent tasks are made dependent on its dependencies before the deletion takes place. This practice preserves all sequential chains of dependencies.

Default and "last used" modes

To make adding a task as simple and consistent as possible, IBM Distributed Marketing provides the following behavior.

- The default mode is In Series; when you begin an editing session, this mode is used as the insertion mode.
- The "last used mode" is remembered for each editing session. When you select a different dependency mode, it is used each time that you add a task until you change it again or end the editing session.
• For example, to add several tasks in parallel, you need to select **In Parallel** mode only one time. Then, every time you insert another task, the system inserts it in parallel unless you explicitly select another mode.

If needed, you can change the dependency that is assigned by the system manually. Click the task name, then edit the comma-separated list of task numbers that display in parentheses after the name.

### About adding a stage or task

To add a task or stage to a workflow, you must have the appropriate permission for the related template. If the **Add** option is missing from the toolbar, contact your administrator about obtaining the appropriate access rights.

Note the following about stage and task rows.

• When you add a stage or task, you can indicate where in the spreadsheet to insert it: enter the stage number and the task number before the task name.

  For example, if you enter 2.3 **Have team meeting** anywhere in the task list, the task is placed under the task that is labeled 2.2. Any subsequent tasks in that stage are automatically renumbered: the step that was previously labeled 2.3 is now 2.4.

• You can move a stage or task to a different part of the spreadsheet. Use the up and down options on the toolbar to move the stage or task to the appropriate place.

• There are several options for managing dependencies on tasks as new rows are added and existing rows are removed. For more information, see “Managing task dependencies” on page 60.

### Managing stage and task sequence

If you change the number for a task or stage, the task is inserted before the row that matches the new number.

For example, assume the stage order as shown here.

1. Planning
2. Collateral Design
3. Lead Generation
4. Show Setup-to-Breakdown
5. Marketing Review

If you edit task 5, Marketing Review, changing its number to 3, the new order is as follows.

1. Planning
2. Collateral Design
3. Marketing Review
4. Lead Generation
5. Show Setup-to-Breakdown

Now suppose that you edit task 2, Collateral Design, changing its number to 4. The new order is the following.

1. Planning
2. Marketing Review

IBM Distributed Marketing: Corporate Marketer’s Guide
3. Collateral Design
4. Lead Generation
5. Show Setup-to-Breakdown

To move a task or stage to the end, give it any number higher than the final task or stage. For example, to move stage 2, Marketing Review to the end, change its number to 6 or higher.

To add a row to the workflow spreadsheet

Before you can add a row to the workflow spreadsheet, you open the workflow in edit mode. For more information, see “About the edit mode toolbar” on page 67.

1. Decide what dependency option you want the new task or stage to use: Click In Series ( ) and select No Dependencies, In Series, or In Parallel. Your selection remains in effect until you change it again.
2. In the workflow spreadsheet, click the stage or task name that you want the new row to follow.
3. Add a stage or task.

   - To add a stage, click the Add Stage Row icon ( ).
   - To add a user task, click the Add Task Row icon ( ).
4. Optionally, change the dependency that is assigned by the system to the row. The numbers of the tasks that a task or stage is dependent on display in parentheses after the name. If a date for one task changes, the system changes the dates for all the dependent tasks.
   
   For example, suppose that you add a task and its name is 2.5 Generate List (2.4). To make this task dependent on task 1.3 instead of task 2.4, change the task name to 2.5 Generate List (1.3). To make this task dependent on both task 1.3 and task 2.4, separate the task numbers with commas: change the task name to 2.5 Generate List (1.3, 2.4).

   For more information, see “Managing task dependencies” on page 60.
5. When you finish editing the workflow, save your changes.

The stage or task is added to the workflow after the insertion point.

About spreadsheet view mode

When you display the Workflow tab in spreadsheet view (the default), information about the stages and tasks in your workflow display in tabular format. For information about the columns that display, see “About the workflow spreadsheet columns” on page 66.

In addition to viewing data for the workflow, you can update task status and scheduling information and add attachments. For more information, see “To update a task from view mode” on page 58.
To customize the spreadsheet view, click Layout on the Workflow tab. You can select the columns to display and the width of the first (task name) column. For more information, see “To customize the spreadsheet or timeline view.”

Process flowchart view

The process flowchart view displays the tasks in a network diagram style, as follows.

- Each task is displayed as a box with a task number and ID.
- Tasks that have dependencies are connected to any tasks they depend on.
- Sequential tasks are displayed on the same line.
- Parallel tasks are displayed on different lines.
- Independent/orphan tasks are displayed on their own line, with no connections.

About timeline view mode

The Workflow tab timeline view presents a view of the tasks for a List, On-demand Campaign, or Corporate Campaign over a period of weeks or months.

To display tasks on a timeline, click Timeline View.

When you view the workflow on a timeline, you can update the task status and scheduling information and add attachments. For more information, see “To update a task from view mode” on page 58.

To customize the timeline view, click Layout on the Workflow tab. You can:
- Choose weeks or months as the time scale.
- Select the dates to plot: Actual/Forecast or Target.
- Select captions for timeline bars.

For more information, see “To customize the spreadsheet or timeline view.”

To customize the spreadsheet or timeline view

When you view the Workflow tab in spreadsheet view mode or timeline view mode, you can make choices about the information that you want to see. To customize the view, click Layout. The Project Workflow Tab Layout dialog opens with the following options.

Options on the Project Workflow Tab Layout dialog

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spreadsheet Layout</td>
<td>To hide the options in the Spreadsheet Layout section on this dialog. Click the icon next to the section title. To view a hidden section, click again.</td>
</tr>
</tbody>
</table>
### Table 5. Options on the Project Workflow Tab Layout dialog (continued)

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Columns to Display</strong></td>
<td>A list of check boxes that corresponds to the columns you can include in spreadsheet view mode. Click a link above the list to select a preset group of columns to display:</td>
</tr>
<tr>
<td></td>
<td>- <em>all</em>: default setting; all boxes checked (all columns display).</td>
</tr>
<tr>
<td></td>
<td>- <em>targets</em>: hides Status, % Complete, and Actual date columns.</td>
</tr>
<tr>
<td></td>
<td>- <em>actuals</em>: hides Target Dates/Effort and Member/Reviewer roles columns.</td>
</tr>
<tr>
<td></td>
<td>- <em>all dates</em>: displays all columns that are related to target and actual dates.</td>
</tr>
<tr>
<td></td>
<td>- <em>responsibility</em>: displays columns that are related to who is assigned to complete the tasks.</td>
</tr>
<tr>
<td></td>
<td>Alternatively, you can check individual columns to include them or clear columns to remove them.</td>
</tr>
<tr>
<td></td>
<td><strong>First Column Width</strong> defines the width for the first column, which displays task names and dependencies. You can set a different first column width for spreadsheet view mode and for timeline view mode. Select:</td>
</tr>
<tr>
<td></td>
<td>- <em>Remember Last Setting</em>: When you view the workflow spreadsheet, you can adjust the first column width to see more or less of the task names.</td>
</tr>
<tr>
<td></td>
<td>- <em>Exactly</em>: Select to enter a number that sets the column to an exact width in pixels.</td>
</tr>
<tr>
<td><strong>Timeline Layout</strong></td>
<td>To hide the options in the Timeline Layout section, click the icon next to the section title. To view a hidden section, click again.</td>
</tr>
<tr>
<td><strong>Time Scale</strong></td>
<td>The increment of time that is used for measurement. Select <em>Weeks</em> or <em>Months</em>. The default setting is <em>Weeks</em>.</td>
</tr>
<tr>
<td><strong>Bars Represent</strong></td>
<td>The bars in the timeline view indicate durations. You can choose to display Actual/Forecast dates, Target dates, or both. The default is to display both.</td>
</tr>
<tr>
<td><strong>Bar Captions</strong></td>
<td>By default, the bars do not have captions. Select an option to display task information as bar captions. For example, you can have task names or milestone types display as the captions.</td>
</tr>
<tr>
<td><strong>First Column Width</strong></td>
<td>Defines the width for the first column, which displays task names and dependencies. You can set a different first column width for spreadsheet view mode and for timeline view mode. Select:</td>
</tr>
<tr>
<td></td>
<td>- <em>Remember Last Setting</em>: When you view the workflow spreadsheet, you can adjust the first column width to see more or less of the task names.</td>
</tr>
<tr>
<td></td>
<td>- <em>Exactly</em>: Select to enter a number that sets the column to an exact width in pixels.</td>
</tr>
<tr>
<td><strong>Use these settings for current workflow only</strong></td>
<td>Check this box to apply your selections to the current workflow only. This option ensures that whenever you navigate away from and back to this tab, your display settings will not change (until the next time you make a change and check this box). Clear this box to make your selections the default for the Workflow tab. Your settings become the defaults for all users for this workflow until someone changes the defaults.</td>
</tr>
</tbody>
</table>
About the workflow spreadsheet columns

When the workflow displays in spreadsheet view mode (the default view) or in edit mode, data is presented in a spreadsheet of columns and rows. You review and enter information in the spreadsheet cells for each column.

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tasks, Stages</td>
<td>Lists the tasks and stages that make up the Advanced List, On-demand Campaign, or Corporate Campaign. When in edit mode, click a stage or task to revise or change its sequence, name, or dependencies. When in view mode, click a task to update status and scheduling information. For more information, see “To update a task from view mode” on page 58.</td>
</tr>
<tr>
<td>Status</td>
<td>Displays an icon to indicate the status of the task. Tasks can have one of the following statuses. • Pending • Active • Skipped • Finished</td>
</tr>
<tr>
<td>% Complete</td>
<td>The percentage value that represents how complete a task is. In edit mode, click the measuring bar for a task and enter a new % Complete number. The measuring bar expands to display a comparable level.</td>
</tr>
<tr>
<td>Actual Start</td>
<td>After you change a task from Pending to Active, this field represents the Actual Start date. In edit mode, click in the cell to use a calendar to select a date and time.</td>
</tr>
<tr>
<td>Actual End</td>
<td>After you change a task from Active to Finished, this field represents the Actual End date. In edit mode, click in the cell to use a calendar to select a date and time.</td>
</tr>
<tr>
<td>Duration</td>
<td>The duration of the task, in days, hours, and minutes. If you enter both start and end dates, the system automatically calculates a value for this field (the Actual End date minus the Actual Start date).</td>
</tr>
<tr>
<td>Schedule Through</td>
<td>Indicators for which dates to use when you determine task dates. The following options are available. • <strong>Bus. - Business days only</strong>: include only standard, non-holiday, non-weekend dates in date calculations that are made for this task. This schedule is the default for all tasks. • <strong>Wkd. - Business days + Weekends</strong>: include weekends in date calculations that are made for this task. • <strong>Off. - Business days + Days off</strong>: include predefined system-wide non-work time in date calculations that are made for this task. • <strong>All - All calendar days</strong>: include all dates in date calculations that are made for this task. No dates are ignored when dates are calculated for this task.</td>
</tr>
</tbody>
</table>
Table 6. Workflow spreadsheet columns  (continued)

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Start</td>
<td>The targeted start date of the task. In edit mode, use the pop-up calendar to select a date.</td>
</tr>
<tr>
<td>Target End</td>
<td>The targeted end date of the task. In edit mode, use the pop-up calendar to select a date.</td>
</tr>
<tr>
<td>Duration</td>
<td>The duration of the task, in days, hours, and minutes. The Target End minus the Target Start dates.</td>
</tr>
</tbody>
</table>
| Milestone Type | A task milestone that you choose from a list. Example options might be Meeting, Event, and Job Start. System administrators set the milestone types that are on the list.  
For more information about setting up milestones, see the Distributed Marketing Administrator’s Guide. |
| Member Role(s) | A role or roles that are associated with the task. These roles can be loaded automatically from the project template that is used to create the project, or the project owner can set them up manually. |
| Members      | The people that are associated with the task. If a workflow task has a role in its Member Role(s) column, when you assign people to roles, the workflow automatically adds a person in the corresponding Members column. You can also add people to the Members column manually while you edit the workflow. |

About the edit mode toolbar

When you switch from a view mode to edit mode, you can make changes to the workflow. You click the icons on the toolbar to add, move, and delete stages and tasks. The following table describes the toolbar options.

Table 7. Using the Editing toolbar for the Workflow tab

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
</table>
| ![Add Row Icon](Image) | **Add Row.** To add a row after an existing row in the workflow, select the row then click this icon to specify the type of row. You can add:  
  - User Task  
  - Flowchart Run  
  - List Review  
  - Notify Field Marketers (Corporate Campaigns)  
  - Subscription (Corporate Campaigns)  
  - Recurrence  
Distributed Marketing adds the task and renumbers the subsequent tasks. |
Table 7. Using the Editing toolbar for the Workflow tab (continued)

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
</table>
| ![In Series Icon] | **In Series.** By default, the system adds rows to the spreadsheet in series: each task is dependent on the task that precedes it. To use a different dependency option, click this icon and make a selection before you add the next task to the workflow. Select a dependency option.  
  • No Dependencies: when you add a row, the system does not make it dependent on any other row  
  • In Series: when you add a row, the system makes it dependent on the row above it  
  • In Parallel: when you add a row, the system makes it dependent on the same task or tasks as the row above it  
Each row that you add uses the same dependency option until you change your selection.  
You can also change dependencies manually: click the task or stage name and supply a comma-separated list of numbers in parentheses. |
| ![Add Stage Row Icon] | **Add Stage Row.** Adds a stage in the spreadsheet. Tasks are grouped in stages. |
| ![Move row up Icon] | **Move row up.** Click a task or stage name to select the row, then click this icon to move the selected row upward.  
  **Note:**  
  • When you move a row, its task dependencies do not change.  
  • When you move a stage, all of its associated tasks move with it. |
| ![Move row down Icon] | **Move row down.** Click a task or stage name to select it, then click this icon to move the selected row downward.  
  **Note:**  
  • When you move a row, its task dependencies do not change.  
  • When you move a stage, all of its associated tasks move with it. |
| ![Delete row Icon] | **Delete row.** Click a task or stage name to select it, then click this icon to delete the component.  
  **Note:**  
  • You cannot delete the first stage in a workflow spreadsheet.  
  • When you delete a stage, its associated tasks are appended to the previous stage. The tasks are not deleted. |
Table 7. Using the Editing toolbar for the Workflow tab (continued)

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
</table>
| ![Tools](image) | **Tools.** Offers options that affect the values in specific spreadsheet cells, or that affect a column or the entire spreadsheet.  
To apply any of the following options, you must first Shift+click to select one or more adjacent cells in the spreadsheet:  
• Copy: copies the contents of the selected cells to the clipboard.  
• Paste: pastes the contents of the clipboard, beginning at the selected cell.  
• Paste Rows After: pastes the contents of the clipboard below the selected row.  
• Mark as: changes the Status and % Complete values for the corresponding task or tasks. For example, Mark as Finished changes the Status to Finished and % Complete to 100%. You can mark tasks as Skipped, Finished, Active, or Pending.  
• Fill Down/Up: copies the value in the selected cell or group of cells to the cells below or above it.  
• Clear: erases all entries in the selected cell or group of cells.  
**Note:** You must apply these options to cells that are adjacent; that is, Ctrl+click selections are not supported.  
The other options on the **Tools** menu function as follows:  
• Clear Column: click a single cell, then select this option to erase all entries in that column. For columns that have a default value, such as Schedule Through, every cell is set to the default.  
• Clear All: erases the entire spreadsheet.  
| ![Recalculate](image) | Click to recalculate dependent dates while preserving slack time. Recalculates all date dependencies that are based on your changes; leaves any existing slack time between dependent tasks.  
| ![Recalculate](image) | Click to recalculate dependent dates while removing slack time. Recalculates all date dependencies that are based on your changes; removes any slack time between dependent tasks.  
| ![Undo](image) | **Undo.** Click to undo your last change.  
| ![Redo](image) | **Redo.** Click to reapply a change you undid with the Undo action.  
| ![Cancel](image) | Click one of the following options to complete your work:  
• **Cancel.** Return to spreadsheet view mode without saving edits that are made since your last save.  
• **Save:** Interim save, the spreadsheet remains in edit mode.  
• **Save and Finish:** Saves your work and displays spreadsheet view mode.  

**To work in spreadsheet view mode**  
When you initially click the Workflow tab, it displays in spreadsheet view mode and offers the following user interface controls.
### Table 8. Controls on the Workflow tab

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breadcrumb links</td>
<td>Breadcrumbs (links to the pages you visited before you arrive at the current page) are located above the List, On-demand Campaign, or Corporate Campaign name. Click any active link in the breadcrumb trail to go to that page.</td>
</tr>
<tr>
<td>![Edit Icon]</td>
<td><strong>Edit.</strong> Changes the display to edit mode so that you can add, remove, and change workflow stages and tasks and enter detailed information for the tasks. For more information, see “About the edit mode toolbar” on page 67.</td>
</tr>
<tr>
<td>![Save as Template Icon]</td>
<td><strong>Save as Template.</strong> Saves the workflow definition as a reusable workflow template (if you have the permission to do so). A dialog opens for you to name the template. For more information about using template components, see the Distributed Marketing Administrator’s Guide.</td>
</tr>
<tr>
<td>![Spreadsheet View Icon]</td>
<td><strong>Spreadsheet View.</strong> Changes the display to spreadsheet view mode, which provides information about each task in tabular format. When you view the workflow as a spreadsheet, each task name is a link. Click a task to open a dialog where you can add and change information about the task. For more information, see “To update a task from view mode” on page 58.</td>
</tr>
<tr>
<td>![Timeline View Icon]</td>
<td><strong>Timeline View.</strong> Changes the mode to present a graphic display of scheduling information for the tasks, including duration and status. For more information, see “About timeline view mode” on page 64. When you view the workflow on a timeline, each task name is a link. Click a task to open a dialog where you can add and change information about the task. For more information, see “To update a task from view mode” on page 58.</td>
</tr>
<tr>
<td>![Layout Icon]</td>
<td><strong>Layout.</strong> Opens a dialog where you can select the columns that you want to display in spreadsheet view mode, and choose the time scale and dates to include in timeline view mode. For more information, see “To customize the spreadsheet or timeline view” on page 64.</td>
</tr>
</tbody>
</table>

### Changing the layout of the workflow

You can change the layout of the spreadsheet and timeline views of the workflow to display the information that you need.

1. In the **Workflow tab**, click **Layout**.
   The Instance Workflow Tab Layout dialog box opens.
2. In the **Spreadsheet Layout** section, select the check boxes of all columns you want to show in the workflow.
   You can also use the links after **Columns to display** to select subsets of available columns.
3. Set the first column width for the spreadsheet view.
4. In the **Timeline Layout** section, select values from the **Time Scale, Bars Represent**, and **Bar Captions** drop-down lists.
5. Set the first column width for the timeline view.
6. To have these settings apply only to the currently opened workflow, as opposed to all workflows you view, check **Use these settings for current workflow only**.

7. Click **Apply** or **Apply and Close** to save your selections.

The view of the workflow is updated to reflect your selections.

**To set first column width**

You can change the width of the first column in the workflow spreadsheet view, and keep this setting for your entire session. That is, your changes remain after you navigate to other pages and then return to this tab.

1. Navigate to the Workflow tab of the Advanced List, On-demand Campaign, or Corporate Campaign.

2. Use the column width control to resize the first column to your preferred width.

3. Click the **Layout** link in the upper right section of the screen.

4. In the **Instance Workflow Tab Layout** dialog, do the following.
   a. In the **First Column Width** section, select the **Remember Last Setting** radio button.
   b. At the bottom of the dialog, check the **Make these the default settings for this project's workflow tab** box.

5. Click **Apply and Close** to save your changes and close the dialog.

The first column width is now set for this Advanced List, On-demand Campaign, or Corporate Campaign for the remainder of your session. No matter which pages you navigate to, when you navigate back to this workflow tab, the first column width remains as you set it.
Chapter 8. About flowcharts for Corporate Campaigns

For a Corporate Campaign, two flowcharts are typically executed by corporate marketing through Campaign.

The two flowcharts are:
- A List selection flowchart selects target customers from your customer database. Field marketers then accept or decline the target customers who are associated with them.
- A second flowchart runs the campaign. It selects those customers that are approved by field marketers, associates them with offers, and fulfills the campaign.

About flowcharts for On-demand Campaigns

For On-demand Campaigns, field marketers typically specify selection criteria made available by the administrator in the On-demand Campaign template.

That selection criteria is sent to the associated List selection flowchart in Campaign and used to select customers from the customer database.

A second flowchart runs the On-demand Campaign that is based on criteria you configure. For example, the On-demand Campaign can have an attribute to indicate whether it should be fulfilled locally or by the corporate office. If it is to be fulfilled locally, the flowchart generates a file that is attached to the On-demand Campaign, and the field marketer can use this file to fulfill the campaign. If it is to be fulfilled by the corporate office, then the results are written to a table that the corporate marketer can use for fulfillment.

While the flowcharts run in Campaign, field marketers can complete all their work through Distributed Marketing. The Flowchart Run tasks in the workflow execute the Campaign flowcharts in the background.

Typically, corporate marketers design and create the flowcharts in Campaign, as well as templates and forms in Distributed Marketing; field marketers work only within Distributed Marketing.

About flowcharts for Lists

For Lists, field marketers typically specify selection criteria made available by the administrator in the List template.

That selection criteria is sent to the associated list selection flowchart in Campaign and used to select customers from the customer database.

While the flowchart runs in Campaign, field marketers can complete all their work through Distributed Marketing. The Flowchart Run task in the workflow executes the Campaign flowchart in the background.

Typically, corporate marketers design and create the List selection flowcharts in Campaign; field marketers work only within Distributed Marketing.
About list selection flowcharts

A list selection flowchart in Campaign uses certain criteria to select customers from the customer database.

This criteria is specified in a Select process.

The flowchart must also contain a Snapshot or Extract process to write the selected list to the Distributed Marketing database.

About List selection flowcharts for Corporate Campaigns

For Corporate Campaigns, the corporate marketer creates and generates the List through Campaign. The contact list is then made available to subscribed field marketers using Distributed Marketing for validation.

Steps for generating the Corporate Campaign List

The following steps outline the tasks for generating the Corporate Campaign List:

1. The corporate marketer creates the Corporate Campaign and the linked campaign, by accessing the Corporate Campaigns page through the Corporate Campaign command in the Local Marketing menu.
2. The corporate marketer configures the linked campaign, by accessing the campaign through the Campaigns command in the Campaign menu.
3. The corporate marketer builds the List selection flowchart, by accessing the campaign through the Campaigns command in the Campaign menu.
4. A Corporate Campaign workflow task runs the List selection flowchart.
5. In Campaign, the flowchart runs, resulting in the List being written to the Distributed Marketing database.
6. The corporate marketer accepts the contact list.

How Corporate Campaign selections are stored

You should design the list selection flowchart that is associated with a Corporate Campaign so that when it runs in Campaign the selected customers are stored in the Distributed Marketing system database, in the uacc_corporate_lists table.

Generating and storing the list through the flowchart

Note: Before the flowchart can store the list selections in the uacc_corporate_lists table, the table must be mapped in Campaign.

List selections are made through a Select process in the flowchart. You define the SQL statements to select desired customers for the Corporate Campaign. For example, the Select process might select all customers with a savings account within a specific range.

You can use one or more Select processes to select the target customers for the Corporate Campaign list.

Following the Select processes, you add a Snapshot or Extract process. When you configure the Snapshot or Extract process, ensure that you:

• Export the selections to the uacc_corporate_lists table.
• Select the Append to Existing Data radio button.
**Note:** The uacc_corporate_lists table contains the history of all the generated lists. If you select either Replace All Records or Update Records, the contents of the table are overwritten or updated and all the lists are deleted or updated.

### Mapping database fields to the uacc_corporate_lists table

In the list selection flowchart, you must map fields in your customer database to the following fields in the uacc_corporate_lists table:

<table>
<thead>
<tr>
<th>Field</th>
<th>Field Type</th>
<th>Saved Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ListId</td>
<td>Campaign Generated Field</td>
<td><em>CampaignCode.</em> Generated field <em>CampaignCode</em> should be mapped against <em>ListId</em> field.</td>
</tr>
<tr>
<td>AudienceLevel</td>
<td>Derived Field</td>
<td>The audience level(s) configured in the List Manager module must be hardcoded with the values configured in the listmanager_tables.xml file (for example, &quot;P&quot; for People Table or &quot;P/C&quot; for People Table/Contract Table).</td>
</tr>
<tr>
<td>UserBranch</td>
<td>N/A</td>
<td>Not required.</td>
</tr>
</tbody>
</table>
| UserID         | <Customer_User>  | The user name of the field marketer or corporate marketer that is running the flowchart.  
**Note:** Internally, all flowcharts are run by the same Campaign user. The flowchart uses the *UserName* variable to store in the *UserID* field the user name of the field marketer or corporate marketer who ran this flowchart. |
| GenerationDate | <Generate_Date>   | Date on which the records are generated. This can be a specific date, a formula, or a date indicated in the campaign. |
| Status         | Derived Field    | All records are initially set to T, for To Accept, which corresponds to Waiting in the user interface.  
List records can have one of four status values, depending on the actions of field marketers during validation:  
• T: To Accept  
• V: Accepted  
• A: Added  
• D: Deleted |
| Audience Level ID | <CustomerID> or <AccountID> | The unique ID for the target of the campaign, typically a Customer ID Or Account ID. |

You may need to map additional fields for filtering purposes. For example, if the region_id column was added for Data Level Filtering, you need to map it as well.

### About list selection flowcharts for On-demand Campaigns and Lists

For On-demand Campaigns and Lists, the corporate marketer typically creates the flowchart in Campaign, then field marketers run the flowchart and generate the lists.
Steps for generating the On-demand Campaign or List customer list

The following steps outline the tasks for generating the customer list for an On-demand Campaign or List:

1. In Campaign, create and publish the list selection flowchart.
2. In Distributed Marketing, create and publish forms, then add them to a template with custom tabs for displaying the flowchart forms.
3. In Distributed Marketing, create the On-demand Campaign or List using the appropriate template.
4. In Distributed Marketing, select the list composition criteria.
5. In Distributed Marketing, generate the list by running the flowchart.

About user variables for list selection flowcharts

When you build the List selection flowchart in Campaign, you must first specify the user variables to be used in the queries to select your contacts.

You must define two types of user variables:

- All user variables that map to selection criteria that you want field marketers to be able to set when creating an On-demand Campaign or List. For example, if you want field marketers to be able to select an Income Range for an On-demand Campaign, you must define a user variable for Income Range in the list selection flowchart.

- All user variables that are specified in the following table:

<table>
<thead>
<tr>
<th>User Variable</th>
<th>Data Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>UserName</td>
<td>Text</td>
<td>&lt;User_name&gt; (the ID that the user enters to log in to Distributed Marketing). This parameter is never displayed in Distributed Marketing.</td>
</tr>
<tr>
<td>ListId</td>
<td>Text</td>
<td>&lt;ID_List&gt;</td>
</tr>
<tr>
<td>ListSection</td>
<td>Text</td>
<td>Allows you to combine lists to form new lists. All variables with the prefix &quot;ListSection&quot; are linked to the list of Lists. The list of all Lists contain the field marketer's active Lists that can be included or excluded.</td>
</tr>
<tr>
<td>&lt;Anycharacter_string&gt;</td>
<td>Text</td>
<td></td>
</tr>
</tbody>
</table>

IBM Distributed Marketing: Corporate Marketer's Guide
Guidelines for list selection flowcharts for On-demand Campaigns and Lists

When you build the list selection flowchart in Campaign, you must follow specific guidelines.

The specific guidelines are as follows.

- You must specify the flowchart name in the template for On-demand Campaigns or Lists from which the flowchart is run.
- You cannot use the following processes in a list selection flowchart:
  - Plan
  - Create Segment
  - Cube

If you are using the List Manager, follow these additional guidelines:

- For On-demand Campaigns, the flowchart must end with a Snapshot or Extract process that writes the selections to the `uacc_ondemand_lists` table in the Distributed Marketing system database.
- For Lists, the flowchart must end with a Snapshot or Extract process that writes the selections to the `uacc_lists` table in the Distributed Marketing system database.

How On-demand Campaign or List selections are stored

When the list selection flowchart associated with an On-demand Campaign or List runs in Campaign, the selected customers are stored in the Distributed Marketing system database.

On-demand Campaign selections are stored in the `uacc_ondemand_lists` table.

List selections are stored in the `uacc_lists` table.

Generating and storing the list through the flowchart

**Note:** Before the flowchart can store the list selections in the `uacc_ondemand_lists` or `uacc_lists` table, the table must be mapped in Campaign.

List selections are made through one or more Select processes in the flowchart. You define the SQL statements to select desired customers for the On-demand Campaign or List. For example, the Select process might select all customers with a savings account within a specific range.

You also use user variables to specify parameters in Distributed Marketing that are used as selection criteria in the flowchart in Campaign.

If you are using the List Manager following the Select processes, you add a Snapshot or Extract process. When configuring the Snapshot or Extract process, ensure that you:

- Export the selections to the `uacc_ondemand_lists` or `uacc_lists` table.
- Select the Add to Existing Data radio button.

**Note:** The `uacc_ondemand_lists` and `uacc_lists` tables contain the histories of all the generated lists. In the flowchart in Campaign, if you select either Replace All Records or Update Records, the contents of the tables are overwritten or updated and all the lists are deleted or updated. The life cycle of data in these tables is meant to be managed through Distributed Marketing. For example,
when you delete a List, the data for that List is cleared. In addition, when the List is rerun, entries from previous runs of that list are cleared from the table.

**Mapping database fields to the uacc_ondemand_lists or uacc_lists table**

In the list selection flowchart, you must map fields in your customer database to the following fields in the uacc_ondemand_lists or uacc_lists table:

<table>
<thead>
<tr>
<th>Field</th>
<th>Field Type</th>
<th>Saved Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ListId</td>
<td>User Variable</td>
<td>UserVar.ListId</td>
</tr>
<tr>
<td>AudienceLevel</td>
<td>Derived Field</td>
<td>The audience level(s) configured in the List Manager module must be hardcoded with the values configured in the listmanager_tables.xml file (for example, &quot;P&quot; for People Table or &quot;P/C&quot; for People Table/Contract Table).</td>
</tr>
<tr>
<td>UserBranch</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>UserID</td>
<td>User Variable</td>
<td>UserVar.UserName</td>
</tr>
<tr>
<td>GenerationDate</td>
<td>&lt;Generate_Date&gt;</td>
<td>Date on which the records are generated. This can be a specific date, a formula, or a date indicated in the campaign.</td>
</tr>
<tr>
<td>Status</td>
<td>Derived Field</td>
<td>&quot;V&quot; is hardcoded. All records are set to &quot;Accepted&quot; by default. List records can have one of four status values, depending on the actions of field marketers during validation: T: To Accept V: Accepted A: Added D: Deleted</td>
</tr>
<tr>
<td>AudienceLevelID</td>
<td>&lt;CustomerID&gt;</td>
<td>ID of references</td>
</tr>
</tbody>
</table>

You may need to map additional fields for filtering purposes. For example, if the region_id column was added for Data Level Filtering, you need to map it as well.

**About campaign fulfillment flowcharts**

A campaign fulfillment flowchart in Campaign begins the actual marketing campaign and controls how specific offers are sent to selected customers.

For On-demand Campaigns, corporate marketers build the campaign fulfillment flowchart in Campaign and associate it with an On-demand Campaign template in Distributed Marketing. Field marketers then run the campaign fulfillment flowchart from within Distributed Marketing.

The selected customers are handled differently for Corporate Campaigns and On-demand Campaigns.
About campaign fulfillment flowcharts for Corporate Campaigns

The Corporate Campaign fulfillment flowchart can be executed by a Run Flowchart task in the workflow, or the corporate marketer can create and run the fulfillment flowchart through Campaign.

How you select target customers in the campaign fulfillment flowchart

You select target customers in the campaign fulfillment flowchart from the uacc_corporate_lists table in the Distributed Marketing system database.

In a Corporate Campaign, field marketers must approve their associated target customers for inclusion in the campaign. Field marketers can also add customers who were not in the original list that is generated by the list selection flowchart. Only approved or added customers should be selected by the Corporate Campaign's fulfillment flowchart.

The list selection flowchart records the original list of customers in the uacc_corporate_lists table in the Distributed Marketing system database. When field marketers review the customer list, their approvals, rejections, and additions are recorded in the uacc_corporate_lists table as well.

Therefore, the campaign fulfillment flowchart must select the approved target customers from the uacc_corporate_lists table, not the original table in the customer database.

Filtering targets in the uacc_corporate_lists table to select the right customers

When you select customers from the uacc_corporate_lists table in the Distributed Marketing system database, you must filter your selections that are based on two criteria:

• Project Code
  You must select only target customers for this Corporate Campaign by matching the campaign's unique code with the project_code value. For example, the Select process in the flowchart could include the statement:
  `project_code = "CorpCamp029"`

• Status
  You must select only approved target customers by matching values of A or V in the Status column. The Select process in the flowchart should include the statement:
  `Status in ('A', 'V')`

About campaign fulfillment flowcharts for On-demand Campaigns

For On-demand Campaigns, the corporate marketer creates and publishes the campaign fulfillment flowchart through Campaign.

Corporate marketers, or administrators, add the form that is automatically created by the publishing of the flowchart to an On-demand Campaign template. Field marketers then use the On-demand Campaign template to create new On-demand Campaigns.
A field marketer runs the campaign fulfillment flowchart for an On-demand Campaign through Distributed Marketing.

**How you select target customers in the campaign fulfillment flowchart**

You select target customers in the campaign fulfillment flowchart from the uacc_ondemand_lists table in the Distributed Marketing system database.

The list selection flowchart for the On-demand Campaign records the list of customers in the uacc_ondemand_lists table. Field marketers refine this list by refining the selection criteria for the On-demand Campaign and rerunning the list selection flowchart.

**Filtering targets in the uacc_ondemand_lists table to select the right customers**

When you select customers from the uacc_ondemand_lists table in the Distributed Marketing system database, you must filter your selections that are based on the UserVar.ID_List user variable.

**On-demand Campaign fulfillment**

Corporate marketers can specify On-demand Campaign fulfillment requirements to field marketers through a custom tab on the On-demand Campaign template.

**Local or corporate service fulfillment**

Depending on how your administrator configured the On-demand Campaign template, you might have to fulfill the On-demand Campaign. Or, you might be required to use a corporate service to fulfill the campaign. Or you might have to choose between these methods.

When you are permitted by the corporate office to fulfill the On-demand Campaign, the corporate marketers might configure the mail merge feature to facilitate fulfillment.

**The mail merge feature**

Field marketers or corporate marketers can use the Distributed Marketing mail merge feature to personalize standard letters by merging a Microsoft Word letter document with a file that contains contact data for on-demand marketing campaign target customers.

---

**About viewing campaign and list attributes in Distributed Marketing**

Corporate marketers can expose the list and campaign attributes. The attributes can then be viewed by field marketers for On-demand Campaigns and Lists.

**Field marketers view of campaign and list attributes**

Field marketers can view the selection criteria for a List or On-demand Campaign, and the fulfillment specifications for an On-demand Campaign. This information comes from the flowchart attributes the corporate marketer exposes in Distributed Marketing.
Selection criteria and fulfillment specifications are made available as tabs in the template for the On-demand Campaign or List.

Field marketers cannot view this information for Corporate Campaigns; therefore these tabs are not available in Corporate Campaigns.

**Making flowchart attributes visible in Distributed Marketing**

For On-demand Campaigns, corporate marketers can make list and campaign attributes visible to field marketers by using Distributed Marketing.

Before you can complete this task, you must define the selection criteria as user variables.
1. Edit the flowchart with the criteria you want to make visible to field marketers.

2. In the flowchart editor, click the **Options** icon.
3. From the drop-down menu, select **Parameter List**.
   - The CampaignDistributed Marketing Settings window displays the Expose Parameters tab.
   - This tab contains all the settings that are used in the processes that are contained in the flowchart, as well as the user variables that you have already defined.
4. Check the box next to the parameters that you want to be visible to field marketers.
   - Only the selected parameters are visible in Distributed Marketing.

**Important:** Each published flowchart must have the user variables **UserName** and **ListID**. If these two user variables are not present when the flowchart is published, the associated form in Distributed Marketing is not saved. These variables must also be exposed to publish and create forms.

5. Select the name of each checked user variable or setting to define how they are displayed in Distributed Marketing:
   a. Enter the name of the setting that is selected in the **Prompt** field to use as the name of the linked field in Distributed Marketing.
   b. Enter the text that is displayed in a help bubble if the field marketer selects the associated help icon in Distributed Marketing.
   c. Select desired interface in which the criteria value are input or selected in Distributed Marketing.
      - The following types are available:
        • Edit Box
        • Select One From Drop-Down List
        • Select One using Radio Buttons
        • Select Multiple From List
        • Select Multiple Using check box
6. Redefine the default value if it is not correct.
   - The default value of the user variable is specified in the **Default Value** field, if it is assigned to the variable.

**Note:** If you do not select a user variable, Distributed Marketing uses the value that is specified in the **Default Value** field. If no default value is specified, then all possible values are selected.
7. Click **OK** when finished.

**Process display settings and field marketer actions**

Each process in Campaign has its own group of settings to which you can provide access.

The following table describes the possible actions a field marketer can take for each selected setting.

<table>
<thead>
<tr>
<th>Processes</th>
<th>Display Settings</th>
<th>Supported Field Marketer Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Export</td>
<td>Query Expression</td>
<td>Enables the user to edit the request that is used by the process.</td>
</tr>
<tr>
<td></td>
<td>Cell Size Limit</td>
<td>Enables the user to set this limit.</td>
</tr>
<tr>
<td></td>
<td>Cell Size Limit Method</td>
<td>Not supported.</td>
</tr>
<tr>
<td></td>
<td>Cell Size Limit Random Seed</td>
<td>Not supported.</td>
</tr>
<tr>
<td></td>
<td>Result Cell Size (output)</td>
<td>Displays the total number of customers who meet the selection or export criteria in the Results tab.</td>
</tr>
<tr>
<td>Merge Reference</td>
<td>Cell Size Limit</td>
<td>Enables the user to set a target count limit.</td>
</tr>
<tr>
<td></td>
<td>Result Cell Size (output)</td>
<td>Displays the total number of customers who meet the selection or export criteria in the Results tab.</td>
</tr>
<tr>
<td>Segment</td>
<td>Mutually Exclusive Segments</td>
<td>Not supported.</td>
</tr>
<tr>
<td></td>
<td>For each segment:</td>
<td>See above. Query Expression is not supported.</td>
</tr>
<tr>
<td></td>
<td>Cell Size Limit / Query Expression</td>
<td></td>
</tr>
<tr>
<td></td>
<td>/ Result Cell Size (output)</td>
<td></td>
</tr>
<tr>
<td>Sample</td>
<td>Random Seed</td>
<td>Enables the user to select records randomly.</td>
</tr>
<tr>
<td></td>
<td>Specify Size by</td>
<td>Enables the user to specify the type of sample (percent or number of records).</td>
</tr>
<tr>
<td></td>
<td>For each sample:</td>
<td>See above.</td>
</tr>
<tr>
<td></td>
<td>Cell Size Limit / Result Cell Size (output)</td>
<td></td>
</tr>
<tr>
<td>Processes</td>
<td>Display Settings</td>
<td>Supported Field Marketer Actions</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Snapshot</td>
<td>Export To</td>
<td>Enables the user to save the extraction result in a table or a file.</td>
</tr>
<tr>
<td>Output</td>
<td>Export Operation</td>
<td>If the process is configured to export data to a table or a file, you can view the file name and</td>
</tr>
<tr>
<td>Event</td>
<td>Export Table/File Name</td>
<td>location, or let the user specify her own name and location for the file.</td>
</tr>
<tr>
<td></td>
<td>Delimited file</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Include Headers</td>
<td>Enables the user to include the column headers in the tables.</td>
</tr>
<tr>
<td></td>
<td>Output File/Table Name</td>
<td>If the process is configured to export data to a table or a file, the name of the output file</td>
</tr>
<tr>
<td></td>
<td></td>
<td>must be entered for the generated file to be attached to the list or campaign in Distributed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marketing.</td>
</tr>
<tr>
<td>Segment</td>
<td>Mutually Exclusive Segments</td>
<td>Not supported.</td>
</tr>
<tr>
<td></td>
<td>For each segment:</td>
<td>See above. Query Expression is not supported.</td>
</tr>
<tr>
<td></td>
<td>Cell Size Limit / Query Expression</td>
<td></td>
</tr>
<tr>
<td>MailList</td>
<td>Random Seed</td>
<td>If the process is configured to export a contact list, the name of the export table/file must</td>
</tr>
<tr>
<td>CallList</td>
<td></td>
<td>also be entered for the generated file to be attached to the On-demand Campaign in Distributed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Marketing.</td>
</tr>
</tbody>
</table>

**About running flowcharts**

For Corporate Campaigns, the corporate marketer must run the list generation flowchart through a Flowchart Run task in the workflow.

**Running flowcharts for Corporate Campaigns**

For fulfillment flowcharts, the corporate marketer has the option of running the flowchart through Campaign.

**Running flowcharts for On-demand Campaigns and Lists**

For On-demand Campaigns or Lists, the field marketer schedules the flowcharts when editing the On-demand Campaign or List workflow, or runs them directly via the Generate List and Run Campaign links in the Summary tab of the On-demand Campaign or list in Distributed Marketing.

A field marketer can also run the flowchart from the Summary tab of the On-demand Campaign or List, by clicking Run Campaign or Generate List.

**Note:** Field marketers typically do not work directly in Campaign.
**Reviewing run history**

You can view the history of flowchart runs in the **Analysis** tab of the Corporate Campaign, On-demand Campaign, or List. In the Analysis tab, select **Run History** from the drop-down list in the upper-right corner.

For each run, the run history shows user variables, input, and output parameters and counts for the generated lists.

**About attaching flowchart output files to On-demand Campaigns**

For an On-demand Campaign, you can have flowchart output files that are attached automatically.

To attach files, follow these guidelines:

- Output files must be exported by the flowchart to a single folder on the Campaign server under partitions/partition_x.
- You must expose the **Output File** output parameter to Distributed Marketing so that the system knows which file in the directory to attach to the List or On-demand Campaign.
- You must make flowchart attributes visible in Distributed Marketing
- You must specify the access mode and path between the Distributed Marketing server and the Campaign server in the **collaborate_config.xml** file.

You can choose to retrieve files by:
- Accessing the Campaign folder (the default)
- FTP
- HTTP
- TFTP
Chapter 9. Working with Lists, On-demand Campaigns, and Corporate Campaigns

This section contains common information about working with Lists, On-demand Campaigns, and Corporate Campaigns.

The content in this section applies to each of these objects, as the instructions are the same. For example, you delete a List, On-demand Campaign, or Corporate Campaign in the same way; therefore information about deleting these objects is presented together.

Where necessary, differences between Lists, On-demand Campaigns, and Corporate Campaigns are noted.

Note: You may not have the necessary permissions to perform all tasks that are described in this section, or you may have permissions to perform the task on some objects, but not others. For example, field marketers can typically make changes to Lists and On-demand Campaigns, but can only view Corporate Campaigns. For more information, see your administrator.

Viewing and editing the Summary page

You can edit some, but not all, data on the Summary page for a List, On-demand Campaign, or Corporate Campaign.

By default, the Summary section for a List, On-demand Campaign, or Corporate Campaign is collapsed while in view mode. You can expand the section by clicking the header.

1. Open the List, On-demand Campaign, or Corporate Campaign to view the Summary page.

2. Click the Edit icon ( ).
   Certain fields in the Summary page become editable. For example, fields that you can typically edit are
   • Name
   • Description
   • Target Start Date
   • Target End Date
   • Other custom attributes that are created by your administrator
   Typically, you cannot edit campaign codes or List Review data.

3. Edit data as necessary.
4. Click Save Changes.

The Edit Summary page closes, and the changes you made are reflected in the Summary page.
Modifying the default contents of the Lists, On-demand Campaigns, and Corporate Campaigns pages

You can change which Lists, On-demand Campaigns, or Corporate Campaigns are displayed by default, as well as the columns included in the page.

When you select Lists, On-demand Campaigns, or Corporate Campaigns from the Local Marketing menu, a page opens listing those objects.

1. While you are viewing the Lists, On-demand Campaigns, or Corporate Campaigns page, click the Options icon ( ).
   The Options dialog box opens.

2. In the Default drop-down list, select the set of Lists, On-demand Campaigns, or Corporate Campaigns that you want shown by default when you open that page.

3. Determine which columns to show by selecting columns from the Available Columns list and Selected Columns list and by using the horizontal arrow keys to move columns between lists.
   Continue until the columns you want to display are all in the Selected Columns list.

4. Determine the order of columns by selecting columns in the Selected Columns list and by using the vertical arrow keys to move columns up and down.
   Continue until the columns are in the wanted order.

5. Click Save Changes.

The Lists, On-demand Campaigns, or Corporate Campaigns page changes to reflect your selections. These changes remain in effect when you view the page later.

Modifying how Lists, On-demand Campaigns, and Corporate Campaigns are displayed

You can change how Lists, On-demand Campaigns, or Corporate Campaigns are displayed in multiple ways.

When you select Lists, On-demand Campaigns, or Corporate Campaigns from the Navigation pane, a page opens listing those objects. The exact content depends on settings that are defined by your administrator.

1. To change how objects are displayed, click the View icon ( ).
   The Set View Options dialog box opens.
   You can select:
   • Timeline, to show the objects in a table format.
   • Text Calendar, to show the objects as text entries in the calendar.
   • Graphical Calendar, to show the objects as graphics in the calendar.
   You also select the time period and color coding.
   To return to the table view, click the object name in the Navigation pane.

2. To sort the objects when you view as a table, click the name of the column to sort by. You can click the name again to switch between ascending and descending order.
The number of objects may be too high for a single screen. If there are multiple screens, you can click the screen number to view at the bottom of the table to see other objects. Additionally, you can click **Show All** to fit all objects in one screen.

### Viewing specific Lists, On-demand Campaigns, or Corporate Campaigns

You can change which Lists, On-demand Campaigns, or Corporate Campaigns are displayed in multiple ways.

When you select **Lists**, **On-demand Campaigns**, or **Corporate Campaigns** from the **Local Marketing**, a page opens listing those objects. The exact content depends on settings that are defined by your administrator.

1. To view all objects, click **All ...** at the top of the page.
   
   All objects are displayed, as well as various filters for the display, for example, **Last Weeks ...**, **My ...**, and **Completed ...**. You can click a filter name to see only objects that meet that criteria.

2. To view objects that meet certain criteria, click the **Filter** icon (🔍).
   
   The Search for dialog box opens.

3. Complete the search criteria that you need, then click **Apply**.

### Opening and editing a List, On-demand Campaign, or Corporate Campaign

You can open a List, On-demand Campaign, or Corporate Campaign from the Dashboard or from the page listing that object.

You must have the required permissions to open and edit a List, On-demand Campaign, or Corporate Campaign. For more information, see your administrator.

After you open a List, On-demand Campaign, or Corporate Campaign, you can edit any of its tabs.

1. Click the name of the List, On-demand Campaign, or Corporate Campaign.
   
   The Summary tab for that object opens.

2. Click the name of the tab you want to edit, or remain on the Summary tab to edit it. For example, if you edit the Workflow, you must open the Workflow tab before you click **Edit**.

3. Near the top of the page, next to the object's name, click the **Edit** icon (📝).

4. Edit the contents of the tab as necessary.

5. Click **Save Changes**.

Edits that you made to the tab are saved.
List, On-demand Campaign, and Corporate Campaign status

A List, On-demand Campaign, or Corporate Campaign each have a status.

The following states are:
- Not Started
- In Progress
- Paused
- Canceled
- Finished

Simple Lists begin in the In Progress state.

Advanced Lists, On-demand Campaigns, and Corporate Campaigns, whether recurring or not, begin in the Not Started state.

Changing the Lists, On-demand Campaigns, or Corporate Campaign status

The status of the List, On-demand Campaign, or Corporate Campaign is shown in the home page, the pages that list these objects, and in the Summary page.

To change the status, you must be viewing the List, On-demand Campaign, or Corporate Campaign Summary page.

1. View the Summary page for the List, On-demand Campaign, or Corporate Campaign.

2. Click the Status icon.

3. From the drop-down list, select the status to change to. Your options are Pause, Cancel, or Finish.
   A dialog box prompts you to add comments about the status change.

4. Add a comment and click Continue to close the dialog box.

The status of the List, On-demand Campaign, or Corporate Campaign changes to your selection.

Printing a List, On-demand Campaign, or Corporate Campaign

When you view a List, On-demand Campaign, or Corporate Campaign, you can print it on your local printer.

1. Open the List, On-demand Campaign, or Corporate Campaign.

2. Click the Print icon, and select Print.
   The Print dialog box opens.

3. Complete the Print dialog box as needed.
Exporting a List, On-demand Campaign, or Corporate Campaign

When you view a List, On-demand Campaign, or Corporate Campaign, you can export it to a Microsoft Excel file.

1. Open the List, On-demand Campaign, or Corporate Campaign.

2. Click the Print icon ( ), and select Export.
   The File Download dialog box opens.

3. Click Open to open the Microsoft Excel file directly, or Save to save it to your computer.
   If you choose to save it, you are prompted for the location on your computer.

Copying a List, On-demand Campaign, or Corporate Campaign

When you view a List, On-demand Campaign, or Corporate Campaign, you can copy it to create one with the same settings.

1. Open the List, On-demand Campaign, or Corporate Campaign.

2. Click the Copy icon ( ).
   You are prompted to confirm the copy.

3. Click OK.
   The Summary page for the new List, On-demand Campaign, or Corporate Campaign opens. The name of the new object is Copy of existing object name.

4. Edit information in the Summary page as needed.

5. Click Save Changes.
   The object closes.

6. To edit other pages in the List, On-demand Campaign, or Corporate Campaign, open, and edit the object.

About people

You assign people to units of work. You make assignments primarily through the People tab on a List, On-demand Campaign, or Corporate Campaign.

Note: You might see only a subset of the people available. Your organization can limit the view of available resources.

About the People tab

Each Corporate Campaign contains its own People tab. Use this screen to do the following.

• Manage the members of a Corporate Campaign.
• Edit access level for a member.
• Replace a person in a role when a user becomes unavailable.
• Add or remove a role.

A Corporate Campaign template can contain information about the functional roles for the project. A template can reduce some of the work necessary to assign people or teams to units of work within the Corporate Campaign.
**Note:** By default, the People tab is available only for Corporate Campaigns. For information about making it available for Lists or On-demand Campaigns, see the *Distributed Marketing Administrator’s Guide*.

**To manage Corporate Campaign members**

1. Navigate to the People tab of the Corporate Campaign.

2. Click the Edit Member/Role Settings icon (רישום). The Select Team Members dialog box opens.

3. Do one of the following.
   a. To add a person, select the name from the left pane of the dialog, and click >>.
   b. To remove a person, select the name in the Select Team Members list box and click <<.
   c. To change the role for a person, select the name in the Select Team Members list box then click Up and Down to move it to the required role.

   **Note:** You cannot remove a user assigned to a task.

4. Click Save Changes.
   The Select Team Members dialog box closes. The People tab becomes the active window.

The changes that you make are reflected in the list of people and roles. For example, if you added a creative lead, the screen would contain a line similar to the following.

<table>
<thead>
<tr>
<th>Member/Access Level</th>
<th>Role</th>
<th>Email Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>P Picasso (participant)</td>
<td>Creative Lead</td>
<td><a href="mailto:ppicasso@mycompany.com">ppicasso@mycompany.com</a></td>
</tr>
</tbody>
</table>

**Selecting team members for a Corporate Campaign**

You can select other Distributed Marketing users to participate in the Corporate Campaign.

You can assign participants as individuals, or by role. When you assign participants by role, you can assign an entire group of field marketers to participate in a Corporate Campaign at one time.

1. Open the Corporate Campaign.
2. Open the People tab.
3. Click the Edit Member/Role Settings icon (רישום).
   The Select Team Members dialog box opens.
4. To assign team members by role:
   a. In the upper left of the dialog box, click Roles.
   b. Select roles to assign to the Corporate Campaign from the list on the left.
   c. Click the right-pointing arrow button to move the selected roles to the Selected Team Members list on the right.
5. To assign individual users:
   a. In the upper left of the dialog box, click Folders.
   b. Expand the folder entries and select individuals to assign to the Corporate Campaign from the list on the left.
c. Click the right-pointing arrow button to move the selected users to the Selected Team Members list on the right.

6. Click **Save Changes**.

You can now assign work for the Corporate Campaign by role.

**Editing Corporate Campaign member access levels**

You can control the access level other Distributed Marketing users have to the Corporate Campaign.

You can specify whether users are Owners or Participants of the Corporate Campaign. The specific privileges of Owners and Participants are determined by the user permissions that are defined by the Distributed Marketing administrator.

1. Open the Corporate Campaign.
2. Open the **People** tab.
3. Click the **Edit Member/Role Settings** icon ( ).
   The Select Team Members dialog box opens.
4. To add users:
   a. Expand the folder entries and select individuals to assign to the Corporate Campaign from the list on the left.
   b. Click the right-pointing arrow button to move the selected users to the Selected Team Members list on the right.
5. To make a user an owner of the Corporate Campaign:
   a. In the Selected Team Members list, select the user.
   b. Click **Up**.
      Repeat this step until the user appears under **Owner** in the list.
6. To make a user a participant in the Corporate Campaign:
   a. In the Selected Team Members list, select the user.
   b. Click **Down**.
      Repeat this step until the user appears under **Participant** in the list.
7. Click **Save Changes**.

**Assigning work by role**

You can add a user to any list of existing users that are assigned to a task or replace any existing assigned users by clicking the **Assign Work by Role** icon.

Before completing this task, you should select team members for the Corporate Campaign.

1. Open the Corporate Campaign.
2. Open the **People** tab.
3. Click the **Assign Work by Role** icon ( ).
   A dialog box opens asking how you want to assign work. You can choose to do the following:
   - Add the new user to any existing users assigned to the task.
   - Replace any existing assigned users with the new user.
4. Select **append the new user** to add the new user to any existing users assigned to the task, or select **replace the existing assignment** to replace any existing assigned users with the new user.

5. Click **Apply**.
   Users are assigned to tasks as you specified.

6. Click **Close**.

---

**About attachments**

You can include attachments with a List, On-demand Campaign, or Corporate Campaign. These attachments provide information that is relevant to the campaign or List.

Corporate or field marketers might include the following as attachments, for example:

- Marketing messages for the initiative, including content for a mail campaign
- Data, such as customer names, generated after you run a List or On-demand Campaign

A List or On-demand Campaign owner or participant can include attachments only if the corporate template developers include the Attachments tab in the List or On-demand Campaign templates.

If the template developer includes attachments in the On-demand Campaign templates, field marketers or corporate marketers can use the attachments to help fulfill campaigns.

Corporate marketers can also add attachments to an On-demand Campaign when the Attachments tab is available through the On-demand Campaign template.

You can also include restricted attachments, such as `upload_allowedFileTypes` and `upload_fileMaxSize`. `upload_allowedFileTypes` indicates the types of files that can be uploaded in Distributed Marketing, and `upload_fileMaxSize` indicates the limit on the maximum size of the file that can be uploaded.

---

**Adding an attachment to a List, On-demand Campaign, or Corporate Campaign**

If the template designer allowed it, when you view a List, On-demand Campaign, or Corporate Campaign, you can add a file as an attachment.

The file that you add can come from your computer or a URL.

1. Open the List, On-demand Campaign, or Corporate Campaign.
2. Open the Attachments page.

3. Click the **Add Attachments** icon (➕).
4. In the **File to Attach** field, select **From My Computer** or **URL**.
5. In the field to the right, enter the path to the file.
   - If you selected **From My Computer**, you can click **Browse** to visually find the file on your computer.
6. Optionally, add notes about the attachment.
7. Click **Save Changes**.
Removing an attachment from a List, On-demand Campaign, or Corporate Campaign

You can delete an attachment from a List, On-demand Campaign, or Corporate Campaign by clicking the Remove button.

1. Open the List, On-demand Campaign, or Corporate Campaign.
2. Open the Attachments page.
3. In the row for the attachment to remove, click Remove.
   You are prompted to confirm the deletion.
4. Click OK.

The file is no longer attached to the List, On-demand Campaign, or Corporate Campaign.

Posting a message

When you view a List, On-demand Campaign, or Corporate Campaign, you can post a message.

This message is associated with the List, On-demand Campaign, or Corporate Campaign only. You have the option of having these messages sent to other Distributed Marketing users. You might need to post messages to convey to others that work on the List, On-demand Campaign, or Corporate Campaign about important information about the project.

Note: These messages are separate from alerts. An alert is created when you create a message, but the alert does not contain the content of your message.

1. Open the List, On-demand Campaign, or Corporate Campaign.
2. While you view any page of the List, On-demand Campaign, or Corporate Campaign, click the Communicate icon ( ), then select Post a Message. The Messages dialog box opens.
3. Enter your message in the message field.
4. Select the delivery option.
5. Click Post Message.

The message is then associated with the List, On-demand Campaign, or Corporate Campaign. If indicated, it is also sent to users by email.

For those working with the List, On-demand Campaign, or Corporate Campaign, the number next to the Communicate icon ( ), indicating that the new message is there.

Reading messages

Other Distributed Marketing users might attach messages to a List, On-demand Campaign, or Corporate Campaign to pass on important information to other team members.
When you view the List, On-demand Campaign, or Corporate Campaign, you can view these messages. These messages might also be sent to you by email, if the other users chose this option.

1. Open the List, On-demand Campaign, or Corporate Campaign.
   The number of messages that are associated with the List, On-demand Campaign, or Corporate Campaign is indicated next to the **Communicate** icon ( ). In this example, there is one message to read.

2. Click , then select **Read Messages**.
   The Messages dialog box opens, listing the messages that are associated with the List On-demand Campaign, or Corporate Campaign.

   **Note:** You can post a new message from this dialog box.

3. Click **Close** when finished.

### Deleting Lists, On-demand Campaigns, or Corporate Campaigns

You must have the required permissions to delete a List, On-demand Campaign, or Corporate Campaign.

Typically, field marketers cannot delete Corporate Campaigns. For more information, see your administrator.

1. From the **Local Marketing** menu, click **Lists, On-demand Campaigns**, or **Corporate Campaigns**.
   The page listing that object type opens.

   **Note:** To complete this task, you must view the objects in the Timeline view.

2. Check the field next to the name of one or more List, On-demand Campaign, or Corporate Campaign you want to delete.
   You can also check the field next to the Name column header at the top of the table to select all currently displayed objects.

   **Note:** Checking this field selects only the objects that are currently displayed on screen. If the list of objects spans multiple pages, those objects on other pages are not selected.

3. Click the **Delete** icon ( ).
   You are prompted to confirm the deletion.

4. Click **OK**.

The selected objects are deleted.

### Deleting a List, On-demand Campaign, or Corporate Campaign

You must have the required permissions to delete a List, On-demand Campaign, or Corporate Campaign.

Typically, field marketers cannot delete Corporate Campaigns. For more information, see your administrator.
While you view a List, On-demand Campaign, or Corporate Campaign, you can delete it.

**Note:** You can also delete multiple Lists, On-demand Campaigns, or Corporate Campaigns from the pages that list each of these objects.

1. Open the List, On-demand Campaign, or Corporate Campaign.

2. Click the **Delete** icon (**X**).
   - You are prompted to confirm the deletion.

3. Click **OK** to delete the object.

The List, On-demand Campaign, or Corporate Campaign is deleted.
Chapter 10. Alerts

You can use alerts to communicate information to specific people about the state of an object or about an action that the user needs to take. Default alert subscriptions are set by administrators, but can be overridden on a per-object basis by owners and participants of the specific objects.

To subscribe to alerts for an object

You can override default settings within a List, On-demand Campaign, or Corporate Campaign even if you are not an administrator, which allows you to control the alerts that each object owner and participant receives. However, if there are permissions that are configured for any of the tabs of a List, On-demand Campaign, or Corporate Campaign, the system filters alerts appropriately.

1. Open the object for which you want to change alert subscriptions.

2. Click the Communicate icon ( comunicate_32x32.png) and select Subscribe to Alerts from the drop-down list.

3. From the list of alerts, select the check boxes that correspond to the alert that you want to change. You can set or clear alert subscriptions for each type of user, Owner, or Participant. The possible entries are as follows:
   • Check mark: indicates that the user receives the alert or alarm
   • Blank: indicates that the user does not receive the alert or alarm
   • n/a: indicates that you did not specify users for this access level when you created the object. After you add with the corresponding access level, you can set alerts for that access level.

4. Click Accept to save your changes or Cancel to leave the alert settings as they were.

Viewing alerts

When you receive an alert, go to the Alerts page to view it. Alerts are also sent to affected users’ email addresses (for each user that has a valid email address that is set up).

To view alerts, log in and click the Alerts icon ( alerts_16x16.png ). Clicking, or scrolling, over the alerts icon shows a drop-down menu that separates the alerts for your installed applications. The number of alerts is displayed to the left of each application name. After you choose which application's alerts to view, the page displays the following information:

Table 9. Columns on the Alerts page

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page heading</td>
<td>Contains the number of unread alerts (which is displayed in parentheses) and the total number of alerts</td>
</tr>
<tr>
<td>Check box</td>
<td>Each alert contains a check box; use check boxes to select alerts for a specific action (for example, to mark a group of alerts for deletion). Check the box in the first line (next to the Message Text label) to select all the alerts.</td>
</tr>
</tbody>
</table>
Table 9. Columns on the Alerts page (continued)

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message text</td>
<td>Displays the text of the alert.</td>
</tr>
<tr>
<td>Date/Time</td>
<td>Displays the time of the event that triggered the alert.</td>
</tr>
</tbody>
</table>

You can perform the following actions from the page.

Table 10. Controls on the Alerts page

<table>
<thead>
<tr>
<th>Link/Button</th>
<th>Description</th>
</tr>
</thead>
</table>
| ![Envelope](email.png) | Select the yellow envelope icon next to an alert to mark the alert as read.  
|              | After you click the icon, the alert is disabled. Reselect the icon to mark the alert as unread. |
| Alert title | Click the link in the alert to go to the object that is the subject of the alert.             |
|             | **Note:** The Alerts page remains open while you view the information in a separate window.   |
| Pages       | Click a page number to list the corresponding page of alerts.                                  |
| Delete Selected | Click to delete the selected alerts.                                                        |
| Delete All  | Click to delete all of your alerts.                                                           |
| Mark All as Read | Click to mark all your alerts as read, graying out each alert. A confirmation screen is displayed to ensure that you want to mark all alerts as read. |
| Mark All as Unread | If you have no unread alerts, click this link to mark all your alerts as unread.              |
| Close       | Click to close the Alerts page.                                                               |
Chapter 11. About templates

Templates are definitions of a List, On-demand Campaign, or Corporate Campaign that corporate and field marketers use to create new objects.

As an administrator, you create templates and specify various parts of the object. For example, among the many settings you determine for a Corporate Campaign template are:

- The associated flowchart in Campaign
- Team members
- Workflow
- Custom tabs

All Lists, On-demand Campaigns, and Corporate Campaigns are based on a template you create, and the object inherits all settings from the template. Corporate or field marketers can change the object's settings as needed.

Why use templates?

Templates are the required building blocks for Lists, On-demand Campaigns, and Corporate Campaigns. Users cannot create these objects without templates.

By using templates, you help users save time because they do not have to configure objects from the beginning; they only need to change settings that are specific to the List or campaign.

For example, if your organization is running multiple Corporate Campaigns that have the same team members and workflow, you can create a template with the right settings for the team and workflow. Corporate marketers then create the Corporate Campaigns that are based on this template, and do not have to configure the team members or workflow.

About template components

Templates are made up of other components that the administrator creates and manages.

Specifically, templates can include the following components.

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tabs</td>
<td>Individual screens for the campaign. Tabs contain one or more forms.</td>
</tr>
<tr>
<td>Forms</td>
<td>Subsection of a tab, containing fields.</td>
</tr>
<tr>
<td>Field</td>
<td>Data element that is contained within a form. Each field has a specific format; some fields, for example contain text, and others contain a set of radio buttons. You can place fields into groups, and display them in either a 1- or 2-column layout.</td>
</tr>
<tr>
<td>Data mapping</td>
<td>Mappings of data between Distributed Marketing and Campaign.</td>
</tr>
<tr>
<td>Icons</td>
<td>Small images that represent the object within the Distributed Marketing user interface.</td>
</tr>
</tbody>
</table>
### Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attachments</td>
<td>Files or folders that are displayed on the Attachment tab of the List, On-demand Campaign, or Corporate Campaign.</td>
</tr>
<tr>
<td>Custom links</td>
<td>Hypertext links are displayed on selected tabs.</td>
</tr>
<tr>
<td>Workflow</td>
<td>The set of stages and tasks that are displayed in the project's workflow tab.</td>
</tr>
</tbody>
</table>

### About creating templates

You create a template by assembling existing components. As you set up your system, you must create the other components before you can create templates.

### Planning your templates

Before you begin building templates, you must analyze your organization's needs, then decide on the templates you need.

For example, your organization might run three different types of On-demand Campaigns, with different target selection criteria and different workflows. You most likely need three different templates for these On-demand Campaigns.

In addition to planning the number and types of templates, you must plan for the types of objects you need in those templates. For example, the three On-demand Campaign templates you need can share the Summary form, but require different Selection Criteria forms and Workflows.

### Planning template contents

After you plan the types of templates you need, you must determine the contents of those templates; that is, you must decide which fields to include, and how to organize those fields.

You should capture this information about paper or in a spreadsheet, then use the Forms Editor to define the tabs and fields you need.

For example, you might determine that an On-demand Campaign template must include a field for the business unit that requests the campaign. You could list the requirements for this field as follows:

<table>
<thead>
<tr>
<th>Field Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Name</td>
<td>Business Unit</td>
</tr>
<tr>
<td>Display Name</td>
<td>Business Unit</td>
</tr>
<tr>
<td>Tab/grouping</td>
<td>In the Summary tab, under the Collateral Request Info section</td>
</tr>
<tr>
<td>Input field type</td>
<td>Single-Select</td>
</tr>
<tr>
<td>Possible values or database table to retrieve values from</td>
<td>Retail Banking, Investment Services, Insurance, Credit Card Brochure, Postcard, DataSheet, Intro Folder, White Paper, Print Ad, or a table name or column name where Distributed Marketing should look up these values.</td>
</tr>
<tr>
<td>Required field/error message, if missing</td>
<td>Business Unit is a required field.</td>
</tr>
<tr>
<td>Field Attribute</td>
<td>Value</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------</td>
</tr>
<tr>
<td>Help Tip</td>
<td>Enter the business unit that requests this collateral piece.</td>
</tr>
</tbody>
</table>

As a best practice, create a similar table for each field you require before you begin creating fields and tabs in the Forms Editor.

**Before creating templates**

Templates depend on the existence of other, lower-level components. Therefore, you must set up the following objects before you set up templates:

1. Forms
2. Icons
3. Data Mapping
4. Workflows
5. Roles
Chapter 12. Building and managing templates

To create and manage templates and template components, you use the Template Configuration page. Select Settings > Distributed Marketing Settings. Then, click Template Configuration.

The items and functions on the Template Configuration page are organized into two sections, Template Configuration and Templates Components. There is also an option to validate all templates.

Template Configuration section

The template configuration section of the Template Configuration page contains the Templates link. This link opens a page that lists all the existing templates and template folders that are organized by marketing object type. You use the links on that page to create, delete, and organize templates, and to edit or export individual templates.

Validating templates

To run a utility that validates templates and forms and shows any validation errors, click Validate Templates in the template configuration section.

Templates Components section

The templates components section of the page contains the following links.

Table 11. Links in the Templates Components section

<table>
<thead>
<tr>
<th>Link</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forms</td>
<td>Opens the Form Definitions page, which lists the form definitions and provides options for working with forms. The following information shows for each form definition:</td>
</tr>
<tr>
<td></td>
<td>• Name of the form definition</td>
</tr>
<tr>
<td></td>
<td>• Database table name that stores the values users enter in the form fields</td>
</tr>
<tr>
<td></td>
<td>• List of templates that use the form</td>
</tr>
<tr>
<td></td>
<td>Click Add to add a form.</td>
</tr>
<tr>
<td>Workflow</td>
<td>Opens a list of separately saved workflow templates and shows the following information.</td>
</tr>
<tr>
<td></td>
<td>• Name</td>
</tr>
<tr>
<td></td>
<td>• The number of stages and tasks in the workflow template</td>
</tr>
<tr>
<td></td>
<td>• When it was first created and last modified</td>
</tr>
<tr>
<td></td>
<td>• Whether it is enabled or disabled</td>
</tr>
<tr>
<td></td>
<td>You create workflow templates by saving the work that is done on the Workflow tab of a List, On-demand Campaign, or Corporate Campaign template or instance. You can use the links on this list page to delete, enable/disable, import, or export a workflow template.</td>
</tr>
</tbody>
</table>
### Table 11. Links in the Templates Components section (continued)

<table>
<thead>
<tr>
<th>Link</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Mapping</td>
<td>Opens a list of data maps and shows the following information.</td>
</tr>
<tr>
<td></td>
<td>• Data mapping file names</td>
</tr>
<tr>
<td></td>
<td>• Type: Campaign Data Mapping</td>
</tr>
<tr>
<td></td>
<td>• List of templates that use the mapping.</td>
</tr>
<tr>
<td></td>
<td>• Click Add ( <img src="icon_add.png" alt="Add Icon" /> ) to add a data mapping file.</td>
</tr>
<tr>
<td>Icons</td>
<td>Opens a list of icons and shows the following information.</td>
</tr>
<tr>
<td></td>
<td>• Icon images; large and small</td>
</tr>
<tr>
<td></td>
<td>• Icon name</td>
</tr>
<tr>
<td></td>
<td>• List of templates that use the icon</td>
</tr>
<tr>
<td></td>
<td>• Delete link for deleting the icon (does not delete the file from its</td>
</tr>
<tr>
<td></td>
<td>location on disk)</td>
</tr>
<tr>
<td></td>
<td>Click Add ( <img src="icon_add.png" alt="Add Icon" /> ) to add an icon.</td>
</tr>
</tbody>
</table>

## Templates Definition page

Use the links and commands on the Templates Definition page to work with templates.

From this page, you can perform the following actions:

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit</td>
<td>Click the template name to edit the template.</td>
</tr>
<tr>
<td>Enable or disable</td>
<td>Click the link to toggle the state of the template, from <strong>Enabled</strong> to</td>
</tr>
<tr>
<td></td>
<td><strong>Disabled</strong> and back.</td>
</tr>
<tr>
<td></td>
<td>When a template is enabled, you can use it to create an object.</td>
</tr>
<tr>
<td>Delete</td>
<td>Click to delete a template from the system. The link is only available for</td>
</tr>
<tr>
<td></td>
<td>templates that do not have any objects that are created from them.</td>
</tr>
<tr>
<td>Add</td>
<td>Click <strong>Add template</strong> in the section of the list for the type of template</td>
</tr>
<tr>
<td></td>
<td>you want to add a template.</td>
</tr>
<tr>
<td></td>
<td>Click the <strong>Add</strong> icon ( <img src="icon_add.png" alt="Add Icon" /> ) to add a template.</td>
</tr>
<tr>
<td>Open folder</td>
<td>Click the folder name to open the folder.</td>
</tr>
<tr>
<td>Jump to Folder</td>
<td>Click <strong>Jump to Folder</strong> to navigate to and open another template folder.</td>
</tr>
<tr>
<td>Move items</td>
<td>Select the items to move, then click the <strong>Move Items</strong> icon ( <img src="icon_move.png" alt="Move Items Icon" /> ) to display a screen where you can choose a new folder for selected items.</td>
</tr>
<tr>
<td></td>
<td>Select the items to move, then click <strong>Move Item(s)</strong> to. You then select a</td>
</tr>
<tr>
<td></td>
<td>template folder to which to move the template.</td>
</tr>
</tbody>
</table>
### To build a template

Before you create templates for Lists, On-demand Campaigns, and Corporate Campaigns, determine whether you must add custom tabs. If you do, see the chapter on the Forms Editor and use the procedures in that chapter to create forms for custom tabs.

When the template components you need are available, create a template and assemble the pieces. The steps to create a template are generally the same for each object type.

1. From the **Settings** menu, select **Distributed Marketing Settings**.
   
   The Administrative Settings screen opens.

2. Click **Templates**.
   
   The Template Configuration Screen opens

3. Click the **Add** icon (**`).

4. From the icon’s drop-down list, select the type of object for which you want to create a template.

5. Use the information that is provided in the rest of this chapter to determine how to complete each of the tabs for this template.

**Important:** When you assemble a template, click **Save Changes** when you finish editing a tab, before you navigate to another tab in the template. Otherwise, your changes are not saved.

### Effects of template changes

When you edit a template, be aware you are changing all instances of objects that were previously created from the template.

The exceptions are workflow, people, or an attachment. When you change the workflow template, add or remove roles, or add or remove an attachment, your changes apply only to objects you create after the changes are made. Existing workflows are not changed, nor are roles or attachments for any existing Lists, On-demand Campaigns, or Corporate Campaigns.

### About template folders

You can create folders for templates in the Templates Definition screen.

You can move templates to any existing folders.
To edit a template

Template editing is spread across the following tabs. Depending on the object type, only a subset of these tabs may be available.

- **Properties**: basic template properties, such as name and description.
- **Project Roles**: roles definition. Project templates only.
- **Requests**: defines rules for requests that are made by using this template. Project templates only.
- **People**: roles definition.
- **Campaign**: IBM Campaign integration settings (Corporate Campaign templates only)
- **Recurrence**: recurrence settings.
- **Workflow**: workflow settings (not available for simple Lists).
- **Budget Approval Rules**: define rules for line item approvals. Program, project, and invoice templates only.
- **Tabs**: Tab definitions; add additional forms and custom tabs.
- **Attachments**: files that are attached by default to all objects created from the template.
- **Custom Links**: custom links to programs, web pages, and so on.
- **Customize Alerts**: options that control the alerts IBM Marketing Operations sends for objects that are created by using this template.

1. Click Settings > Distributed Marketing Settings.
2. In the Administrative Settings screen, select Template Configuration (located under Other Options).
3. Select Templates.
4. Select the name of the template you want to edit.
   The Properties tab of the selected template is displayed. You can edit fields on any of the object templates tabs; click a tab in the menu bar to navigate to it.
5. Click Save Changes to save any changes you made to the template.

Template Properties tab for defining the template

For all objects, the template Properties tab contains the following properties for you to set.

Table 12. Properties for all templates

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The display name for the template, which displays on the Templates list page.</td>
</tr>
<tr>
<td>Description</td>
<td>Short description of the template. Displays on the template selection page when users add a List, On-demand Campaign, or Corporate Campaign.</td>
</tr>
<tr>
<td>Icon</td>
<td>Large and small icon images for the template. The large icon displays when users create an instance that is based on this template. The small icon displays next to the template name in the Templates list page. Click Change Icon to import different image files.</td>
</tr>
<tr>
<td>Security Policies</td>
<td>List of security policies that determine which users have access to the template. Note: Different fields display for project templates.</td>
</tr>
</tbody>
</table>
Table 12. Properties for all templates (continued)

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Template ID</td>
<td>Internal identifier for the template. Use lowercase alphanumeric values only. Do not include accented or non-roman characters or spaces.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong></td>
</tr>
<tr>
<td></td>
<td>• Template IDs must be unique across Distributed Marketing.</td>
</tr>
<tr>
<td></td>
<td>• Additionally, after you use a template ID, you cannot use it again, even if you delete it.</td>
</tr>
<tr>
<td></td>
<td>• You can edit this field only until a user creates the first object instance that is based on this template.</td>
</tr>
<tr>
<td>Default Name</td>
<td>The default name to give to an object instance (such as a program, asset, or marketing object) created from this template.</td>
</tr>
<tr>
<td></td>
<td>You can leave this field blank.</td>
</tr>
<tr>
<td>ID Prefix</td>
<td>Prefix for the external ID of the object. Each List, On-demand Campaign, and Corporate Campaign has an external ID assigned to it. For example, you enter an ID Prefix of TRS for the Tradeshow On-demand Campaign template. The first tradeshow On-demand Campaign that you create would then have an ID of TRS1001.</td>
</tr>
<tr>
<td></td>
<td>You can set the ID prefix by template, to easily determine the template on which an object is based.</td>
</tr>
<tr>
<td>ID Generation Class</td>
<td>Java™ class to specify a numbering algorithm for objects. By default, Distributed Marketing assigns a sequential number to each object. However, you can configure Distributed Marketing to use an algorithm that you define to set the external ID. If you choose this configuration option, the ID Generation Class specifies the Java class that is used to generate the code. You must edit this attribute only if you want to generate IDs according to an algorithm other than the default.</td>
</tr>
</tbody>
</table>

**Template People tab**

The People tab of a template defines roles that are added to Lists, On-demand Campaigns, or Corporate Campaigns that are created from this template.

You must define list definitions for roles before you add roles to a template.

To add a role, select a role from the drop-down list. The available values are populated from the list definitions.

To delete a role, click **Remove** next to the role you need to delete.

**Template Recurrence tab**

The Recurrence tab establishes properties for a recurring campaign. Recurring campaigns reference a basic workflow; you can set up recurrence properties to define how many times the basic workflow should recur.

Depending on permissions, users can modify recurrence properties when they create or edit a Corporate Campaign, On-Demand Campaign, or List. If they do so, all tasks in the workflow are replaced by new tasks, with dates that are calculated based on the new recurrence properties.
The Recurrence tab contains the following settings:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
</table>
| Campaign Workflow Type | Specifies whether the workflow used by the Corporate Campaign, On-Demand Campaign, or List contains a recurring stage. Options are:  
  - Nonrecurring  
  - Recurring  
  If you select Recurring, the properties on this tab are applied to the stage in the Workflow that is marked for recurrence.  
  **Note:** Recurrence properties that you set up here can apply to only a single stage of a workflow. |
| Frequency | Specifies the recurrence pattern. Options are:  
  - Daily—Occurs on a daily basis. When you select Daily, you must specify the number of days between each occurrence of the workflow or workflow stage.  
  - Weekly—Occurs on a weekly basis. When you select Weekly, you must specify the number of weeks between each occurrence of the workflow or workflow stage. (To specify every other week, enter 2 for the number of weeks between each occurrence.) You must also specify the day or days of the week on which the occurrence should take place.  
  - Monthly—Occurs on a monthly basis. When you select Monthly, you must specify the number of months between each occurrence of the workflow or workflow stage. You must also choose one of these options:  
    - Each date of month—Choose this option if you want the occurrence to take place on a specific date each month.  
    - Each day of week—Choose this option if you want to schedule the occurrence to run on a specific day of a specific week each month. For instance, if you want to run the campaign monthly, on the third Thursday of each month, you should select this option.  
  Keep in mind that your calendar options apply to your recurrence schedule; that is, the recurrence schedule is built using your settings for valid working days. |
| Ending | Specifies the total number of occurrences of the workflow or workflow stage. You can also choose to specify a date by which the recurrence should end. |
| Permissions to modify the recurrences in the instance | Allows you to specify the recurrence options that can be changed in each Corporate Campaign, On-Demand Campaign, or List.  
This field is displayed only in the Corporate Campaign, On Demand Campaign, or List template; it is not displayed in the actual instance of the Corporate Campaign, On-Demand Campaign, or List. Options are:  
  - All options—Users can change all recurrence options.  
  - No options—Users cannot change any recurrence options.  
  - All options but frequency—Users can change all options except frequency. |
The Workflow tab identifies and organizes tasks for a List, On-demand Campaign, or Corporate Campaign. When you create a template, you can include data on its Workflow tab to provide an initial workflow structure for each marketing object instance that users create. To review and define a workflow on the template, you use a spreadsheet-style interface. Users access a similar spreadsheet interface to update the supplied workflow as needed for individual instances.

For more flexibility, the data on the Workflow tab in any template or any individual instance can be saved as a separate workflow template component. Template components, which can include forms in addition to workflows, make designing templates to meet different needs more modular and efficient. Any workflow template component can be imported into any List, On-demand Campaign, or Corporate Campaign type template or instance.

Initially, the Workflow tab displays in view mode. To set up the stages, tasks, milestones, dependencies, and other data that make up the workflow, you switch to editing mode.

**Note:** When you design the workflow for a template, you can specify team member roles to associate with each task. To do so, you must first define values on the People tab. For more information, see “Template People tab” on page 107.

### Creating and editing workflow templates

The workflow that you create on the Workflow tab of any List, On-demand Campaign, or Corporate Campaign template or instance can be saved as a workflow template. Then, you can reuse the workflow in similar Lists, On-demand Campaigns, or Corporate Campaigns.

1. In any List, On-demand Campaign, or Corporate Campaign template or instance, select the **Workflow** tab. You can start with a new template or instance, or select one that already has a defined workflow.
2. For a new template or instance, change to edit mode. Set up the tasks, dependencies, and values that you want the template to supply as a starting point for new Lists, On-demand Campaigns, or Corporate Campaigns. For an existing template or instance, review the workflow.
3. With the Workflow tab in view mode, click task names to review or define settings.
4. Click **Save as Template**.
5. Enter a descriptive name for the template and click **Continue**.
6. Click **Save**. The workflow template displays on the Workflow Templates page, and can be imported into any template or instance.

To edit a workflow template, open a List, On-demand Campaign, or Corporate Campaign template and import the workflow template that you want to edit into its Workflow tab.

Typically, you set up a new template for this purpose because importing a workflow template overwrites any previously defined values. You can then edit the workflow and save the workflow as a new template with the same or a different name.
**Importing workflow templates**

You can import an existing workflow template into your List, On-demand Campaign, or Corporate Campaign template. Then, you can customize the workflow template for your new List, On-demand Campaign, or Corporate Campaign template.

1. Create the List, On-demand Campaign, or Corporate Campaign template. If the workflow template you plan to use includes people, you do not need to define them. The people are imported with the workflow template.
2. Select the Workflow tab.
3. With the Workflow tab in view mode, click **Import Template**.
   - The system presents a warning that the import overwrites the existing workflow.
4. Click **OK**.
   - A list of workflow templates opens.
5. Select a template from the list and click **Import**.
   - The Workflow tab displays the workflow tasks and stages from the workflow template. Any roles that are referenced by task rows also display on the People tab.
6. To modify or add stages or tasks, click **Edit**.
   - Then, customize the workflow as necessary for the project template. Remember to save your changes.
7. When the workflow is complete, click **Save and Finish** to return to view mode.

**Adding workflow to templates**

To set up a List, On-demand Campaign, or Corporate Campaign template that includes workflow data, you create the template, specify team member roles, and then edit the Workflow tab.

1. Select **Settings > Distributed Marketing Settings**.
2. Click **Templates**.
3. Click **Add Template** and select a template type.
4. Complete the fields in the **Template Properties** form and click **Save Changes**.
5. On the **People** tab, specify participant roles then click **Save Changes**.
6. Select the **Workflow** tab and click **Edit**.
7. Add system and user tasks and organize them into stages.
8. Edit task dependencies, define task scheduling and duration, and enter other values to supply when users create instances from this template.
9. When the workflow is complete, click **Save and Finish**. The tab returns to view mode.
10. To configure more information for each task, click the task name when the Workflow tab is in view mode. For list review tasks, you can configure the list display.
**Template Campaign tab**

You use this tab in a Corporate Campaign template to set up communication between Distributed Marketing and Campaign. This tab is not available for On-demand Campaigns and Lists.

The Campaign tab contains the following settings:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campaign Service URL</td>
<td>The URL used to start Campaign. For example:</td>
</tr>
<tr>
<td></td>
<td><a href="http://engsvr1:9001/Campaign/services/CampaignServices">http://engsvr1:9001/Campaign/services/CampaignServices</a></td>
</tr>
<tr>
<td></td>
<td>Distributed Marketing uses this value to access services provided by a Campaign server when you create a linked campaign.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> Enter a value here only if you are mapping data between Distributed Marketing and Campaign.</td>
</tr>
<tr>
<td>Campaign Data Mapping</td>
<td>The XML file that contains the data map for creating a Campaign campaign from a Distributed Marketing object instance.</td>
</tr>
<tr>
<td>Options</td>
<td>A single check box, <strong>Use Campaign Code Generated by Campaign</strong>. Check this box to force Campaign and Distributed Marketing campaign codes to match.</td>
</tr>
<tr>
<td>Partition ID</td>
<td>The Partition ID identifies the partition of the Campaign instance that contains the linked campaign.</td>
</tr>
<tr>
<td></td>
<td>The default value is partition1, which is correct if Campaign is installed to a single partition. If Campaign is installed on multiple partitions,</td>
</tr>
<tr>
<td></td>
<td>you can specify the partition to use for creating campaigns.</td>
</tr>
<tr>
<td></td>
<td>If you leave this field blank, Distributed Marketing obtains the partition ID from the defaultCampaignPartition parameter under</td>
</tr>
<tr>
<td></td>
<td>Platform &gt; Configuration &gt; Distributed Marketing.</td>
</tr>
<tr>
<td>Folder ID</td>
<td>The folder ID where Campaign stores campaigns that are created from within Distributed Marketing.</td>
</tr>
<tr>
<td></td>
<td>This ID comes from the Campaign\ UA_Folder system table. You must set up this system table in Campaign before you define it here.</td>
</tr>
</tbody>
</table>

**Template Tabs tab for customizing the user interface**

Use this tab to add forms to the Summary tab, or to create custom tabs for the marketing object types that support this feature.

For example, you want to collect information about the outside vendor that users plan to contract with to get collateral printed. To do so, you create a form with an attribute for users to select a printing company from a list of several vendors. You also include a text box for users to enter the quoted price of each page of the collateral. You then use the Tabs tab in a template to add a custom tab and name it **Printing**.

**Tip:** You cannot rename the standard tabs that display for object instances.

**Table 13. Fields for defining a new tab**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The display name for the new section on the Summary tab or the new custom tab.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Page Style | • Select **summary** to add a form to the bottom of the Summary tab. Use this option for forms that contain relatively few attributes and forms that users need to see frequently.  
• Select **tab** to create a custom tab specifically for the form. Use this option for forms, or groups of forms, that require their own page, as in the **Printing** tab example. |
| Form       | Select the form to add.                                                                                                                                 |
| Visibility | Select **Show in Wizard** to display the new Summary section or custom tab in the series of pages that display when users create a marketing object. If you clear this option, the section or tab displays only after users save the object. |

### Adding tabs to templates

Add a tab or form to templates to collect information about the marketing object. You can add more forms to the Summary tab. For some types of templates, you can add custom tabs, on which you add forms.

1. Add or edit the template then click its Tabs tab.

2. Click the **Add a Tab** icon (➕).

3. Enter a descriptive name for the tab in the **Name** text box.
   
   The name that you choose becomes the name of the tab that users see when they create instances from this template.

4. Choose whether to show the form on the **Summary** tab or its own custom tab.

5. Select a form from the **Form** list.
   
   This list contains all the forms available in IBM Distributed Marketing.

   **Note:** For List templates, forms of type Campaign are not listed.

6. Select the visibility options for the tab.

7. Click **Save Changes** to save the tab, or the **Add a Tab** icon (➕) to add another tab.

### Moving tabs and forms on templates

You can change the position on forms on tabs. You can also change the order of custom tabs as you change and refine templates.

1. Edit the template then click its Tabs tab.

2. Click one of the following buttons after **Move**:
   
   • **Down** to move a tab down. Moving a summary tab down places it lower on the object's **Summary** page. Moving a separate tab down places it further to the right in the tab list. For example, if the tab was fourth in the list, moving it down once makes it fifth.
   
   • **Up** to move a tab up. Moves it up or forward one position.

   **Note:** Summary tabs must come before non-summary tabs.
Deleting custom forms and tabs from templates

You might want to remove forms from tabs or custom tabs from templates. Consider whether you want to change the template by deleting the form or create a new template. If you delete a form or tab, data in existing object instances is lost.

**Important:** Deleting a custom form or tab from a template also deletes it from all existing object instances that are created from the template. Do not delete a custom form or tab from a published template if users already created object instances from it. If you do, data is lost.

1. Edit the template then click its Tabs tab.
2. Scroll to the section that defines the form or custom tab you want to remove and click **Delete** (on the right side of the page).
   
   The form or custom tab is removed from the object template.
3. Click **OK**.
4. Click **Save Changes**.

Template Attachments tab for adding folders and files

Use this tab to manage attachments in your templates. You can add attachments and folders for future attachments.

On this tab, you:

- Add one or more attachment folders so that users can add and organize attachments: Click the **Add a folder** icon.
- Change the relative position of the folders on the tab: Click **Up** and **Down** to reorder attachment folders.
- Delete folders: Click **Delete** next to the folder you want to remove. All attachments in the folder are also deleted.
- Attach one or more files to the template, so that whenever an object is created from the template, certain images and documents are attached by default. Click **Add an Attachment**.
- Delete default attachments: Click **Delete** next to the file you want to remove.

To add folders and default attachment files:

1. Add or edit the template then click its Attachments tab.
2. Add at least one folder to the tab: Click the **Add a folder** icon and provide a **Name**.
3. To add an attachment, click **Add an Attachment** next to a folder. The Upload Attachment dialog opens.
4. Enter the file path and name, or click **Browse** to locate the attachment.
5. Click **Save** to attach the file.
   
   The attachment file displays in a list under its folder.
6. On the Attachments tab, click **Save Changes** to save the new folder and its attachment.
   
   Repeat these steps to add as many folders and attachments as needed.
Template Custom Links tab for accessing other websites

Use this tab to create custom links that display on one or more tabs for the object instances that are created from this template. For example, you might want to link to an application that your organization uses to generate ID codes for collateral pieces or direct marketing offers.

To add a custom link, click Add a Custom Link. For each link, you can add a parameter, such as the query portion for a dynamic URL. To form the complete URL for the link, IBM Distributed Marketing appends a question mark (?) to the end of the URL you supply and then adds the parameter. To include a parameter, click Add a Parameter. More fields display for the parameter.

This tab contains the following properties. When your work is complete, click Save Changes.

**Table 14. Properties for custom links**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of links per row</td>
<td>Specifies the number of links to display in a single horizontal line at the bottom of the selected tab or tabs. The display number depends on the width of the browser window. If blank, the links display continuously and wrap onto more lines.</td>
</tr>
<tr>
<td></td>
<td>For example, you create 6 custom links to display on the Summary tab. To organize the links into 3 rows with 2 links in each row, enter 2.</td>
</tr>
<tr>
<td>Name</td>
<td>Enter a name for the link. This value becomes the name of the link.</td>
</tr>
<tr>
<td>ID</td>
<td>Enter a unique internal ID for the custom link.</td>
</tr>
<tr>
<td>Description</td>
<td>Enter some descriptive text for the link. This text is shown as a tip when a user moves the cursor over the link.</td>
</tr>
<tr>
<td>URL</td>
<td>Enter the fully qualified URL (including http:///) of the website to open when users click the link. The website opens in a new browser window.</td>
</tr>
</tbody>
</table>

Custom link URLs can include a parameter. For example, the link can open one page for an object that is Not Started, and another page for an object that is In Progress.

**Table 15. Fields for custom link parameters**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Enter a name for the parameter.</td>
</tr>
<tr>
<td>Value</td>
<td>Select a value from the list to define the type of object property to use. Depending on your selection, another Value list can display to collect more specification. The choice that you make determines the options available from the subsequent list.</td>
</tr>
<tr>
<td></td>
<td>For example, if you select a value of <code>&lt;object type&gt; Properties</code>, a list displays values including Target Start, Actual End, Security Policy, and other relevant properties for the object.</td>
</tr>
</tbody>
</table>

If you add more than one custom link, you can change their relative positions: Click Up and Down to reorder the links.
Workflow Templates page

You use the options on the Workflow Templates page to import, export, delete, enable, or disable previously created and saved workflow templates.

The Workflow Templates page lists all the workflow templates and presents the following information and functions.

Table 16. Options on the Workflow Templates page

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of the workflow template.</td>
</tr>
<tr>
<td>Stages / Tasks</td>
<td>The number of stages and tasks in the workflow, which is separated by a ‘/’ character. For example, the value in this column for a workflow that has 5 stages and 30 tasks is 5/30.</td>
</tr>
<tr>
<td>Creation Date</td>
<td>The date the template was created.</td>
</tr>
<tr>
<td>Last Modify Date</td>
<td>The date of the most recent change that is made to the template.</td>
</tr>
<tr>
<td>Status</td>
<td>Whether the template is enabled or disabled. When a workflow template is created, its status is set to Enabled by default.</td>
</tr>
<tr>
<td>Export link</td>
<td>Exports the workflow template to an XML file. You can then import it into another IBM Distributed Marketing system.</td>
</tr>
<tr>
<td>Import icon</td>
<td>Imports an XML file with workflow template data. Typically, you create these files by exporting them from another IBM Distributed Marketing system.</td>
</tr>
<tr>
<td>Enable/Disable icon</td>
<td>Marks the selected templates as enabled or disabled. A disabled workflow template cannot be imported into a List, On-demand Campaign, or Corporate Campaign template.</td>
</tr>
<tr>
<td>Delete icon</td>
<td>Deletes the selected workflow templates.</td>
</tr>
</tbody>
</table>

Exporting workflow templates

You can export individual workflow templates to use them in other List, On-demand Campaign, or Corporate Campaign templates. You might want to edit the exported XML file and reimport the workflow template back into IBM Distributed Marketing.

1. Select Settings > Distributed Marketing Settings.
2. Click Template Configuration.
3. Click Workflow.
4. Click the Export link for the workflow you want to export.
5. Choose a location to save the XML file, and save it.
6. Open the file with a text or XML editor, make your changes, and then save the file.
7. Navigate back to the templates library (Settings > Distributed Marketing Settings).

8. Click the Import Workflow Template icon and browse to your edited XML file.
9. Name the file to differentiate it from the previous version. For example, if you export Marketing Collateral, you can name your edited file Marketing Collateral 2. You can always rename the file later.
10. Create a template and use the new workflow or open an existing template and replace the old workflow template with the new one.

**Data Mapping Definitions**

The Data Mapping Definitions page maps data between objects in Distributed Marketing and campaigns in Campaign. Use the Data Mapping link on the Template Configuration page to configure data mapping.

The Data Mapping Definitions page contains the following columns:

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of the data mapping file.</td>
</tr>
<tr>
<td>Type</td>
<td><strong>Campaign Data</strong>: maps Distributed Marketing attributes to Campaign attributes.</td>
</tr>
<tr>
<td></td>
<td>If you have map files from previous versions, you might see other values in the Type column.</td>
</tr>
<tr>
<td>Used By</td>
<td>A list of templates that use the data map.</td>
</tr>
</tbody>
</table>

**Note:** You cannot create a map file within Distributed Marketing. Use a text or XML editor to create and edit the necessary map files.

The Campaign Service URL field on the Campaign tab in a Corporate Campaign template behaves as follows:
- If it is blank, data mapping does not occur.
- If it contains information, the value in the field is used to map data between Distributed Marketing and Campaign.

**Adding data mapping files**

Use a text or XML editor to create or edit a data mapping file. After you have a data mapping file, you add it to Distributed Marketing.

1. Select Settings > Distributed Marketing Settings.
2. Click Template Configuration > Data Mapping.
3. Click Add a data mapping ( ).
   The Upload Data Mapping dialog box opens.
4. Enter a name for the data mapping file.
5. Browse to the XML file that defines the data mapping.
6. Click Continue.

**Editing data mapping files**

If you want to update a data mapping file, you must first edit the XML file, and then reload it back into Distributed Marketing.

1. Open the data mapping XML file in a text editor and make your changes.
2. Select Settings > Distributed Marketing Settings.
3. Click Template Configuration > Data Mapping.
4. Click the file name that you are updating.
   The Update Data Mapping dialog opens.
5. Select File, and browse to the XML file.
6. Click **Continue**.
   You are prompted to overwrite the existing file.
7. Click **Save** to overwrite the existing file with the newer version.

---

**Icons page**

On the Icons page, you review and add icon files. These icons display in various parts of Distributed Marketing user interface to identify a type of template or object instance.

Click the **Icons** link on the Template Configuration page (or on the template Summary tab) to manage the icons that identify templates and the objects that are created from them.

The **Icons** page contains the following columns:

<table>
<thead>
<tr>
<th>Column</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image files</td>
<td>A large and small image for each icon. Click the images to change the icon name or the image files.</td>
</tr>
<tr>
<td>Name</td>
<td>The name of icon.</td>
</tr>
<tr>
<td>Used By</td>
<td>A list of object templates that use this icon. You specify the icons that are used by a template on the template Properties tab. See “Template Properties tab for defining the template” on page 106.</td>
</tr>
<tr>
<td>Delete</td>
<td>A link to delete the icon image file. This link is only available for icons that are not used in any templates.</td>
</tr>
</tbody>
</table>

Distributed Marketing is installed with a set of default icons. You can choose from these icons, or add icons that are customized for your organization. When you add your own custom icons, you upload two file sizes for each icon:

- **Main icon**: the large (46x54 pixels) image that displays when users create an object instance. For example, the main icon displays next to each template in the List, On-demand Campaign, or Corporate Campaign template selector (the dialog box that opens when users click Add for an object type).
- **List icon**: the small (20x24 pixels) image that displays on the list page next to an object instance. For example, the List, On-demand Campaign, or Corporate Campaign list page contains the list icons for all of the Lists, On-demand Campaigns, and Corporate Campaigns on the page.

The image files must be in JPEG, PNG, or GIF format.

**Adding and editing icons**

You can add or edit icons to use on templates.
1. Click **Settings > Distributed Marketing Settings > Template Configuration**.
2. Click **Icons**.
3. To add an icon, click **Add an Icon**.
4. Enter a **Name** for the type of template and object the icons identify, such as the name of a type of List.
5. Upload the icon image files:
To upload a main icon, under File Image enter a path and file name or click Browse.

To upload a list icon, under List Icon Image enter a path and file name or click Browse.

To replace an existing file, you must select the check box next to the type of icon you want to change.

6. Click Continue to load the files into Distributed Marketing.
7. Click Save Changes to confirm the upload.

The new or edited icon displays in the list.

About importing and exporting templates

The template import/export functionality allows you to:

• Export templates into a self-contained archive, and
• Import templates that were previously exported or saved to a self-contained archive.

Specifically, the export command downloads a ZIP archive to your computer; import uploads a ZIP archive to the Distributed Marketing server.

You can use the import and export commands to create a portable archive. For example, you can export all of your templates from a test server after you verify they work correctly, then import them to a production server.

To import templates

You can use the import button to import workflow templates that were created in the same version of Distributed Marketing that you are using. To import templates from an earlier version of Distributed Marketing, you must upgrade.

1. From the Settings menu, select Distributed Marketing Settings.
2. Click Template Configuration.
3. Click the Import icon.
   The Import Templates dialog is displayed.
4. Enter the path name of the template archive you are importing, or navigate to it using the Browse button.
5. In the Update Database section, choose which database scripts to run:
   • Drop tables
   • Create/Update tables
   • Drop Lookup Tables
   • Create/Update Lookup Tables
   Checking all the boxes fully imports the template. However, you lose any data you had if you are reimporting the same templates.

Note: If you are concerned about overwriting data, you can examine the SQL script files in the template archive to see the details, and create the necessary tables and columns manually.

6. Click Continue to import the selected templates.
   A summary page is displayed, detailing templates that are being imported, and any warnings about current template files that is overwritten.
7. Click:
Save Changes to import the templates, or
Cancel to stop the import, and avoid overwriting any existing templates.

The system reads the template files and analyzes them, and reports any errors. Imported templates are saved to the template database, and then all available templates are reloaded from the database.

**Note:** The archives that contain the example templates are in the \tools\admin\ folder under your Distributed Marketing installation. Use the archive for your database type. (For example, use sample_templatesDB2 if you are using a DB2 database.)

**About exporting templates**

If you create or edit a group of templates on a development or test Distributed Marketing server, you can export them and then import them to a production server.

The template export feature in Distributed Marketing allows you to export a group of templates or a single template. In either case, the system creates a self-contained ZIP archive; you can use this archive to import the templates to another Distributed Marketing server.

Export creates separate SQL scripts. These separate scripts give you more control over updating your database to work with the new templates when you import them. For example, if you need to add a column here or there, you can run only the create/alter scripts, so as not to needlessly delete tables and existing data.

The system generates the following script files (to use when you import the template archive).

**Table 17. Generated script files**

<table>
<thead>
<tr>
<th>File</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>createlkup.sql</td>
<td>Adds columns to existing lookup tables, and creates new lookup tables that are needed for the templates.</td>
</tr>
<tr>
<td>droplkup.sql</td>
<td>Deletes existing lookup tables that are used by the templates. If you do not mind possibly deleting data, you run this script before createlkup.sql to ensure that the database is set up correctly.</td>
</tr>
<tr>
<td>insertlkup.sql</td>
<td>Inserts data into the lookup tables. This script makes it possible to save complete lookup tables (schema plus data) with the template archive.</td>
</tr>
</tbody>
</table>

**To export a group of templates**

1. From the Settings menu, select Distributed Marketing Settings.
2. Click Template Configuration.
3. Click the Export icon ( ).
   The Export Templates dialog is displayed.
4. Select the Database Type from the pull-down list.
   This determines the format of the SQL script files that are generated with the exported templates.
5. Click:
   • Continue to export the templates, or
   • Cancel to stop the export; skip the remainder of the instructions.
6. Click **Open** or **Save** from the File Download dialog that is displayed.

   The system creates a ZIP archive that contains the template and SQL script files.

---

**Exporting templates**

You can export and import templates to create similar marketing objects in integrated IBM EMM products. Depending on your organization, Marketing Operations, Campaign, and Distributed Marketing can share templates.

1. From the **Settings** menu, select **Distributed Marketing Settings**.
2. Click **Template Configuration**.
3. Click **Templates**.
4. Click the name of the template to export.
   
   The Properties tab displays.

5. Click the **Export** icon (/tcp://).---

6. Specify the **Database Type** of the system that receives the template metadata through an import operation. The selected database type determines the format of the SQL script files that are generated by the export process.

7. Click **Continue** to export the template, or **Cancel** to cancel the export; skip the remainder of the instructions.

8. On the File Download dialog, click **Open** or **Save**.

   The system creates a compressed archive that contains the XML and SQL script files for the selected template. Open or extract the archive file to view these files.

---

**Template validation**

Validate your templates to check for errors.

Marketing Operations offers two types of predefined template validation checks:

- **Database validation**
- **Attributes validation**

You can perform these validation checks on all of your templates at any time: on the Template Configuration page, click **Validate Templates**. Information about these validation checks follows.

The system can also include more validation procedures if defined by your installation.

---

**Database validation**

Database validation checks the validity of the database schema, and whether form attributes match their data type in the database.

The system validates the database when you import, upgrade, and export templates. When you export templates, only forms that are not linked to any template are validated.

When you import and upgrade, you can save templates even if they are invalid. You receive a warning, but you can still save. However, when you add a form, you cannot save the form if validation finds any errors.
Attribute validation

Templates attributes type validation checks whether two form columns from two templates point to same table column but with different type (for example, one has a type of select and the other is multi-select).

If two or more form attributes with different types point to the same table column, the system generates an error that describes the inconsistency.
Chapter 13. Form Editor

The Form Editor creates and edits template components. Forms capture information about the List, On-demand Campaign, or Corporate Campaign.

Forms are also the way a field marketer provides input to Campaign flowcharts.

**Forms and attributes**

Forms are collections of attributes. Attributes are used to collect data about Lists, On-demand Campaigns, or Corporate Campaigns.

Forms define how the attributes are displayed for input by field marketers or corporate marketers, and how the supplied values are stored in a database.

**Forms and Campaign flowcharts**

When a flowchart is published in Campaign, an associated form is automatically created in Distributed Marketing.

**How forms and Campaign flowcharts relate**

When a flowchart is published in Campaign, an associated form is automatically created in Distributed Marketing.

You use this form to capture and send information from Distributed Marketing to Campaign.

By using the form in this way, you give field marketers control over certain aspects of On-demand Campaigns and Lists.

The administrator does this by exposing parameters in Campaign, publishing the flowchart, and then working with the automatically created form in Distributed Marketing.

**Campaign tasks**

In Campaign, you must create flowcharts, expose parameters, and publish the flowcharts. The typical workflow is as follows:

1. Create an input flowchart. The function of this flowchart is to create a list as an input to Distributed Marketing.
2. For the input flowchart, expose the parameters that the field marketer should be able to control, for example, gender and income range.
3. Create an output flowchart. The function of this flowchart is to hold the final list of prospects for the On-demand Campaign.
4. For the output flowchart, expose the parameters that the field marketer should be able to control.
   For example, you may want to field marketer to be able to customize the greeting and the branch name.
5. Publish both the input and output flowcharts.
Distributed Marketing tasks

In Distributed Marketing, you must create a template for an On-demand Campaign or List. The typical workflow is as follows:
1. Run the SQL commands that are produced as part of the flowchart publishing process.
2. Edit the forms that were created when the flowcharts were published in Campaign.
3. On the Form Definitions screen, click Publish next to the form to make the form available for use in templates.
4. Create a template for an On-demand Campaign or List.
5. Add two tabs to the template, one for the input form and one for the output form.
6. Create an On-demand Campaign or List by using the new template.
7. Generate the list.
8. Run the On-demand Campaign or List.

About offer integration in On-demand Campaigns

Offer integration takes the assigned offers corporate marketers design in the flowchart in Campaign and publishes it to Distributed Marketing.

While the corporate marketer designs the flowchart, they can assign offers to target cells. When the field marketer runs a flowchart, the offers that are configured by the corporate marketer are used. They also configure On-demand Campaign templates with the same flowchart form, and after the template is ready, field marketers can use the template.

The field marketer is only able to choose between available offers for each cell, and the offer selection is used during a flowchart execution in Campaign.

Field marketers are not able to view or select offers in an instance if offer integration is turned off. If offer integration is turned on, the field marketer is able to view and select offers in an instance.

To enable offers in On-demand Campaigns, in the Template Properties, select the Enable Offer Selection check box. You are able to view your offers on the Form Definitions page.

Note: By default, settings for offer integration at template level are disabled.

Republishing flowchart after changes

A Campaign user can edit the process configuration of a mail list or call list by changing the offer association with the target cells. Any additional offers or deletion of offers to a target cell creates a version of the flowchart. If the flowchart is already published, Save & Finish automatically republishes the flowchart. To notify Distributed Marketing about the changes that are made, the Campaign user saves and publishes the flowchart.

Note: If the corporate marketer does not publish the updated flowchart form, the field marketer receives an error message and is not able to run the flowchart.
After the changes are made, a new set of offers with their ID, name, description, and cell information is shown in Distributed Marketing. On the Form Definitions page, a merge notification is displayed for that flowchart form. You receive alerts about form republishing or an invalid form whenever a flowchart is republished. You can turn off the form valid/invalid notifications from the Notification Subscription page. Opening the form asks the user to merge with the latest list of offers.

**Deleting offers**

Campaign users might delete offers currently being used in flowcharts and in Distributed Marketing campaigns.

If a cell or offer that is used in the flowchart is updated or deleted from the campaign but the user does not publish the flowchart, there is not a version mismatch for the flowchart. While the system runs the flowcharts from Distributed Marketing, if the system verifies that the offer or cell used for execution is not correct, the flowchart execution fails.

Deleting offers behaves the same way as republishing flowcharts after changes are made.

---

**Adding a form generated from Campaign**

An associated form is automatically created in Distributed Marketing when you publish a flowchart in Campaign.

The underlying schema for the associated form does not yet exist in the Distributed Marketing database.

When you open such a form, you are presented with a screen where you can select the database type and the action to take. You select one of the following:

- **Preview SQL**
  Select this option to preview the SQL script that is used to create the database table for the form.

- **Run SQL Script**
  Select this option to run the SQL script to create the database table for the form.

You cannot work with the form unless the underlying schema exists. That is, before you can edit or publish the form, someone must run the generated SQL commands to create the tables to store the contents of the form.

---

**About invalid forms**

Invalid forms are forms that are associated with a flowchart in Campaign that are modified in Distributed Marketing. Templates that use the form also become invalid. All flowchart run tasks that use the form are canceled.

To make the form and templates that use it valid, and to be able to run flowchart run tasks that use the form, you must run the SQL generated by the republished flowchart.

**Note:** Invalid forms are marked with a red exclamation point. If a form is deleted (for example, when flowchart is removed in Campaign), then the template is marked with a red cross.
For an upgraded system, if you want to use a user variable value with 450 characters for existing values or tables, then you need to manually alter the look-up table that you want to use. Otherwise, the form is invalid.

---

**Form Definitions page**

The Forms Definition page uses links and commands to work with forms.

You access the Forms Definition page by selecting **Settings > Distributed Marketing Settings**, then clicking **Template Configuration**, then **Forms**.

The following table describes the links that are contained in the Forms Definition page:

<table>
<thead>
<tr>
<th>Link</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>The name of the form. Click the name to open the form.</td>
</tr>
<tr>
<td></td>
<td>The Pencil icon after a form Name indicates that the form is updated but the changes are not yet published.</td>
</tr>
<tr>
<td></td>
<td>The red exclamation mark indicates that a form is temporarily invalid because the associated flowchart was republished from Campaign.</td>
</tr>
<tr>
<td></td>
<td>The yellow triangle icon indicates that a form is republished and there are changes that must be validated. You must run a SQL script to validate the form.</td>
</tr>
<tr>
<td>Disable/Enable</td>
<td>Link to toggle the form between Enabled and Disabled states.</td>
</tr>
<tr>
<td></td>
<td>• Disable: indicates that the form is Enabled. Click to disable the form. Disabling the form prevents it from being selected in a template.</td>
</tr>
<tr>
<td></td>
<td>• Enable: indicates that the form is Disabled. Click to enable. Enabling a form allows it to be selected in a template.</td>
</tr>
<tr>
<td>Used By</td>
<td>The list of templates that currently use the form. Click a template name to open that template.</td>
</tr>
<tr>
<td>Publish</td>
<td>Click to publish the form.</td>
</tr>
<tr>
<td>Revert</td>
<td>Click to discard all the changes that are made to the form and revert it to the previous published version.</td>
</tr>
<tr>
<td>Delete</td>
<td>Click to delete the form.</td>
</tr>
</tbody>
</table>

---

**Editing a form**

You cannot edit a form in the Published state. You must first disable a published form in order to edit it. The system continues to use the published version of the form while you are editing it.

1. From the **Settings** menu, select **Distributed Marketing settings**.
   The Administrative Settings screen opens.
2. Click **Template Configuration**.
   The Template Configuration screen opens.
3. Click **Forms**.
   The Form Definitions screen opens.
4. Make changes to the form as necessary.
   If you are making multiple changes, you should periodically click **Save Changes** to save the form and continue working.
5. When you are finished editing the form, click **Save and Exit**. The Form Editor closes and you return to the Form Definitions screen.

You must now either republish or revert the form.

**Reverting a form**
You can revert a form to its last published state when you do not want to use recent changes.
1. From the **Settings** menu, select **Distributed Marketing settings**. The Administrative Settings screen opens.
2. Click **Template Configuration**. The Template Configuration screen opens.
3. Click **Forms**. The Form Definitions screen opens.
   Changed forms are indicated by a pencil icon (-pencil).
4. In the row for the modified form, click **Revert**.

The form reverts to its last published state.

**Deleting a form**
You cannot delete a form that is referenced by a template.
1. From the **Settings** menu, select **Distributed Marketing settings**.
   The Administrative Settings screen opens.
2. Click **Template Configuration**. The Template Configuration screen opens.
3. Click **Forms**. The Form Definitions screen opens.
4. In the row for the form, click **Delete**.
   You are prompted to confirm the deletion.
5. Click **OK** to delete the form.

The form is removed from the system.

**About Run History series**
Distributed Marketing produces a series of run histories, with each series conceptually tied to a version of the form that is used to generate the results.

You view the run history series in the Run History drop-down menu in the Analysis tab. The Run History drop-down menu allows you to see all revisions or the "run history series," with the most recent one selected by default.

**About merging forms**
When a flowchart is republished in Campaign, a new form is generated that must be merged with the old one.

If the new flowchart exposes a new parameter, you must merge the form to have that parameter appear.
When you merge forms, note the following.

- For trivial flowchart changes (for example, when a lookup value for an existing user variable is added), you do not need to take any action, other than republishing the flowchart in Campaign. Distributed Marketing recognizes these changes automatically.

  **Note:** However, in this example, you do have the option of not merging the change if Distributed Marketing uses different lookup values.

- If user variables are added to or deleted from the flowchart, the system alerts marketers to the fact they need to revalidate their Lists and On-demand Campaigns.

- Some small changes that are made to a flowchart are ignored by Distributed Marketing. For example, changes to localized text such as labels, prompts, and option prompts are ignored, because Distributed Marketing users typically modify this data. Therefore, the system does not overwrite these changes.

- If you expose new user variables in a flowchart, and there are already objects in Distributed Marketing that use this flowchart, the system does not update the existing objects with a default value for any new attributes.

## Republishing a form

You must republish a form when its associated flowchart in Campaign changes.

1. From the **Settings** menu, select **Distributed Marketing settings**.
   The Administrative Settings screen opens.
2. Click **Template Configuration**.
   The Template Configuration screen opens.
3. Click **Forms**.
   The Form Definitions screen opens.
   Forms for which the associated flowchart has changed are indicated by a pencil icon (✏).
4. In the row for the modified form, click **Publish**.
5. Edit the form as necessary.
   If you are making multiple changes, you should periodically click **Save Changes** to save the form and continue working.

Field marketers should revalidate List and On-demand Campaign instances that use the updated form.

## Changing values displayed in forms

You can modify the display values contained in lookup tables that are used to present choices in drop-down lists and selection tables that are contained in forms.

This allows you to display choices to corporate and field marketers in your organization in their native language. You do this in the Form Editor by modifying individual elements of the form.

1. Edit the form for which you want to modify how values are displayed.
2. Select an element.
3. Click **Update Lookup Table**.
   The Update Lookup Table window opens.
4. Modify or translate the values in the table.
For example, translate the values for Acquisition, Cross-selling, and Loyalty into a language other than English.
Your changes replace the text that is displayed in the drop-down list or display table that is populated by the lookup table.

**Note:** This step fails if the lookup table is a view rather than a table.

5. Save and republish the form when you are finished.

## Form status

There are three form status values: published, disabled, and enabled.

The follow table lists the possible form status values:

<table>
<thead>
<tr>
<th>Status Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Published</td>
<td>The form is published and is available for use in templates. You cannot edit a form in this state; you must first disable it. A Published form is also Enabled.</td>
</tr>
<tr>
<td>Disabled</td>
<td>A previously Published form was disabled so that it could be edited.</td>
</tr>
<tr>
<td>Enabled</td>
<td>A previously Disabled form was enabled so that it could be used by templates.</td>
</tr>
</tbody>
</table>

## Form Editor page

The Forms Editor is a visual tool to help you lay out how you want pages to appear to corporate and field marketers.

The form layout is displayed in the main area of the page. In this area, you can:
- Change the format and labels of the parameters.
- Rearrange the layout by selecting and moving elements around the page.
- Add help text, default values, and mark parameters as required

## Form Editor tabs

The Form Editor contains three tabs:
- “Add an Element tab” on page 130 tab
- “Element Properties tab” on page 133 tab
- “Form Properties tab” on page 133 tab

## Form Editor Commands

The Form Editor contains the following commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Save Changes</td>
<td>Saves the changes that are made to this form and continue editing.</td>
</tr>
<tr>
<td>Save and Exit</td>
<td>Saves the changes that are made to this form and returns the user to the Form Definitions page.</td>
</tr>
<tr>
<td>Preview</td>
<td>Opens a pop-up window that shows how the form looks to corporate and field marketers.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Cancel</td>
<td>Discards the non-saved changes and returns to the Form Definitions page.</td>
</tr>
</tbody>
</table>

**Add an Element tab**

The Add an Element tab of the Form Editor allows you to select elements and drag them to the desired location on the form.

In this tab, you work with two kinds of elements:

- General Elements, which include the Attribute Group Header
- Custom Elements

**Attribute Group Header**

You can add group headers to group the fields on the form. When you add a group header, you specify its properties, then drag it onto the form. The following table describes the properties for a group header:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Internal Name</td>
<td>Internal name of the group.</td>
</tr>
<tr>
<td>Group Display Name</td>
<td>The label that is displayed to users on the form.</td>
</tr>
<tr>
<td>Description</td>
<td>Descriptive text for the group; this is useful for determining the purpose.</td>
</tr>
<tr>
<td></td>
<td>This text is not displayed to users.</td>
</tr>
<tr>
<td>Show Group Heading</td>
<td>Determines if the Group Display Name is shown on the form.</td>
</tr>
<tr>
<td>Group Layout</td>
<td>Determines whether the group is displayed in one or two columns. The value</td>
</tr>
<tr>
<td></td>
<td>of this property sets the form layout until the next group header on the</td>
</tr>
<tr>
<td></td>
<td>form appears.</td>
</tr>
</tbody>
</table>

**Custom Attributes**

You can add custom attributes to the form.

You must first create custom attributes; the custom attributes you create are only available on the current form.

The following custom attribute types are supported:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text - Single-Line</td>
<td>Text field allowing users to enter a single line of text.</td>
</tr>
<tr>
<td>Text - Multi-Line</td>
<td>Text field allowing users to enter multiple lines of text.</td>
</tr>
<tr>
<td>Single-Select</td>
<td>Enumerated field, allowing a user to select one value from a list. The</td>
</tr>
<tr>
<td></td>
<td>choices are driven by a hardcoded list of options you specify when creating</td>
</tr>
<tr>
<td></td>
<td>the attribute.</td>
</tr>
<tr>
<td>Single-Select</td>
<td>Represents a single property (column) from a row in the lookup table that</td>
</tr>
<tr>
<td>Database Attribute</td>
<td>is used by the parent SSDOR attribute.</td>
</tr>
<tr>
<td>Reference (SSDAR)</td>
<td></td>
</tr>
<tr>
<td>Single-Select</td>
<td>Extends the capability of an SSDB attribute, and provides users the</td>
</tr>
<tr>
<td>Database Object</td>
<td>ability to create attributes that represent an entity with multiple</td>
</tr>
<tr>
<td>Reference (SSDOR)</td>
<td>properties.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Single-Select Database</td>
<td>Same as the Single-Select attribute, except that the list of choices is loaded from a database table that contains valid items.</td>
</tr>
<tr>
<td>Multiple-Select Database</td>
<td>Same as the Single-Select Database attribute, except that you can choose more than one item from the list.</td>
</tr>
<tr>
<td>Yes/No</td>
<td>Boolean field, allowing a user to select one of two values. Can appear in any of the following ways:</td>
</tr>
<tr>
<td></td>
<td>• Check box</td>
</tr>
<tr>
<td></td>
<td>• Drop-down list</td>
</tr>
<tr>
<td></td>
<td>• Radio button group</td>
</tr>
<tr>
<td>Date Select</td>
<td>Date selector, where the user can enter a date or select a small calendar from which to choose a date.</td>
</tr>
<tr>
<td>Integer</td>
<td>Numeric field, allowing users to enter whole numbers.</td>
</tr>
<tr>
<td>Float</td>
<td>Numeric field. You can specify the number of decimal places.</td>
</tr>
<tr>
<td>Money</td>
<td>Numeric field, allowing users to enter currency values. The system uses the localized currency symbol. You can specify the precision (number of decimal places) for the field.</td>
</tr>
<tr>
<td>User-Select</td>
<td>Creates a user selector, which is populated (from Marketing Platform) with all system users. You can use this attribute where the value should come from a list of users.</td>
</tr>
<tr>
<td>List of Lists</td>
<td>Special type of multi-select attribute that displays all of the lists of a field marketer in a multi-select format.</td>
</tr>
<tr>
<td>Hidden</td>
<td>Used to pass the ListID and Username properties from a Campaign flowchart that is brought into Distributed Marketing as a form.</td>
</tr>
<tr>
<td></td>
<td>You can also use this type to create a field to which you assign a default value that you do not need users to see, for example, a field that is used only for reporting.</td>
</tr>
</tbody>
</table>

**Note:** Note the following:
- Each attribute type can be displayed with different controls as indicated by the icon in the list.
- To create an attribute, click **Create a New Custom Attribute** at the bottom of the custom attribute list.

**Creating an attribute**

You can create custom attributes from the Add an Element tab of the Form Editor.

Before you can create any custom attributes for the form, the database schema for the lookup tables must be created. You must do this outside of Distributed Marketing with your database management software.

1. Open the Form Editor for the form to which you want to add a custom attribute.
2. With the Add an Element tab open, click **Create a New Custom Attribute**.
   - The Create a New Custom Attribute dialog box opens.
3. Enter information in the Basic Options section as needed.
   - Fields marked with two red asterisks (**) are required.
   - Additional Basic Options fields may be added, and the Display Options may change, based on the Attribute Type you select.
4. Set the Display Options as needed.
5. Click **Save and Exit** to save the attribute and return to the form editor.
   You can also click **Save and Create Another** to save this attribute, and then create another attribute in the same dialog box.

The custom attribute is now available for use in this form.

**Note:** Custom attributes that you create are only available in the form you are editing.

**Creating a dependent attribute**
Dependent attributes are attributes whose values are constrained by another attribute value.

You can make only the following attribute types dependent on other attributes:
- Single-Select - Database
- Multiple-Select - Database

If you want to have a field that displays all the cities for a selected state, you can make the City attribute dependent upon the State attribute.
1. Create the parent attribute.
   To continue with the example above, you would create the State attribute.
2. Place the parent attribute onto the form.
   The Create a New Custom Attribute dialog box opens.
3. Create the child attribute. For example, you would create the City attribute.
4. In the child attribute, check the field **This field is dependent on the following column**.
5. Select the database table column on which this attribute is dependent. For example, you would select the State column.
6. Click **Save and Exit** to save the attribute and return to the form editor.
   You can also click **Save and Create Another** to save this attribute, and then create another attribute in the same dialog box.

The dependent custom attribute is now available for use in this form.

**Deleting a custom attribute**
You cannot delete custom attributes from forms that were created automatically from a published Campaign flowchart.
1. In the Form Editor, select the custom attribute to delete from the Custom Attributes list.
   The custom attribute to delete must be in this list, and not in the form itself.
2. Click **Delete the selected attribute**.
   You are prompted to confirm the deletion.
3. Click **OK**.
   The custom attribute is deleted.
4. Click **Save Changes** or **Save and Exit** to save the form with the deletion.
   To cancel the deletion, click **Cancel**.
Element Properties tab
The Element Properties tab displays the properties of the currently selected element in the Form Editor.

This tab is displayed when you select a single element in the form.

The values that are displayed in this tab are read-only. To edit the values, click Edit Custom Attribute or Edit Attribute Group.

Form Properties tab
The Form Properties tab displays the properties that are related to the form.

Use this tab to view or edit the form properties. The tab contains the following information:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form name</td>
<td>The name of the form. If the form is created automatically when a Campaign flowchart is published, then the Flowchart name, ID, type are displayed in read-only mode.</td>
</tr>
<tr>
<td>Form Description</td>
<td>Description for the form.</td>
</tr>
<tr>
<td>Form Layout</td>
<td>Radio button group that indicates whether the form has a one- or two-column layout.</td>
</tr>
</tbody>
</table>

Properties for forms associated with Campaign flowcharts
If the form was created through the publishing of a Campaign flowchart, it has several additional properties:

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flowchart Type</td>
<td>The flowchart type is either List or Campaign. On-demand Campaigns and Lists typically have two tabs, one for input and one for output. The input form should be designated as List, and the output form should be designated as Campaign.</td>
</tr>
<tr>
<td>Flowchart Name</td>
<td>The read-only name of the corresponding flowchart in Campaign.</td>
</tr>
<tr>
<td>Flowchart Version</td>
<td>The read-only version of the corresponding flowchart in Campaign.</td>
</tr>
</tbody>
</table>

Removing a custom attribute from a form
You cannot remove custom attributes from forms that were created automatically from a published Campaign flowchart.

1. In the Form Editor, select the element to delete.

2. Click the Delete icon ( DELETE ).
   The element is deleted from the form.

3. Click Save Changes or Save and Exit to save the form with the deletion.
   To cancel the deletion, click Cancel.
About Single Select Database

Single Select Database (SSDB) gives you the ability to create single select drop-down attributes that are based on database tables.

You use single select databases when the underlying lookup table exhibits a key-value relationship, and when one entity can be defined by one attribute and identified by one key column.

You can select only one value at a time from a drop-down list or a radio button group, depending on the display format that is selected while you create the attribute.

These tables must follow certain conventions.
1. The table names must have a prefix: `lkup`.
2. It must have at least two columns: a key column and a column that stores display values.
3. It is recommended to have the key column with a primary key constraint to avoid repetition. Even if the lookup table that is pointed to is a view, ensure that the data in the view has unique records.
4. It is recommended to not have more than three columns, where the third column refers to the relationship with another SSDB attribute. Having more than three columns in the lookup table renders the unused columns redundant.
5. Set the **Sort-by Column** field to the same column as the **Display Column**, so that your Display Column values are visible when you select a column sort order.

About Single Select Database Object Reference

Single Select Database Object Reference (SSDOR) attributes extend the capability of an single select database attribute, and provides users the ability to create attributes that represent an entity with multiple properties.

Use the following conventions while you create a single select database object reference.

- Select the database lookup table that has numerous columns that are representing an entity.
- Select the key column carefully as this table might have many columns, and based on the value in the key column, the dependent attributes are populated. You need to use a primary key constraint on this table, as data might keep growing in this table. If the lookup table that is being pointed to is a view, ensure that the data in the view has unique records that are identified by a unique key column.
- Choose the appropriate columns from the available ones to be displayed at the instance level.
- SSDOR attributes are mandatory, but are not read-only.

The underlying database lookup table has multiple columns. An entire row in the lookup table would represent the object (entity). The data in this table may keep on growing.

SSDOR attributes allow users to select the columns they would like to view so that they can make more informed choices of the value to be selected at the outset.
Note: Date/date time type fields are not supported in the SSDOR display column.

**About Single Select Database Attribute Reference**

A Single Select Database Attribute Reference (SSDAR) represents a single property (column) from a row in the lookup table that is used by the parent SSDOR attribute.

Selection of the lookup table is automatic, depending on the parent SSDOR selected. The lookup table for a SSDAR always points to a parent lookup table.

Use the following conventions while you create SSDAR attributes.

- The form must have at least one SSDOR attribute.
- Select the parent attribute carefully, and the lookup table is populated automatically.
- Give intuitive names to attributes to easily map the attribute to the database column.
- By default, SSDAR is a read-only attribute.

The parent lookup table has to have a unique key in the table. The unique key must be made the attribute key in the Form Editor as well. The parent key column should be present in the child attribute lookup table.
Appendix A. Defining campaign logic in flowcharts

IBM Campaign uses flowcharts to define campaign logic. Each flowchart in a campaign performs a sequence of actions on data that is stored in your data mart.

Each marketing campaign consists of at least one flowchart. Each flowchart consists of at least one process. You configure and then connect processes to perform data manipulation, contact list creation, or contact and response tracking for your campaign. For example, a Select process can select existing customers from your database by using criteria that you specify, and a Segment process can segment those customers into tiers.

By connecting a series of processes in a flowchart, then running that flowchart, you define and implement your campaign.

Note: To work with flowcharts, you must have the appropriate permissions. For more information, see the IBM Campaign Administrator’s Guide.

Flowchart workspace overview

The flowchart workspace provides the tools and space to design flowcharts for marketing campaigns.

When you create or edit a flowchart, a separate flowchart window opens. You can move or resize the flowchart window as you work.

You can open just one flowchart at a time. If you attempt to open another flowchart while one is already open, you are prompted to save your changes. To open two flowcharts at the same time, see “Viewing two flowcharts side-by-side” on page 142.

Note: Pop-up blockers prevent the flowchart window from opening. Be sure to turn off any pop-up blockers in your browser or browser add-ons.

The following figure shows a flowchart open for editing in the flowchart window.
The flowchart window consists of the following elements.

<table>
<thead>
<tr>
<th>Table 18. Flowchart window elements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Element</strong></td>
</tr>
<tr>
<td>Toolbar</td>
</tr>
<tr>
<td></td>
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<tr>
<td>Palette</td>
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<tr>
<td></td>
</tr>
<tr>
<td>Workspace</td>
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<td></td>
</tr>
</tbody>
</table>

**Creating flowcharts**

You can add a flowchart to your campaign either by creating a new one, or copying an existing one.

Copying an existing flowchart may save time because you can start with a completed flowchart and modify it to meet your needs.

To facilitate constructing flowcharts, you can use pre-configured flowchart templates to quickly create common campaign logic or process box sequences. You can also save and reuse other objects such as queries, table catalogs, triggers, custom macros, user variables, and definitions of derived fields.

**Flowchart design considerations**

Be aware of the following considerations when you create flowcharts.

- **Avoid cyclical dependencies.** Be careful not to create cyclical dependencies among processes. Consider this example of a cyclical dependency: (a) Your flowchart contains a Select process whose output provides input to a Create Seg
process. (b) The Create Seg process generates a strategic segment as its output. (c) You use that segment as input to the Select process. This situation results in an error when you try to run the process.

- **Applying global suppressions.** If your organization uses the global suppression feature, it is possible that a particular set of IDs might be automatically excluded from use in target cells and campaigns. The flowchart log file indicates whether global suppression is applied.

**Creating flowcharts**

Follow these instructions to add a flowchart to a marketing campaign. A flowchart determines the campaign logic.

**Note:** If you are creating an interactive flowchart, see the IBM Interact documentation for information.

1. In the campaign or session to which you want to add a flowchart, click the **Add a Flowchart** icon.
   The Flowchart Properties page opens.
2. Enter a name and description for the flowchart.

   **Note:** Under **Flowchart Type**, **Standard Batch Flowchart** is the only option unless you are a licensed user of Interact. If you installed a licensed version of Interact, you can also select **Interactive Flowchart**.

3. Click **Save and Edit Flowchart**.
   The flowchart opens in a new window, which includes the process palette on the left, a toolbar at the top, and a blank flowchart workspace.
4. Add a process to your flowchart by dragging a process box from the palette to the workspace.
   A flowchart typically begins with one or more Select or Audience processes to define the customers or other marketable entities with which to work.
5. Double-click a process in the workspace to configure it.

   **Important:** Click **Save Changes and Continue to Edit** frequently while you add and configure processes.
6. Connect the configured processes to determine the workflow of your campaign.
7. Click **Save and Exit** to close the flowchart window.

**Adjusting flowchart appearance**

You can adjust the position and alignment of process boxes to improve the appearance of the flowchart. All of these changes are visual. They do not affect the flow of data. The direction of the connection lines between processes determines the data flow.

This procedure assumes that you have a flowchart open for editing.

Follow these steps to adjust the appearance of a flowchart.

1. To reposition all processes in a flowchart, click the **Change Layout** icon and select an option.
   - **Tree:** Organizes process boxes in a tree format. Useful when each process box has a single input.
   - **Organization Chart:** Organizes simple flowcharts and is effective for flowcharts with a single input from the top.
**Circular**: Arranges process boxes in a radial fashion. Useful for single connection-based flowcharts that lead to one output.

**Hierarchical**: Organizes process boxes in horizontal or vertical levels so that most links flow uniformly in the same direction. This layout often provides the most simple and visually straightforward choice.

2. To reposition all process boxes to a horizontal or vertical layout:
   a. Right-click the flowchart workspace.
   b. Choose **View > Horizontal / Vertical** or click the **Horizontal / Vertical** icon in the toolbar.
      If this option causes connection lines to overlap, choose **View > Angled Connections** twice to redraw the connection lines properly.

3. To align two or more process boxes, drag a selection box around at least two processes, then use the alignment icons in the flowchart toolbar.
   - To align boxes in a row: Use the **Align Top** icon, the **Align Bottom** icon, or the **Align Center (Vertical)** icon.
   - To align boxes in a column: Use the **Align Left** icon, the **Align Right** icon, or the **Align Center (Horizontal)** icon.

   If you choose an incorrect alignment, select an option from the **Change Layout** menu to restore the layout. In many cases, the **Hierarchical** layout fixes overlapping process boxes.

   You can also select an individual process box and drag it to a new location.

---

**Copying flowcharts**

Copying an existing flowchart to add to a campaign saves time because you can start with a completed flowchart and modify it to meet your needs.

If the copied flowchart includes contact processes (Mail List or Call List) with target cells linked to target cells that are defined in the target cell spreadsheet, new cell codes generate for cells in the new copy of the flowchart so that duplicate cell codes do not occur. If the target cells were defined in the flowchart, and if the **Auto-generate cell code** option in the contact process is off, new cell codes are NOT generated when you paste the copied flowchart.

**Note**: When you copy a flowchart, if the flowchart logic uses derived fields that reference cell codes from the old flowchart, the logic is broken in the new flowchart.

Process configuration settings are copied to the new flowchart. However, any temporary files or tables that were created as a result of running the original flowchart are not copied to the new flowchart.

---

**Copying flowcharts**

Copying an existing flowchart saves time because you can start with a completed flowchart and modify it to meet your needs.

1. View the flowchart that you want to copy.
   - For example, click a flowchart tab while you view its campaign.

2. Click the **Copy** icon.

3. In the Duplicate Flowchart dialog, select the campaign into which you want to copy the flowchart.
4. Click **Accept this Location**.

**Note:** You can also double-click a folder to select and accept the location in one step.

The flowchart is copied to the campaign that you selected.

Process configuration settings are copied to the new flowchart. However, any temporary files or tables that were created as a result of running the original flowchart are not copied to the new flowchart.

If the copied flowchart includes contact processes (Mail List or Call List) with target cells that are linked to a target cell spreadsheet, new cell codes are generated for cells in the new flowchart so that duplicate cell codes do not occur. If the target cells were defined in the flowchart, and if the **Auto-generate cell code** option in the contact process is off, new cell codes are **NOT** generated for the new flowchart.

**Note:** If the flowchart logic uses derived fields that reference cell codes from the old flowchart, the logic does not carry over to the new flowchart.

---

### Viewing flowcharts in Read-Only mode

If you have View permissions for a flowchart, you can open it in Read-Only mode to see which processes are used and how they are connected. However, you cannot open process configuration dialogs or make any changes.

1. Choose **Campaign > Campaigns**.
2. Use one of the following methods to open a flowchart.
   - Click **View a tab** next to the campaign name, and select a flowchart from the menu.
   - Open the campaign, then click the flowchart tab.
   - Open the campaign’s Analysis tab, then click the name of the flowchart that you want to view.

If you want to see more details of the flowchart, such as how the processes are configured, you must open the flowchart for reviewing or editing: Click the **Edit** icon in the flowchart toolbar. Your permissions determine whether the flowchart opens in review or edit mode.

---

### To view a flowchart

You can view a flowchart in three ways:

- On the Campaigns page, click the **View a tab** icon next to the campaign and select the flowchart you want to view from the menu.
- Open the flowchart tab directly from the campaign.
- Open the campaign’s Analysis tab, then click the flowchart name from the list of flowcharts.

---

### To zoom in and out

Click the **Zoom In** and **Zoom Out** icons.
**Viewing two flowcharts side-by-side**

Some campaign designers prefer to view two flowcharts side-by-side when developing new flowcharts. When using Internet Explorer, you must use File > New Session to open additional browser windows.

Do not use any other method to open multiple browser sessions. For example, do not use a new tab; do not open another browser session from the Start menu; and do not use File > New Window. Using these methods can confuse or corrupt information that is displayed in Campaign.

**Note:** When using the method below, you cannot copy processes from one flowchart to another. To copy configured processes across flowcharts, use the template library options available on the right-click command menu, as explained in Copying processes between flowcharts.

1. Open Internet Explorer.
2. Log in to the IBM Enterprise Marketing Management (EMM) Suite and navigate to a Campaign flowchart in view mode only.
3. In the browser window that you opened in Step 1, select File > New Session in the Internet Explorer menu bar.
   A new Internet Explorer instance opens.
4. In the new browser window, log in to the IBM Enterprise Marketing Management (EMM) suite as the same or a different user, and navigate to a Campaign flowchart in view mode only.

**Remember:** You must disable any pop-up blockers in your browser or browser add-ons, such as toolbars. Pop-up blockers prevent the flowchart window from opening.

---

**Reviewing flowcharts**

Depending on your permissions, you might be allowed to review, but not edit, flowcharts. Reviewing a flowchart means you can look at process configurations and make changes, but you cannot save any changes or perform production runs. The flowchart auto-save option is disabled and cannot be enabled. To save changes to a flowchart, you must have Edit permissions.

If you are allowed to review but not edit flowcharts, you can verify a flowchart’s contents without inadvertently changing the flowchart.

You open a flowchart in Review mode the same way as you open a flowchart in Edit mode. Your permissions ensure that you can only access flowcharts in Review mode if you do not also have Edit permissions.

Follow these steps to review a flowchart.

1. Use one of the following methods to open a flowchart:
   - On the Campaigns page, Edit a tab next to the campaign, and select a flowchart from the menu.
   - Open a campaign, click the flowchart tab, then click Edit in the flowchart toolbar.
   - Open the campaign’s Analysis tab, click the flowchart link, then click Edit.

   A message indicates that the flowchart is in review mode and that any changes you make cannot be saved. The page header says "Reviewing" and only the Cancel option is visible.
2. You can perform the following actions in Review mode:
   • Save processes as a template.
   • Save the flowchart as a template.
   • Modify the flowchart (but you cannot save your changes).
   • Perform test runs, if you have the appropriate permissions.

Important: Even in Review mode, test runs can write output and execute triggers. Also, if you have the appropriate permissions, you can edit custom macros and triggers in the flowchart, and thus might change the flowchart.

To review the processes in a flowchart

Note: You open a flowchart in Review mode in the same way as you open a flowchart in Edit mode. Your permissions settings automatically ensure that you can only access flowcharts in Review mode if you do not also have Edit permissions.

You can open a flowchart for reviewing in several ways:
   • On the Campaigns page, click the Edit a tab icon next to the campaign and select the flowchart you want to review from the menu.
   • Open the campaign, then click the flowchart tab. On the flowchart page, click the Edit icon.
     You can also press Ctrl and click the flowchart tab to open the flowchart directly in Review mode.
   • Open the campaign’s Analysis tab, click the link to the flowchart you want to review, then click the Edit icon.
     On the Analysis tab, you can also press Ctrl and click the flowchart link to open the flowchart directly in Review mode.

When you enter a flowchart in Review mode, you see a message indicating that the flowchart is in review mode and that any changes you make cannot be saved. The page header indicates "Reviewing", and only the Cancel option is visible.

Editing flowcharts

You edit a flowchart to add or remove processes or to configure the processes. You can also edit the flowchart’s name and description.

Important: If you try to edit a flowchart that is already being edited by someone else, Campaign warns you that the flowchart is open by another user. If you continue opening the flowchart, the other user’s changes are immediately and permanently lost. To prevent the loss of work, do not continue opening the flowchart without first checking with the other user.

Opening a flowchart for editing

To change a flowchart, you must open it in Edit mode.

You can open a flowchart for editing in several ways:
   • On the Campaigns page, click the Edit a tab icon next to the campaign, and select the flowchart from the menu.
   • Open the campaign, then click the flowchart tab. On the flowchart page, click the Edit icon.
You can also press Ctrl and click the flowchart tab to open the flowchart directly in Edit mode.

- Open the campaign’s Analysis tab, click the link to the flowchart you want to edit, then click the Edit icon 📝.
- You can also press Ctrl and click the flowchart name to open the flowchart directly in Edit mode.

**Editing a flowchart’s properties**

To change the name or description for a flowchart, you edit the flowchart’s properties.

1. Open the flowchart for editing.
2. Click Properties 📋 in the Flowchart toolbar.
   - The Edit Flowchart Properties page opens.
3. Modify the flowchart name or description.

   **Note:** Flowchart names have specific character restrictions.
4. Click Save Changes.
   - The modified flowchart details are saved.

**Flowchart validation**

You can use the Validate Flowchart feature to check the validity of a flowchart at any time except when the flowchart is running.

Validation performs the following checks for a flowchart:

- Processes in the flowchart are configured.
- Cell codes are unique in the flowchart, if the AllowDuplicateCellCodes configuration parameter is set to No. If this parameter is set to Yes, duplicate cell codes in flowcharts are allowed.
- Cell names are unique in the flowchart.
- Offers and offer lists that are referenced by contact processes are valid (have not been retired or deleted). Offer lists that are referenced but are empty generate warnings, not errors.
- Cells that were linked to a top-down entry from the target cell spreadsheet are still connected.

The validation tool reports the first error found in the flowchart. You might need to run the validation tool several times in succession (after correcting each displayed error) to ensure that you have fixed all errors.

**Note:** A best practice is to run validation on flowcharts before doing a production run. This is especially important if you are running scheduled flowcharts; using batch mode; or you are not planning to actively monitor the run.

**Validating flowcharts**

When you validate a flowchart, each process is checked for errors. Each error that is found displays in succession so that you can view and correct each one.

1. On a flowchart page in Edit mode, open the Run menu 📐 and select Validate Flowchart.
   - Campaign checks your flowchart.
2. If errors exist, a message box displays the first error that was found. As you correct each error and rerun the validation, any remaining errors display successively.

---

**Test runs for flowcharts**

You can conduct a test run on a flowchart or branch if you do not want to output data or update any tables or files.

When you conduct a test run on a flowchart or a branch, be aware of the following:

- Triggers run on completion of both test and production runs.
- Global suppression is applied when testing processes, branches, or flowcharts.
- The option Advanced Settings > Test Run Settings > Enable Output determines whether output is generated during test runs.

Conduct test runs on processes and branches as you are building flowcharts, so that you can troubleshoot errors as they occur. Remember to save each flowchart before you run or test it.

**Testing a flowchart**

When you test a flowchart, data is not written to any tables. You can then view a report of any errors in the flowchart.

Always save an edited flowchart before you test it.

1. Open a flowchart in Edit mode.
2. Open the Run menu and select Test Run Flowchart.
   - The flowchart runs in test mode, so data is not written to any tables.
   - Each process displays a check mark if it runs successfully. If there are errors, the process displays a red “X”.
3. Use one of the Save options in the toolbar.
   - If you click Save and Exit before the flowchart finishes the test run, the flowchart continues to run and is saved when it finishes. If anyone reopens the flowchart while it is still running, any changes made to the flowchart are lost.
   - For this reason, always save a flowchart before you run it.
   - To pause the run, right-click the process box and select Run > Pause This.
   - To stop the run, right-click the process box and select Run > Stop This.
4. To determine if there were any errors in the flowchart run, click the Analysis tab and view the Campaign Flowchart Status Summary report.

**Testing a flowchart branch**

When you test a flowchart branch, data is not written to any tables. If the run detects errors, you can correct any processes that have errors.

1. On a flowchart page in Edit mode, click a process on the branch you want to test.
2. Open the Run menu and select Test Run Selected Branch.
   - The flowchart runs in test mode. Data is not written to any tables.
   - Each process that runs successfully displays a green check mark. If there are errors, the process displays a red “X”.

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Appendix A. Defining campaign logic in flowcharts 145
Running flowcharts

You can choose to run an entire flowchart, a branch, or an individual process in the flowchart. For best results, conduct test runs as you are building flowcharts, so that you can troubleshoot errors as they occur, and be sure to save each flowchart before you test or run it.

**Important:** For flowcharts containing contact processes, note that each production run of a flowchart can generate contact history only once. To generate multiple contacts from the same list of IDs, snapshot out the list of IDs and read from the list for each flowchart run.

**Note:** Users with Administrative privileges can access the Monitoring page, which displays all running flowcharts and their statuses, and provides controls to suspend, resume, or stop flowchart runs.

### Running a flowchart

When you run an entire flowchart, the data that it generates is saved in system tables. After you run and save the flowchart, you can view the results of the run in reports.

1. If you are viewing a flowchart, open the Run menu and select **Run This**.
   
   If you are editing a flowchart, open the Run menu and select **Save and Run Flowchart**.

2. If the flowchart has already run, click **OK** on the confirmation window.
   
   Data from the run is saved to the appropriate system tables. Each process displays a check mark after it runs successfully. If there are errors, the process displays a red "X".

3. Click **Save and Exit** (or click **Save** to continue editing).
   
   You must save the flowchart after it runs to view the results of the run in any reports. After you save the flowchart, results of repeated runs are immediately available.

   **Note:** If you click **Save and Exit** before the flowchart finishes running, the flowchart continues to run and is saved when it finishes.

4. Click the Analysis tab and view the **Campaign Flowchart Status Summary** report to determine whether there were any errors in the flowchart run.

### Running a flowchart branch

When you select and run a process or a branch in a flowchart, the Run ID of the flowchart is not incremented.

1. On a flowchart page in Edit mode, click a process on the branch that you want to run.

2. Open the Run menu and select **Save and Run Selected Branch**.

   **Note:** When you run only a process or a branch, if contact history records exist, you are prompted to choose run history options before you can proceed. For details, see “Updating contact history by doing a production run” on page 216.

   Each process displays a check mark after it runs successfully. If there are errors, the process displays a red "X".
To run a flowchart process
Running only a process or a branch of a flowchart does not increment the Run ID of a flowchart. When you run only a process or a branch, if contact history records exist, you are prompted to choose run history options before you can proceed.
1. On a flowchart page in **Edit** mode, click a process on the branch you want to run.
2. Click the **Run** icon and select **Save and Run Selected Branch**.
   Each process displays a blue check mark when it has run successfully. If there are errors, the process displays a red X.

Pausing a flowchart run
When you pause a running flowchart, branch, or process, the server stops running but saves all of the data that was already processed. You can pause a run to free up computing resources on the server, for example. After you pause a run, you can continue the run or stop it.

**Note:** If you have the appropriate permissions, you can also control flowcharts from the Monitoring page.
1. On a flowchart page, open the **Run** menu.
2. Select **Pause This**.

Continuing a paused flowchart run
When you continue running a paused run, the run resumes at the exact point at which it stopped. For example, if a Select process was paused after processing 10 records, it resumes by processing the 11th record.

**Note:** If you have the appropriate permissions, you can also control flowcharts from the Monitoring page. For details, see the *Campaign Administrator’s Guide*.
1. On a flowchart page, open the **Run** menu.
2. Select **Continue This**.

Stopping a flowchart run
When you stop a flowchart run, the results of any currently running processes are lost and a red “X” appears on those processes.

**Note:** If you have the appropriate permissions, you can also control flowcharts from the Monitoring page.
1. On a flowchart page, open the **Run** menu.
2. Select **Stop This**.

Continuing a stopped flowchart run
You can continue running a stopped flowchart by running the flowchart branch that begins with the process where the flowchart stopped. That process is rerun along with all downstream processes.
1. On a flowchart page in **Edit** mode, click the process that displays a red "X".
2. Open the **Run** menu and select **Save and Run Selected Branch**.

**Note:** If you have the appropriate permissions, you can also control flowcharts from the Monitoring page. For details, see the *Campaign Administrator’s Guide*. 

Appendix A. Defining campaign logic in flowcharts 147
Troubleshooting runtime errors

Correctly configured processes are displayed in color (the specific color reflects the type of process). A gray process with its name in italics has a configuration error. To find out more information about the error, hold your mouse over the process to display a descriptive error message.

If a flowchart stops running due to an error, the processes that were running display a red X. Hold your mouse over the process to see an error message.

Note: If Campaign is configured so that system tables are stored in a database, you are not viewing the flowchart, and the run stops due to a database connection failure, the processes will not display a red X. Instead, the flowchart appears as it did when it was last saved.

You should also consult the log file for system error information and review the Analysis and Performance/Profitability reports for the campaign to see that the results are what you expected.

Deleting flowcharts

Deleting a flowchart permanently removes a flowchart and all of its associated files, including the log file. If there are portions of your flowchart that you want to store for reuse, you can save them as a stored object.

Output files (such as those written by a Snapshot, Optimize, or a contact process) are not deleted, and contact and response history information is retained.

Important: If you try to delete a flowchart that is being edited by someone else, Campaign warns you that the flowchart is open by another user. If you continue deleting the flowchart, the other user’s changes will be permanently lost. To prevent the loss of work, do not continue deleting the flowchart without first checking with the other user.

Deleting flowcharts

You can delete a flowchart if you decide that you no longer need it.

Deleting a flowchart permanently removes a flowchart and all of its associated files, including the log file. If you want to retain portions of your flowchart for reuse, save them as stored objects.

Output files (such as files written by a Snapshot, Optimize, or a contact process) are not deleted, and contact and response history are retained.

Use the following procedure to delete a flowchart.

1. Open a flowchart in View mode.
2. Click the Delete Flowchart icon.

Important: If you try to delete a flowchart that is being edited by someone else, Campaign warns you that the flowchart is open by another user. If you continue, the other user’s changes will be lost. To prevent the loss of work, do not continue without first checking with the other user.

3. If you are sure that you want to permanently delete the flowchart, click OK to confirm the deletion.

The flowchart and all of its associated files are deleted.
Printing flowcharts

You can print hardcopies of flowcharts from IBM Campaign.

Note: Do not use the web browser File > Print command. This procedure does not always print flowcharts correctly.
1. Open a flowchart in View or Edit mode.
2. Click the Print icon.

Using in-database optimization to improve flowchart performance

Use in-database optimization to avoid copying IDs from the database to the Campaign server for processing whenever possible. This option can improve flowchart performance.

Use the useInDbOptimization configuration property to make the adjustment globally, at the partition level. You can override this property at the flowchart level by selecting Use In-DB Optimization during Flowchart Run from the Admin > Advanced Settings menu.

In-database optimization determines:
• Whether operations are done on the database server or the Campaign server; and
• Where the results of operations are stored.

When in-database optimization is on:
• Processing tasks such as sorting, joining, and merging data are done on the database server whenever possible.
• Output cells of processes are stored in temporary tables on the database server.

Important: In-database processing cannot be done if you specify any limitations on the output cell size or if temporary tables are disabled for a process.

In-database optimization affects CPU consumption:
• When in-database optimization is on, more CPU is consumed on the database server.
• When in-database optimization is off, more CPU is consumed on the Campaign server.

Limitations of in-database optimization
• In-database optimization is not supported for all databases.
• Depending on the logic required, some functions are still performed on the Campaign server, even with in-database processing turned on. Some examples are given below:
  – The query uses tables from different data sources.
    For example, if a Select process queries different data sources, Campaign automatically stores the ID lists for those cases on the application server.
  – The query contains non-SQL macros or derived fields.
    For example, to calculate a derived field, Campaign evaluates the derived field formula to see whether any part of the calculation can be performed with SQL. If simple SQL statements can be used, the calculation is done...
in-database. If not, temporary tables are created on the Campaign server to handle the calculations and persist the results from process to process within a flowchart.

**Processing raw SQL in macros**

Custom macros that consist of raw SQL statements can be processed in-database, within the following guidelines:

- All raw SQL custom macros must begin with `select` and contain exactly one `from` in the rest of the text.
- For databases that only support `insert into <TempTable>` syntax, you must map at least one base table to the same data source at the same audience level as the raw SQL custom macro. If the fields that are selected by the raw SQL custom macro are too large for the fields of the temp table, a runtime error occurs.
- If you use a raw SQL query in a Select process that has an input cell, you must use the `<TempTable>` token to obtain the correct list of audience IDs. Also use the `<OutputTempTable>` token to prevent audience IDs from being retrieved from the database back to the Campaign server.
- You must code the raw SQL to join with the temp table from the upstream process. Otherwise, the results are not scoped by the results from the upstream process.

**To set in-database optimization**

You can adjust in-database optimization in two ways: globally and for individual flowcharts. The best practice is to turn off the global configuration setting and set the option at the flowchart level.

Follow these instructions to use in-database optimization to improve flowchart performance.

1. To adjust the option globally, at the partition level:
   a. Choose Settings > Configuration.
   b. Choose Campaign > partitions > partition[n] > server > optimization.
   c. Set `useInDbOptimization` to TRUE (on) or FALSE (off).

2. To turn the option on or off for an individual flowchart:
   a. From a flowchart page in Edit mode, click the Admin icon and select Advanced Settings.
   b. Select Use In-DB Optimization during Flowchart Run.
   c. Click OK.

When you save and run the flowchart, in-database processing will be used whenever possible.

**Packaging flowchart files for troubleshooting**

If you need help from IBM to troubleshoot a flowchart, you can automatically collect relevant data to send to IBM Technical Support.

You can select from a list of items to include, and specify date ranges by which to limit data. The data is written to the folder you choose, and the contents can be compressed and sent to IBM Technical Support.
In addition to the data items you select, Campaign also creates a summary file that identifies:

- Current date and time
- Version and build numbers of the software
- Your user name
- The selections you included in the package
- Campaign name and ID
- Flowchart chart and ID

**To package flowchart files for troubleshooting**

Only a user with permissions to edit or run a flowchart (either test or production run) can perform this procedure. If you do not have “View logs” permission, you cannot select the log-related entries in the selection window.

Use this task to automatically package flowchart data files so you can send them to IBM Technical Support if you need help troubleshooting a flowchart.

1. From a flowchart page in Edit mode, select **Admin > Collect Flowchart Data**. You see the Create Data Package for Troubleshooting window.
2. Type a name for the package, or leave the default name. The package name will be used to create a subfolder in which the selected data items will be written.
3. Click **Browse** and select the folder under which the data package will be saved.
4. Select the check box for each item you want to include in the package. Some items, when selected, may allow additional information to be entered with which to filter the extracted data.
   
   Alternatively, you can check the **Select default items** check box. This check box automatically selects all data commonly required for troubleshooting flowcharts; this includes all of the listed items except the log files and the contents of the user table, contact and response history tables, strategic segments, and stack trace files.
5. Click **OK** to create the package.

**Transmitting the flowchart data package to IBM Technical Support**

You can send the data package to IBM Technical Support by email or using a method recommended by your support representative. IBM Technical Support will accept uncompressed data (the entire package subdirectory), but you may optionally compress, encrypt, and package the files into a single file before sending them to IBM.

**Options for packaging flowchart data**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description of what is included</th>
<th>Additional specifications you may set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select Default Items</td>
<td>All data commonly required for troubleshooting flowcharts. This includes all of the listed items except the log files and the contents of the user table and contact history table.</td>
<td><strong>Table 19. Options for packaging flowchart data</strong></td>
</tr>
<tr>
<td>Item</td>
<td>Description of what is included</td>
<td>Additional specifications you may set</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Flowchart</td>
<td>The flowchart .ses file.</td>
<td>Include run results? Optionally include or exclude the runtime data files, also called the “underscore” files.</td>
</tr>
<tr>
<td>Flowchart Log</td>
<td>The flowchart .log file.</td>
<td>Optionally set start and end time stamps. If you do not set them, the default is the entire log file.</td>
</tr>
<tr>
<td>Listener Log</td>
<td>The unica_aclsnr.log file.</td>
<td>Optionally set start and end time stamps. If you do not set them, the default is the entire log file.</td>
</tr>
<tr>
<td>Startup Log</td>
<td>The AC_sess.log file.</td>
<td>Optionally set start and end time stamps. If you do not set them, the default is the entire log file.</td>
</tr>
<tr>
<td>Web Message Log</td>
<td>The AC_web.log file.</td>
<td>Optionally set start and end time stamps. If you do not set them, the default is the entire log file.</td>
</tr>
<tr>
<td>Campaign Configuration</td>
<td>The .config file, which lists configuration properties and settings from your Campaign environment to assist in troubleshooting the flowchart.</td>
<td></td>
</tr>
<tr>
<td>Campaign Custom Attributes</td>
<td>The customcampaignattributes.dat file, which lists attribute name and value pairs for Campaign custom attributes. Only entries related to the current campaign are included.</td>
<td></td>
</tr>
<tr>
<td>Cell Custom Attributes</td>
<td>The customcellattributes.dat file, which lists attribute name and value pairs for Campaign cell custom attributes. Only entries related to the current campaign are included.</td>
<td></td>
</tr>
<tr>
<td>Offer Definitions</td>
<td>All rows are included for each of the following offer-related system tables:UA_AttributeDef.dat, UA_Folder.dat, UA_Offer.dat, UA_OfferAttribute.dat, UA_OfferList.dat, UA_OfferListMember.dat, UA_OfferTemplate.dat, UA_OfferTemplAttr.dat, UA_OfferToProduct.dat, UA_Product.dat, UA_ProductIndex.dat</td>
<td></td>
</tr>
<tr>
<td>Target Cell Spreadsheet Data</td>
<td>The targetcellspreadsheet.dat file, which includes data from UA_TargetCells for the entire Target Cell Spreadsheet. Includes data for the current campaign, in column/row-delimited text format.</td>
<td></td>
</tr>
<tr>
<td>Custom Macro Definitions</td>
<td>The custommacros.dat file, which includes the following fields from UA_CustomMacros, in column/row format: Name, FolderID, Description, Expression, ExpressionType, DataScrName, DataVarType, DataVarNBytes, CreateDate, CreatedBy, UpdateDate, UpdateBy, PolicyIS, ACLID</td>
<td></td>
</tr>
<tr>
<td>System Table Mapping</td>
<td>The systablemapping.xml file. Includes all system table mappings, including the data source.</td>
<td></td>
</tr>
</tbody>
</table>
### Table 19. Options for packaging flowchart data (continued)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description of what is included</th>
<th>Additional specifications you may set</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Include System Table Contents</td>
<td>When you select this option, it expands to list all system tables.</td>
<td>Select each system table to include. The entire table will be included (all rows and all columns).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If you do not select any sub-options, the package will not include any system tables.</td>
</tr>
<tr>
<td>+ Include Contact History Tables</td>
<td>When you select this option, it expands to show the contact history and detailed contact history tables for each audience level.</td>
<td>For each set you select, the package will include the contact history and detailed contact history records for that audience level.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>You can optionally set start and end time stamps. If you do not set them, the default is all records.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If you do not select a suboption, the package will not contain any contact history table information.</td>
</tr>
<tr>
<td>+ Include Response History Tables</td>
<td>When you select this option, it expands to show response history tables for all audience levels.</td>
<td>For each table you select, the package will include the response history records for that audience level.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For each table you select, you can optionally set start and end time stamps. If you do not set them, the default is all records.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If you do not select a table, the package will not contain any response history table information.</td>
</tr>
<tr>
<td>+ Include User Table Contents</td>
<td>When you select this option, it expands to show the user table contents that you can select for the package.</td>
<td>Select the user tables from the flowchart to include.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If you do not select any, the package will not include any user table contents.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For each user table that you select, you can optionally set maximum number of rows to include. If you do not set a maximum number of rows, the package will include the entire table.</td>
</tr>
<tr>
<td>+ Include Strategic Segments</td>
<td>When you select this option, it expands to show all the strategic segments that you can select for the package.</td>
<td>Select the segment data for each strategic segment from the flowchart that you want to include.</td>
</tr>
<tr>
<td>+ Include Stack Trace Files</td>
<td>Option available for Unix versions only. When you select this option, it expands to show the list of stack trace files (*.stack) in the same directory as unica_aclsnr.log.</td>
<td>Select the stack trace files that you want to include in the package. If you do not select any suboptions, the package will not include any stack trace files.</td>
</tr>
</tbody>
</table>

### Flowchart reference

This section describes the icons in the Campaign interface for working with flowcharts.
Flowchart tab icons (View mode)

The flowchart tab uses the following icons in View mode.

![Flowchart icons](image)

The icons, left to right, are described in the following table.

**Note:** Many of the icons in the interface are associated with features that require permissions. For more information, see the *Marketing Platform Administrator’s Guide*. The **Copy** and **Delete Flowchart** icons do not appear without the appropriate permissions:

<table>
<thead>
<tr>
<th>Icon Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edit</td>
<td>Click this icon to edit the flowchart.</td>
</tr>
<tr>
<td>Run</td>
<td>Click this icon to access the Run menu.</td>
</tr>
<tr>
<td>Add a flowchart</td>
<td>Click this icon to add another flowchart to the campaign.</td>
</tr>
<tr>
<td>Zoom In</td>
<td>Click this icon to increase the view size of the flowchart.</td>
</tr>
<tr>
<td>Zoom Out</td>
<td>Click this icon to decrease the view size of the flowchart.</td>
</tr>
<tr>
<td>Print this Item</td>
<td>Click this icon to print the flowchart.</td>
</tr>
<tr>
<td>Copy</td>
<td>Click this icon to create a copy of this flowchart.</td>
</tr>
<tr>
<td>Delete Flowchart</td>
<td>Click this icon to delete the flowchart.</td>
</tr>
</tbody>
</table>

Flowchart page icons (Edit mode)

The Flowchart page uses the following icons in Edit mode.

![Flowchart icons](image)

The icons, left to right, are described in the following table.

**Note:** Many of the icons in the interface are associated with features that require permissions. For more information, see the *Marketing Platform Administrator’s Guide*.

<table>
<thead>
<tr>
<th>Icon Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run</td>
<td>Click this icon to access the Run menu.</td>
</tr>
<tr>
<td>Properties</td>
<td>Click this icon to view or edit the Flowchart Properties window.</td>
</tr>
<tr>
<td>Options</td>
<td>Click this icon to access the Options menu.</td>
</tr>
<tr>
<td>Admin</td>
<td>Click this icon to access the Admin menu.</td>
</tr>
<tr>
<td>Reports</td>
<td>Click this icon to access the flowchart cell reports.</td>
</tr>
<tr>
<td>Cut</td>
<td>Select one or more items in the flowchart and click this icon to remove them.</td>
</tr>
<tr>
<td>Icon Name</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>Copy</td>
<td>Select one or more items in the flowchart and click this icon to copy them.</td>
</tr>
<tr>
<td>Paste</td>
<td>Click this icon to paste into the flowchart any items you have cut or copied.</td>
</tr>
<tr>
<td>Zoom In</td>
<td>Click this icon to increase the view size of the flowchart.</td>
</tr>
<tr>
<td>Zoom Out</td>
<td>Click this icon to decrease the view size of the flowchart.</td>
</tr>
<tr>
<td>Print</td>
<td>Click this icon to print the flowchart.</td>
</tr>
</tbody>
</table>
Appendix B. List of processes

The following processes, grouped by process type, are available in Campaign.

The sections for the individual processes provide step-by-step guidance for configuring each process. Each set of the individual process configuration instructions assumes that you have added the process to your flowchart as a first step. For details about how to add a process to a flowchart, see “Adding processes to flowcharts” on page 211.

You should also see “Working with process boxes” on page 210 for information about configuring processes in general.

Campaign provides the following types of processes:
- “Data manipulation processes” on page 209
- “Run processes” on page 210
- “Optimization processes” on page 203

Note: Interact, Contact Optimization, and eMessage provide additional processes. For more information, see the documentation for those products.

Data manipulation processes

Campaign provides the following data manipulation processes:
- “The Audience process”
- “The Extract process” on page 167
- “The Merge process” on page 172
- “The Sample process” on page 173
- “The Segment process” on page 176
- “The Select process” on page 183

The Audience process

Audience levels define the target entity that you want to work with, such as account, customer, household, product, or business division. Use the Audience process in a flowchart to switch between audience levels or to filter out IDs by audience level.

Audience levels are defined by an administrator during the table mapping process. When you use the Audience process in a flowchart, you can specify which audience levels you want to target in your campaign. For example, you can configure the Audience process to:
- Select one customer per household based on some business rule (for example, oldest male or the person with the highest account balance);
- Select all accounts belonging to a particular set of customers;
- Select all accounts with a negative balance belonging to a particular set of customers;
- Select all households with individuals holding checking accounts;
- Select customers with three or more purchases within a specified time-frame.
The Audience process can select from any defined table(s), so you can use it as a top-level process in your flowchart to initially select data.

To use the Audience process, you must work with tables for which multiple audience levels are defined. These levels, defined within a single table, provide a relationship to “translate” from one level to another.

- One key is defined as the “primary” or “default” key for the table. (This key represents the audience used most frequently for this data source.) The default level associated with a table is specified during the table mapping process. For more information about mapping tables, see the Campaign Administrator’s Guide.
- The other keys are “alternate” keys that are available for switching audience levels.

After you switch audience levels, Campaign displays only those tables whose default key is defined at the same audience level. If you work at different audience levels on a regular basis, you might need to map the same table more than once within Campaign, each time with a different primary/default key.

**Audience levels**

Audience levels are defined by Campaign administrators to represent different potential targets of campaigns, such as account, customer, household, product, or business division. Audience levels are often, but not always, organized hierarchically. Here are some examples of hierarchical audience levels that are commonly found in customer marketing databases:

- Household > Customer > Account
- Company > Division > Customer > Product

Your organization can define and use an unlimited number of audience levels. If you are using multiple audience levels (for example, customer and household), it is important to understand how to use the Audience process to best accomplish your business objectives.

Audience levels are created and maintained by a Campaign administrator. Moving from one audience level to another requires that all of the audience levels that you use have keys defined within the same table. This provides a “look up” mechanism to switch from one level to another.

Audience levels are global, and are attached to each mapped base table. Thus, when a flowchart is loaded, the audience levels are loaded along with the table mappings within that flowchart.

If you have permissions to map tables in Campaign, you can map a new table to one or more existing audience levels, but you cannot create new audience levels. Only users with the appropriate permissions, usually system administrators, can create audience levels.

In the Audience process, you specify an input audience level and an output audience level. The input and output audience levels can be the same (for example, Customer) or different (for example, Customer and Household). Use the Audience process to stay within the same audience level, or to switch audience levels.

**Householding**

“Householding” is as a general term to describe reducing the number of members in the current audience level by scoping using another audience level. One of the
most common examples of householding is to identify a single individual to target within each household. You might select one individual per household according to a marketing business rule such as:

- The individual with the greatest dollar value across all accounts;
- The individual with the most purchases in a particular product category;
- The individual with the greatest tenure; or
- The youngest male over 18 within the household.

You can use the Audience process to change audience levels and filter IDs according to user-specified criteria.

**When to switch audience levels**

Some complex campaigns require processing at different audience levels to arrive at the list of final target entities. This can involve starting at one audience level, performing some computations and taking this output, then moving to another audience level, and performing other computations.

For example, you might want to support complex suppressions at different levels. As a result, in a data model where there is a one-to-many or many-to-many relationship between customers and accounts, a marketing analyst might want to build a campaign that does the following:

- Eliminates all accounts of customers that satisfy certain criteria (for example, eliminate any account that is in default);
- Eliminates particular accounts that satisfy certain criteria (for example, eliminate all the low-profitability accounts).

In this example, the campaign might start at the customer level, perform customer-level suppressions (suppress accounts in default), switch to the account level, apply account-level suppressions (suppress low-profitability accounts), and then switch back to the customer level to obtain the final contact information.

**Configuring the audience process**

To use the Audience process, you must work with tables for which multiple audience levels are defined. These levels, defined within a single table, provide a relationship to “translate” from one level to another.

- One key is defined as the “primary” or “default” key for the table. (This default key represents the audience used most frequently for this data source.)
- The other keys are “alternate” keys that are available for switching audience levels.

Once you switch audience levels, Campaign displays only those tables whose default key is defined at the same audience level. If you work at different audience levels on a regular basis, you might need to map the same table more than once within Campaign, each time with a different primary/default key. The default level associated with a table is specified during the table mapping process. For more information about mapping tables, see the Campaign Administrator’s Guide.

The options available in the Audience process configuration dialog depend on various choices that you can make:

- Whether the input and output audience levels are the same or different;
- Whether the audience level values are normalized in these tables;
- Whether there are multiple audience levels defined for the selected tables.
For this reason, not all of the options described in the following sections are available for all pairs of input and output table selections.

**Switching and filtering audience levels:**

Configure an Audience process to switch between audience levels or to filter out IDs by a specific audience level.

To use the Audience process, you must work with tables for which multiple audience levels are defined.

The options that are available in the Audience process configuration dialog depend on various choices that you can make:
- Whether the input and output audience levels are the same or different
- Whether the audience level values are normalized in these tables
- Whether there are multiple audience levels defined for the selected tables

For this reason, not all of the options described below are available for all pairs of input and output table selections.

1. Open a campaign and click a flowchart tab.
2. Click the **Edit** icon in the flowchart window.
3. Drag the Audience process from the palette to your flowchart. The Audience process can select from any defined tables, so you can use it as a top-level process in your flowchart to initially select data. You can also use a process such as Select or Merge to provide input to the Audience process.
4. Double-click the Audience process in the flowchart.
5. On the Source tab, open the **Input** list and specify the data source for the process. You can select a Segment, a Table, or the output cell from any process that is providing input to the Audience process. The audience level for the selected input is displayed next to the **Input** field. If there is no input, the audience level is shown as “not selected.”

**Tip:** Notice that the **Select** options indicate the input audience level. For example, if the audience level is Customer, you can select **One Entry per Customer**. If the audience level is Household, you can select **One Entry per Household**.
6. Select an output audience level from the **Choose Audience** list.

**Note:** If you do not see the expected audience level, you can try remapping a table.

The **Select** options now reflect both the input and the output audience levels. For example, if your input is Household and your output is Customer, the Select options are labeled **All Customer ID Entries, Some Customer ID Entries, One Customer ID Entry per Household ID**.
7. Use the **Select** and **Filter** options to specify how to select records. The available options depend on whether you are selecting All IDs (in which case filtering is not allowed), switching levels, or staying at the same level. For details on how to select and filter based on whether you are switching audience levels, see:
   - **Using the same input and output audience levels**
   - **Using different input and output audience levels**
8. Use the **Cell Size Limit** tab if you want to limit the number of IDs generated by the process. This can be useful for test runs.

9. Use the **General** tab as follows.
   a. **Process Name**: Assign a descriptive name to identify the process in the flowchart and in various dialogs and reports.
   b. **Output Cell Name**: This name matches the Process Name by default. It is used in various dialogs and reports to identify the output cell (the set of IDs that the process produces).
   c. (Optional) **Link to Target Cell**: Perform this step if your organization pre-defines target cells in a target cell spreadsheet (TCS). To associate the pre-defined target cell with the flowchart process output, click **Link to Target Cell**, then select a target cell from the spreadsheet. The **Output Cell Name** and **Cell Code** are inherited from the TCS, and both of those field values are shown in italics to indicate that there is a link relationship. For more information, read about using target cell spreadsheets.
   d. **Cell Code**: The cell code has a standard format that is determined by your system administrator and is unique when generated.
   e. **Note**: Describe the purpose or result of the process, such as "Contact one individual per household".

10. Click **OK**.
    The process is now configured. You can test run the process to verify that it returns the results that you expect.

**Example: Audience process**
The following figure shows a configured Audience process.

![Audience Process Configuration](image)

- The selected input audience level is **Customer**; it is the default audience level of the DEMO_ACCOUNT table (this audience level is displayed to the right of the **Input** field).
- The output audience level is the same: **Customer** as defined in the DEMO_ACCOUNT table. The DEMO_ACCOUNT table has two other audience levels defined: Branch and Household.
- The process is configured to choose one **Customer Entry per HouseHold** based on the maximum of the field HIGHEST_ACC_IND.
Example: Filtering records

When you configure an Audience process to select IDs based on a count, or a statistical function (MaxOf, MedianOf, MinOf) or Any One, the Filter button becomes available. When you click Filter, the Specify Selection Criteria window appears, which allows you to enter a query expression to specify which records will be used in the Based On calculation.

Note: The filtering criteria is applied before the Based On calculation is performed, allowing you to remove records from consideration.

For example, you might want to constrain the date range over which an operation is performed. To use only purchase transactions over the last year, you can enter a filter query expression such as:

\[ \text{CURRENT\_JULIAN()} - \text{DATE(PURCH\_DATE)} <= 365 \]

Then, if you are computing a Based On calculation that chooses the sum of the Amount field, only the amounts from transactions within the last year are summed together.

Using the same input and output audience levels

When the input and output audience levels are the same in an Audience process of a Campaign flowchart, you can use various selection options to identify the audience.

When the same audience level is selected in the Input list and the Choose Audience list, you can use the following Select options to specify the audience:

- "To select one <Input/Output Audience> entry per <Different Audience>" on page 163
- "To select some <Audience> records per <Different Audience>" on page 163
- "To select entries for each entry at that audience level" on page 164

The Select options vary depending on the relationship of the selected input and output audience levels. Options that are not meaningful are disabled.

Note: Campaign includes the name of the selected audience level in the Select option labels. For example, if the input audience level is Customer, the One Entry per option appears as One Customer Entry per.

The Select options include:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Per</td>
<td>One member of the input/output audience level, scoped by another audience level. For example: One customer per household.</td>
</tr>
<tr>
<td>Some Per</td>
<td>Some members of the input/output audience level, scoped by another audience level. For example: All customers in the household with above average purchases.</td>
</tr>
<tr>
<td>For Each</td>
<td>Select members if the number of members at the selected audience level satisfies some condition. For example: Number of accounts &gt; 1, or number of purchases &gt; 3.</td>
</tr>
</tbody>
</table>
To select one <Input/Output Audience> entry per <Different Audience>:
Choose this option if the input and output audience levels are the same, but a
different audience level is used to scope the output. For example, you can select
the one customer within each household who has the oldest account. (Input
audience level is customer, output audience level is customer, scoping by
Household level, using MinOf(BaseInfo.AcctStartDt) to select.)

Specify a business rule to indicate how the single entity is selected (for example,
the minimum, maximum, or median of some field), or else choose Any One (in
this case, no field choices are available).
1. Select an input source for Input and the same audience level for the output
   audience in the Audience process.
   The relevant Select options become available.
2. Select the One Entry per option.
   A drop-down list appears next to the selected option.
3. Select an audience level from the drop-down list.
   All alternate defined audience levels (other than the input audience) appear in
   the list.
4. Choose a value to use from the Based On drop-down list:
   • Any One eliminates the need to pick a Based On value
   • MaxOf returns the maximum value of the selected field
   • MedianOf returns the median value of the selected field
   • MinOf returns the minimum value of the selected field
   Each of these functions will return exactly one member from the input audience
   level. If more than one entry is tied at the maximum, minimum, or median
   value, the first encountered entry is returned.
5. If you selected a Based On criterion other than Any One, select a field on
   which the function operates. This drop-down list includes all the fields from
   the table selected in the Choose Audience field, and any mapped dimension
   tables. Expand a table by clicking the “+” sign. Created derived fields are
   listed at the bottom.
   For example, to select the account holder from each household with the highest
   account balance, you would select “MaxOf” for the Based On criteria and
   Acct_Balance from the list of table fields.
   You can also create or select derived fields by clicking Derived Fields.
6. (Optional) If you selected a count to be based on, the Filter button becomes
   available.
   Use the Filter function to reduce the number the IDs that will be available to
   the Based On calculation. For example, you might want to select customers
   based on their average account balance in the last 6 months, but prior to doing
   that, you would want to filter out all customers whose accounts are inactive.
   To filter records before performing the Based On computation, click Filter . The
   Specify Selection Criteria window appears. You can enter a query expression to
   specify which records will be used in the Based On calculation. The filtering
   criteria is applied before performing the Based On calculation, thereby
   allowing you to remove records from consideration.
7. Click OK to save your query and close the Specify Selection Criteria window.
8. Continue configuring the process by completing the fields on the remaining
tabs.

To select some <Audience> records per <Different Audience>:
This selection indicates that there are multiple entries per audience. In this situation, the input and output audience levels are the same, but a different audience level is used to scope the output. You might select this option, for example, to select all customers within each household who have made purchases over $100 (Input audience level is customer, output audience level is customer, scoping by Household level, using Maximum Purchase Value>$100).

In addition to creating a query, the Based On criterion also supports keywords allowing the functional equivalent of a GROUPBY macro function to be performed.

1. Select an input source for Input and the same audience level for the output audience in the Audience process. The relevant Select options become available.
2. Select the Some Entries per... option. A drop-down list appears next to the selected option.
3. Select an audience level from the drop-down list. All alternate defined audience levels (other than the input audience) appear in the list.
4. Click in the Based On field to enter a query. The Specify Selection Criteria window opens.
5. Enter or build a valid query expression, then click OK to save it and close the Specify Selection Criteria window.
6. Continue configuring the process by completing the fields on the remaining tabs.

To select entries for each entry at that audience level:
This selection indicates that there are multiple selections from multiple audience levels. Select this option if the number of members at the selected audience levels satisfies some condition (for example, Number of Accounts > 1 or Number of Purchases > 3).

**Note:** This option is available only if the input audience level is not normalized (that is, the record ID is not unique in the selected Choose Level table), and the input and output levels are the same. It is the only option available if no alternate keys have been defined for your output audience table.

1. Select an input source for Input and the same audience level for the output audience in the Audience process.
   The relevant Select options become available.
2. Select the For Each option.
   **Note:** This option is available only if the input audience level is not normalized (that is, the record ID is not unique in the selected Choose Level table).

A drop-down list appears next to the selected option.

3. Choose a Based On selection.
   If the table you select under Choose Audience (that is, the output audience) is not normalized, there might be duplication in your results. You can use a Based On method for Campaign to use when selecting records, to avoid duplication. (For example, if your results might include more than one individual in the same household, you can use Based On to select only one individual from that household, based on the criterion you configure in this feature.)
   You must select one of the Based On methods, either Count or Condition:
   - Specify a Count to use in Based On:
This option lets you select the <Input Audience Level> ID, where the number of occurrences of the <Input Audience Level> ID satisfies the specified condition.

To toggle between different relationships (<,<=,>,>=,=), click the operator button repeatedly until the desired relation is displayed.

-- OR --

• Specify a Condition to use in Based On:
Click in the text box to the right of Condition.
The Specify Selection Criteria window appears.
Enter or build a valid query expression, then click OK to save your entry and close the Specify Selection Criteria window.

4. (Optional) If you selected a count to be based on, Filter becomes available.
Use the Filter function to reduce the number the IDs that will be available to the Based On calculation. For example, you might want to select customer IDs based on their average account balance in the last six months, but before doing that, you would want to filter out all customers whose accounts are inactive.
To filter records before performing the Based On computation, click Filter. The Specify Selection Criteria window appears. You can enter a query expression to specify which records will be used in the Based On calculation. The filtering criteria is applied before performing the Based On calculation, allowing you to remove records from consideration.

5. Click OK to save your query and close the Specify Selection Criteria window.
6. Continue configuring the process by completing the fields on the remaining tabs.

Using different input and output audience levels
If you selected different input and output audiences for the Choose Audience list and the Input list, you can use the Select options to perform the following operations.

• “To select all <Output Audience Level> entries” on page 166
• “To select some <Different Output Audience Level> entries” on page 166
• “To select one <Output Audience> per <Different Input Audience>” on page 166

Note: Campaign includes the name of the selected audience level in the Select option labels. For example, if the input audience level is Customer, the One Entry per option appears as One Customer Entry per. In the following sections, this dynamically changing portion of the option text is indicated with <Input/Output Audience> where appropriate.

The Select options include:

<table>
<thead>
<tr>
<th>Select options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>Select all members of the input audience level, scoped by another audience level. For example: All customers per household.</td>
</tr>
<tr>
<td>Some</td>
<td>Select some members of the output audience level, keeping only those IDs that satisfy a specified condition. For example: All customers aged 18 or over within a household.</td>
</tr>
</tbody>
</table>
| One Per | Select exactly one output audience record for each input audience record.  
For example: One customer per household. |

**To select all <Output Audience Level> entries:**
Select this option to switch to the output audience level without performing any filtering (for example, to select all customers in a household or all accounts belonging to a customer). This creates an output cell with all output audience level entries associated with the input IDs. It switches audience levels without applying any selection or filtering criteria.

If you change from a primary audience level to another audience level, you will no longer be able to use derived fields in the following processes.

1. Select an input source for **Input** and a different output audience for **Choose Audience**.
   The **Select** options become available.
2. Select **All <Output Audience Level> Entries**.
3. Click **OK** to close the Audience process configuration dialog and save the configuration.

**To select some <Different Output Audience Level> entries:**
Select this option to switch from the input audience level to a different output audience level, keeping only those IDs that satisfy a specified condition. For example, you could select all customers aged 18 or over within a household, or select all accounts of a customer with positive balances.

The **Based On** criteria allows you to enter a query expression to limit the output audience level entries selected.

1. Select an input source for **Input** and a different output audience for **Choose Audience**.
   The **Select** options become available.
2. Click to select **Some <Output Audience Level> Entries**.
   The **Based On** field becomes available.
3. Click in the **Based On** field to enter a query.
   The Specify Selection Criteria window appears.
4. Enter or build a valid query expression, then click **OK** to save the query and close the Specify Selection Criteria window.
5. Click **OK** to close the Audience process configuration dialog, saving your entries.

**To select one <Output Audience> per <Different Input Audience>:**
Select this option to choose exactly one output audience record for each input audience record (for example, to choose one email address per customer). You must specify a business rule to indicate how the single entity should be selected (min/max/median of some field) or choose **Any One** (in this case, no field choices are available).

This option is available only if the input audience level is not normalized (that is, the record ID is not unique in the selected **Choose Level** table).
In addition to creating a query, the Based On criterion also supports keywords allowing the functional equivalent of a GROUPBY macro function to be performed.

1. Select an input source for **Input** and an output audience for the Audience process.

   The Select options become available.

2. Select **One <Output Audience Level> per <Input Audience Level>**.

3. Select a value from the **Based On** drop-down list.

   (Field selection, using the drop-down list to the right, becomes inactive when you select **Any One**. If this is your selection, skip to step 5.)

4. Select a field in the next drop-down list to which the Based On function relates:

   a. Click in the Based On text box.
      
      The Select Field window appears. All fields from the table selected in the Choose Audience drop-down list appear, including any mapped dimension tables.
      
      You can expand a table by clicking the “+” sign. Created derived fields are listed at the bottom.

   b. Select a field and click **OK**.

   c. (Optional) Create derived fields by clicking Derived Fields.

5. (Optional) To filter records before performing the Based On computation, use Filter.

6. Click **OK** to close the Audience process configuration dialog, saving your entries.

**The Extract process**

Use the Extract process to select fields from one table and write them out to another table for subsequent processing. The Extract process is designed to pare down a large amount of data to a manageable size for subsequent operations, resulting in vast performance improvements.

The Extract process can take input from a cell, single table, strategic segment, optimized list (Contact Optimization only), or eMessage landing page (eMessage only). If you select a strategic segment as input, you must join it to a table before you can extract fields.

If you use several Extract processes in a series, only the fields in the final Extract process are written out.

If you use several Extract processes in parallel (in different branches in the same flowchart), they behave the same as persistent derived fields:

- The extracted fields attach to the inbound cell
- The extracted fields are calculated before query execution in that process
- Multiple extracted fields are available in subsequent processes
- When extracted fields are sent to a contact process:
  - If an extracted field is not defined for a cell, its value = NULL
  - If a single ID is in more than one cell, one row is output for each cell
- When extracted fields are sent to a Segment or Decision process, the extracted field must exist in all selected input cells for it to be used in segmenting by query.
Extracted tables

Data is extracted as either a binary file on the Campaign server or as a table with a UAC_EX prefix.

Extract tables are not deleted at the end of a flowchart run. An extract table persists so that users can continue to access it to perform operations such as profiling its fields.

An extract table is deleted only when you delete its associated Extract process, flowchart, campaign, or session.

Note: To conserve space, system administrators can periodically delete tables with a UAC_EX prefix. However, if these tables are removed, you must rerun the affected Extract processes before you rerun flowcharts or profile fields in the now-missing tables. Otherwise, Campaign generates "Table Not Found" errors.

Example: Extracting transaction data

Assume that you have designed a campaign to perform selections or calculations based on the last three months of purchase transactions for all non-delinquent customers (approximately 90% of your customer base), resulting in 4 Gb of data.

Even if Campaign created a temporary table for these customers, joining it back to the purchase transaction table would entail pulling over approximately 90% of the 4 Gb rows (and discarding all transactions except for the last three months) to execute a GROUPBY macro, for example.

Instead, you can configure an Extract process (placed at the purchase transaction level) to pull out all transactions within the last three months, put them into a table in the database, and then subsequently run multiple GROUPBY macros and other calculations against it (for example, min/max and average).

Prerequisites for extracting data from eMessage landing pages

The following prerequisites must be met before you can configure an Extract process to accept input from eMessage landing pages:

- eMessage must be installed, running, and enabled.
- eMessage landing pages must be appropriately configured.
- The mailing must be executed and responses from mailing recipients must be received.

For more information about eMessage landing pages, see the eMessage User’s Guide.

Extracting subsets of data for further processing and manipulation

Use the Extract process to pare down a large amount of data to a manageable size for subsequent operations, resulting in performance improvements.

The procedure for configuring the Extract process differs depending on which of the following input sources you choose:

- "Extracting data from a cell, table, or strategic segment" on page 169
- "To extract data from an eMessage landing page" on page 170
- To extract data from an optimized list, see the Contact Optimization User’s Guide.
Extracting data from a cell, table, or strategic segment

Follow this procedure to obtain data from an input cell, such as a Select process, a single table, or a strategic segment. In this way, you can pare down a large amount of data to a manageable size for subsequent operations, resulting in improved performance.

1. Within a campaign, open a flowchart for editing.

2. Drag the Extract process from the palette to your flowchart.

3. Double-click the Extract process in the flowchart.
   The process configuration dialog opens.

4. On the Source tab, select an input cell, a single table, or a strategic segment from the Input list. If you select a strategic segment, associate it with a table by selecting a table from the Select Based On list.

5. Specify the records to use as input:
   - Choose Select All Records to include all records from the input data source.
   - Choose Select Records With to select records by doing a query.

6. If you chose Select Records With, create a query by using one of the following methods.

   Note: For complete instructions, see “Creating queries to identify contacts” on page 218.
   - **Point & Click**: Click in the Field Name, Oper., and Value cells to select values to build an expression. Use And/Or to combine expressions. This method provides the easiest way to create a query and helps to avoid syntax errors.
   - **Text Builder**: Use this tool to write raw SQL or use the provided macros. You can use the Formula Helper within Text Builder to select supplied macros, including logical operators and string functions.

8. On the Extract tab, use the Target Data Source field to select an output location:
   - To store the data in binary format, select IBM Campaign Server.
   - To store the data in a uniquely named table with a UAC_EX prefix, select an available database.

9. Optionally, use the Cell Size Limit tab to limit the number of IDs generated by the process.

10. Optionally, use the Dimension tab to add existing dimension tables to the extract table and specify the key fields to join on. The extract table becomes a base table for the selected dimension tables and can be used in downstream processes.

11. Use the General tab as follows.
a. **Process Name**: The process name is used as the box label on the flowchart. It is also used in various dialogs and reports to identify the process.

b. **Output Cell Name**: This name matches the Process Name by default. It is used in dialogs and reports to identify the output cell (the set of IDs that the process retrieves).

c. **(Optional) Link to Target Cell**: Perform this step if your organization pre-defines target cells in a target cell spreadsheet (TCS). To associate the pre-defined target cell with the flowchart process output, click **Link to Target Cell**, then select a cell from the spreadsheet. The **Output Cell Name** and **Cell Code** are inherited from the TCS, and both of those field values are shown in italics to indicate that there is a link relationship. For more information, read about using target cell spreadsheets.

d. **Cell Code**: The cell code has a standard format that is determined by your system administrator and is unique when generated.

e. **Note**: Describe the purpose or result of the process. Common practice is to reference the selection criteria.

12. Click **OK**.

The process is now configured. You can test run the process to verify that it returns the results you expect.

**To extract data from an eMessage landing page**

Ensure that your IBM environment meets the requirements before attempting to extract eMessage landing page data. For more information, see “Prerequisites for extracting data from eMessage landing pages” on page 168.

1. In a flowchart in **Edit** mode, double-click the Extract process in the flowchart workspace.
   
The process configuration dialog appears.

2. On the **Source** tab, select **eMessage Landing Pages**.

3. In the popup window, select an eMessage landing page as input.

   **Note**: You can select only one eMessage landing page as input to an Extract process. To extract data from more than one landing page, configure multiple Extract processes.

4. If there is more than one audience level available for the landing page, select the appropriate audience level from the drop-down list. If there is only one audience level available, it is automatically selected.

5. Click **OK**.

6. On the **Extract** tab, select an output location.
   
   - To store the data in binary format, select **IBM Campaign Server**.
   - To store the data in a uniquely named table with a `UAC_EX` prefix, select an available database.

7. Select fields to extract from the list of **Candidate Fields**.
   
   - Click **Add** to add selected fields to the list of **Fields to Extract**.
   - To remove fields from the list of **Fields to Extract**, select them and click **Remove**.
   - Use the **Up 1** and **Down 1** buttons to change the order of fields in the **Fields to Extract** list.
   - To change the default output name of a field to extract, select the field in the **Fields to Extract** list, click the name in the **Output Name** column, then enter the new name.
For information about the fields on the Extract tab, see “Extract tab reference.”

8. Perform any of the following optional tasks:
   • Add a derived field to the list of candidate fields.
   • Specify that duplicate IDs are excluded from the output. See “Skipping duplicate IDs in process output” on page 233.
   • Limit the size of the output cell (that is, limit the number of IDs generated by the process).
   • Click the General tab to modify the Process Name, Output Cell names, or Cell Codes, link to a target cell, or enter a Note about the process.

   Note: Profiling is not available for eMessage landing page attributes.

9. Click OK.

The process is configured. You can test the process to verify that it returns the results you expect.

Note: During the extraction process, Campaign creates an intermediate view in the system tables database with a UCC_LPV prefix. This internal view remains in the database until the process box is deleted. If you remove the view, you must reconfigure its corresponding Extract process before rerunning the process or flowchart; otherwise, Campaign generates a missing table error.

Extract tab reference

The following table describes the fields on the Extract tab of the Extract Process Configuration dialog.

Table 22. Fields on the Extract tab

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Data Source</td>
<td>Location to which the output from this process will be written. The Campaign Server and any other data sources to which you are connected are available from the Target Data Source drop-down list.</td>
</tr>
<tr>
<td>Candidate Fields</td>
<td>List of fields available to extract, including field name and data type, based on your input data source. To see the list of fields, you may need to click the arrow next to an item to expand the item. If your input source is a landing page in eMessage, each field name is an attribute of the landing page. If the attribute contains special characters or spaces, it is converted to a valid field name. Data types of all landing page attributes are listed as text. Note: Schema object names are limited to 30 characters. Restrict your attribute names to 30 characters or less to produce valid column names for extracted output.</td>
</tr>
<tr>
<td>Fields to Output</td>
<td>Fields that you chose to extract from the Candidate Fields list. The Output Name defaults to the field name in the Fields to Extract column.</td>
</tr>
<tr>
<td>Profile button</td>
<td>Click Profile to preview a list of values in the selected candidate field. See “Previewing field values from your user data” on page 226.</td>
</tr>
<tr>
<td>Derived Fields button</td>
<td>Click Derived Fields to create a variable in the list of candidate fields.</td>
</tr>
</tbody>
</table>
Table 22. Fields on the Extract tab (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>More button</td>
<td>Click More to open the Advanced Settings dialog. This dialog includes the option to exclude duplicate IDs from the output and specify how Campaign identifies duplicates. See “Skipping duplicate IDs in process output” on page 233.</td>
</tr>
</tbody>
</table>

**The Merge process**

Use the Merge process to specify which input cells are included and combined and which input cells are excluded (suppressed).

In this way, you can include or exclude cells from subsequent processes in your flowchart. For example, use the Merge process to suppress 'opt-out' customers who requested that they not receive any marketing materials.

**Merging and suppressing contacts**

The Merge process accepts input from multiple cells and produces one combined output cell. When you merge cells, you can choose to include or exclude content.

1. Open a campaign and click a flowchart tab.
2. Click the Edit icon in the flowchart window.
3. Configure at least two processes whose output you want to merge. For example, configure two Select processes.
4. Drag the Merge process from the palette to your flowchart.
5. Drag an arrow from an upstream process (for example, a Select process) to the Merge process, to connect the boxes. You must connect from the upstream process to the Merge process. Repeat to connect any other upstream processes into the Merge process. See “Connecting processes in flowcharts” on page 213.

**Note:** All cells that provide input to the Merge process must have the same audience level. For example, multiple Select processes must use the Household audience.

6. Double-click the Merge process in the flowchart.

The process configuration dialog box opens. Cells from processes that are connected to the Merge process are listed in the Input list.

7. If you want to exclude IDs from the merged output, select a cell in the Input list and add it to the Records to Exclude list. For example, use this option to exclude Opt Outs.
8. If you want to include IDs in the merged output, select a cell in the Input list and add it to the Records to Include list. The IDs in the cells that you add to this list will be combined into one list of unique IDs.

9. Specify how to merge the lists from the input cells that are in the Records to Include list:
   - **Merge/Purge on Include:** This option produces a list of unique IDs that exist in at least one input cell. Duplicate IDs are included only once. This method uses a logical "OR" or "ANY." For example: Include customer A if that customer is in either the Gold.out cell OR the Platinum.out cell.
   - **Match (AND) on Include:** Include only those IDs that exist across all input cells. This method uses a logical "AND" or "ALL." For example: Include customer A only if that ID exists in both the Gold.out cell AND the
LoyaltyProgram.out cell. This option is useful when you want to include customers that meet multiple criteria. If an ID does not exist in all of the Merge process input cells, the ID is not included.

10. If you want to limit the number of IDs generated by the process, use the Cell Size Limit tab.

11. Use the General tab as follows.
   a. Process Name: Assign a descriptive name. The process name is used as the box label on the flowchart. It is also used in various dialogs and reports to identify the process.
   b. Output Cell Name: By default, this name matches the Process Name. It is used in various dialogs and reports to identify the output cell (the set of IDs that the process produces).
   c. (Optional) Link to Target Cell: Perform this step if your organization pre-defines target cells in a target cell spreadsheet (TCS). To associate the flowchart process output with cells in the TCS, click Link to Target Cell, then select a target cell from the spreadsheet. The Output Cell Name and Cell Code are inherited from the TCS, and both of those field values are shown in italics to indicate that there is a link relationship. For more information, read about using target cell spreadsheets.
   d. Cell Code: The cell code has a standard format that is determined by your system administrator and is unique when generated.
   e. Note: Describe the purpose or result of the process. For example, indicate which records you are including or excluding.

12. Click OK.

The process is now configured. You can test run the process to verify that it returns the results you expect.

The Sample process

Use the Sample process to divide contacts into groups. The classic use of sampling is to establish target and control groups that you can use to measure the effectiveness of your marketing campaign.

Dividing contacts into sample groups

To create target and control groups, use the Sample process. There are several sampling methods: Random creates statistically valid control groups or test sets. Every Other X allocates every other record to a sample group. Sequential Portions allocates a number of records into subsequent samples.

1. Open a campaign and click a flowchart tab.
2. Click the Edit icon in the flowchart window.
3. Drag the Sample process from the palette to your flowchart.
4. Connect at least one configured process (such as a Select process) as input to the Sample process box.
5. Double-click the Sample process in the flowchart. The process configuration dialog appears.
6. Use the Input list to select the cells that you want to sample. The list includes all output cells from any process connected to the Sample process. To use more than one source cell, select the Multiple Cells option. If more than one source cell is selected, the same sampling is performed on each source cell.
Note: All selected cells must be defined at the same audience level, such as Household or Customer.

7. Use the # of Samples/Output Cells field to specify how many samples to create for each input cell. By default, three samples are created for each input cell, with default names Sample1, Sample2 and Sample3.

8. To change the default sample names, double-click a sample in the Output Name column, then type a new name. You can use any combination of letters, numbers, and spaces. Do not use periods (.) or slashes (/ or \\).

Important: If you change the name of a sample, you must update all subsequent processes that use this sample as an input cell. Changing a sample name might unconfigure subsequent connected processes. In general, you should edit the names of samples before connecting subsequent processes.

9. Use one of the following methods to define the sample size:
   - To divide records up by percentages: Select Specify Size By %, then double-click the Size field to indicate the percentage of records to use for each sample. Use the Max Size field if you want to limit the size of the sample. The default is Unlimited. Repeat for each sample listed in the Output Name column, or use the All Remaining check box to assign all remaining records to that sample. You can select All Remaining for only one output cell.
   - To specify the number of records for each sample size: Select Specify Size By # Records, then double-click the Max Size field to specify the maximum number of records to allocate to the first sample group. Specify the Max Size for the next sample in the Output Name column or use the All Remaining check box to assign all remaining records to that sample. You can select All Remaining for only one output cell.
     (Optional) Click Sample Size Calculator, then use the calculator to determine the optimal sample size. Copy the value from the Min. Sample Size field in the calculator, click Done to close the calculator, then paste the value into the Max. Size field for Specify Size By # Records.

10. Ensure that each sample in the Output Name list has a Size defined or has All Remaining checked.

11. In the Sampling Method section, specify how to build the samples:
    - Random Sample: Use this option to create statistically valid control groups or test sets. This option randomly assigns records to sample groups using a random number generator based on the specified seed. Seeds are explained later in these steps.
    - Every Other X: This option puts the first record into the first sample, the second record into the second sample, up to the number of samples specified. This process repeats, until all records are allocated to a sample group. To use this option, you must specify the Ordered By options to determine how records are sorted into groups. The Ordered By options are explained later in these steps.
    - Sequential Portions: This option allocates the first N records into the first sample, the next set of records in the second sample, and so on. This option is useful for creating groups based on the top decile (or some other size) based on some sorted field (for example, cumulative purchases or model scores). To use this option, you must specify the Ordered By options to determine how records are sorted into groups. The Ordered By options are explained later in these steps.

12. If you selected Random Sample, in most cases you can accept the default seed.
In rare cases, you may want to click Pick to randomly generate a new seed value, or enter a numeric value in the Seed field. Examples of when you might need to use a new seed value are:

- You have exactly the same number of records in the same sequence and if you use the same seed value, records are created into the same samples each time.
- The random sample produces undesired results (for example, all males are being allocated to one group and all females to another).

13. If you selected Every Other X or Sequential Portions, you must specify a sort order to determine how records will be allocated to sample groups:
   a. Select an Ordered By field from the drop-down list or use a derived field by clicking Derived Fields.
   b. Select Ascending to sort numeric fields in increasing order (low to high) and sort alphabetic fields in alphabetical order. If you choose Descending, the sort order is reversed.

14. Click the General tab if you want to modify the default Process Name and Output Cell Names. By default, output cell names consist of the process name followed by the sample name and a digit. You can accept the defaultCell Codes or uncheck the Auto Generate Cell Code box and assign codes manually. Enter a Note to clearly describe the purpose of the Sample process.

15. Click OK.

The process is configured and enabled in the flowchart. You can test run the process to verify that it returns the results you expect.

**About the sample size calculator**

Campaign provides a sample size calculator to help determine the statistical significance of sample sizes in evaluating campaign results.

There are two ways to specify the level of accuracy that you want. You can enter an error bound and compute the minimum sample size needed, or you can enter a minimum sample size and compute the error bound that will result. Results are reported at the 95% confidence level.

**Determining the appropriate sample size:**

The sample size calculator determines the minimum number of contacts to include in your sample, based on what you consider to be an acceptable margin of error. Results are reported at a 95% confidence level.

Determining the appropriate sample size is important when your goal is to make inferences about a group of people based on a sample. In general, a larger sample size produces a smaller margin of error. Use the sample size calculator to either compute the sample size needed for a particular error bound, or to determine the error bound for different sample sizes.

1. On the Sample tab of the Sample process configuration dialog, click Sample Size Calculator.
   The Sample Size Calculator opens.

2. For Response Rate Estimate, enter your best guess for the Minimum and Maximum response rates that you expect from your marketing campaign. These two values must be percentages between 0% and 100%. The lower the expected response rate, the larger the sample size must be to achieve the same level of accuracy for the measured response rate.
3. If you are not using a predictive model, select **No Model** under **Modeling Estimate**.

4. If you are using a predictive model, select **Model Performance**, then enter percentages for the **File Depth** and **Cumulative Gain**.

To obtain these values:


b. Select the **Gains** tab, and display the information as a **Table**.

c. Use a value from the first column (Segment) of the table as the **File Depth**, to indicate the percentage of customers that you intend to contact.

d. Use the corresponding value from the last column (Cumulative Gain) of the table as the **Cumulative Gain**.

The calculator uses this information to determine the number of samples that you need to use, based on the expected response rate and modeling performance.

5. Use either approach:

   - To determine the minimum sample size based on the margin of error that you are willing to accept: Enter a value of 0% to 100% in the **Error Bound (+ or -)** field to indicate the percentage margin of error that you are willing to accept for this sample. Then click **Compute Sample Size**. The **Min. Sample Size** field indicates the smallest sample that will meet the specified error bound. A smaller Error Bound percentage requires a larger sample size. Conversely, a larger Error Bound requires a smaller sample size. For example, a 3% Error Bound requires a larger sample size than if you allow for a 10% Error Bound.

   - To determine the margin of error that will result from a specific sample size: Enter a value in the **Min. Sample Size** field to indicate the sample size that you plan to use, then click **Compute Error Bound**. Based on the results, you can decide whether to increase or decrease the sample size. Larger sample sizes result in smaller Error Bounds. If the resulting Error Bound is too high, use a larger sample size.

6. After you determine the optimal sample size:

   a. Copy the value from the **Min. Sample Size** field.

   b. Click **Done** to close the calculator.

   c. Confirm that **Specify Size By # Records** is selected.

   d. Paste the value into the **Max. Size** field in the Sample process box.

**The Segment process**

Use the Segment process to divide data into distinct groups, or segments. Connect a Segment process to a contact process, such as a Call List or Mail List, to assign treatments or offers to the segments.

For example, you can divide your customers into high-value, medium-value, and low-value segments based on their prior purchase history. Each segment can receive a different offer when the segment is input to a contact process. There is no limit to the number of segments that you can create.

You can segment data in two ways: by using the distinct values in a field, or by using a query to filter the data in a field. In addition to database table fields, you can use derived fields to segment data. In this way, you can perform custom grouping, to segment your customers however you want.
Note: Segments that are created by the Segment process are not persistent across flowcharts or sessions. To create a "permanent" segment (also called a strategic segment), an administrator can use the Create Seg process.

**Segmenting by field**
When you segment data by a field in a database table, each distinct value in the field creates a separate segment. This option is most useful when the values in the field correspond to the segments you want to create.

For example, assume that you want to assign a different offer to customers in each of 10 regions. Your customer database contains a field called regionID, which indicates the region to which each customer belongs. Segment by the regionID field to create the 10 regional segments.

**Segmenting by query**
The segment by query option segments your data based on the results of a query that you create. This option is most useful when it is necessary to filter the data in a field to create the required segments.

For example, assume that you want to divide your customers into high-value (more than $500), medium-value ($250-$500), and low-value (under $250) segments based on their purchase history over the last year. The PurchaseHistory field in your customer database stores the total dollar amount of each customer's purchases. Use a separate query to create each segment, selecting records with values in the PurchaseHistory field that meet the criteria of the segment.

Note: You can also segment data using raw SQL.

**Using segments as input to another Segment process**
Segments can be used as input cells to another Segment process. For example, you can segment by age range, then further segment by preferred channel.

For this example, assume that you want to segment your customers into age ranges. Your database contains the field AgeRange, which assigns one of six age ranges (such as 26-30) to each customer. Segment by the AgeRange field to create six segments.

You could then use these six segments as input to another Segment process that further divides customers by another field or query. For example, assume that your database contains a field called PreferredChannel, which specifies each customer's preferred contact channel — direct mail, telemarketing, fax, or email. Using the six age range segments as input, you could then create a second Segment process to segment by the PreferredChannel field. Each of the six age range segments is further segmented into four preferred channel segments, to produce a total of 24 output segments.

**Segmenting considerations**
Consider the following options and guidelines when segmenting data:
- “Choosing a segmenting method” on page 178
- “Making segments mutually exclusive” on page 178
- “Restricting segment size” on page 178
- “Selecting source cells” on page 178
- “Using segments as input to another Segment process”
Choosing a segmenting method: In some cases, the same results can be achieved when segmenting either by field or by query. For example, assume that the AcctType field in your database divides your customer accounts into Standard, Preferred and Premier levels. Segmenting by the AcctType field will create three segments for these account types. You could achieve the same results using queries, but creating the segments would require writing three separate queries. Determine the most efficient method based upon the data you are segmenting.

Making segments mutually exclusive: You can specify segments to be mutually exclusive, meaning that each qualifying record is guaranteed to be placed into no more than one segment. When the segments are assigned to offers, this will ensure that each customer receives only one offer.

Records are placed in the first segment whose criteria they satisfy, based on a priority order that you define. For example, if a customer qualifies for segments 1 and 3, and segment 1 is before segment 3 in the priority order, that customer will appear only in segment 1.

Restricting segment size: The default size for the number of records per segment is Unlimited. You may want to restrict the size of the created segment if, for example, you are performing test runs of the flowchart or process.

You can limit the segment size to any positive integer. If the segment size you specify is less than the total number of records generated, the segment will consist of randomly selected qualifying records.

Selecting source cells: All selected cells must be defined at the same audience level. If more than one source cell is selected, the same segmentation is performed on each source cell.

Segmenting data by field

When you segment data by a field in a database table, each distinct value in the field creates a separate segment. This option is most useful when the values in the field correspond to the segments you want to create.

For example, assume that you want to assign a different offer to customers in each of 10 regions. Your customer database contains a field that is called regionID, which indicates the region to which each customer belongs. Segment by the regionID field to create the 10 regional segments.

Follow these steps to segment data by field.

1. Open a campaign and click a flowchart tab.
2. Click the Edit icon in the flowchart window.
3. Drag the Segment process from the palette to your flowchart.
4. Connect at least one configured process as input into the Segment process.
5. Double-click the Segment process in the flowchart.
   The Segment Process Configuration dialog box opens. Cells from processes that are connected to the Segment process display in the Input list.
6. On the Segment tab, open the Input list and select the input to the Segment process. To select multiple cells, use the ellipsis button (...) next to the Input list.
7. Select Segment by Field and use the list to select the field that you want to use to create the segments.
The Profile Selected Field window opens, and profiling of the selected field automatically starts.

8. Wait for profiling to finish to ensure that all segments are properly created. Then, click **OK**.

   The list of segments and the **# of Segments** field are updated based on the profiling results of the selected field. To reprofile the field at any time after initially selecting it, click **Profile**.

9. Set the remaining configuration options:
   - “Segment process: Segment tab” on page 180
   - “Segment process: Extract tab” on page 181
   - “Segment process: General tab” on page 182

10. Click **OK**.

    The process is now configured. You can test the process to verify that it returns the results you expect.

### Segmenting data with queries

You can segment data based on the results of a query that you create. This option is most useful when it is necessary to filter the data in a field to create the required segments.

For example, assume that you want to divide your customers into high-value (more than $500), medium-value ($250-$500), and low-value (under $250) segments that are based on their purchase history over the last year. The **PurchaseHistory** field in your customer database stores the total dollar amount of each customer’s purchases. Use a separate query to create each segment, selecting records with values in the **PurchaseHistory** field that meet the criteria of the segment.

**Note:** You can also use raw SQL to segment data.

1. Open a campaign and click a flowchart tab.
2. Click the **Edit** icon in the flowchart window.
3. Drag the **Segment process** from the palette to your flowchart.
4. Connect one or more configured processes as input into the **Segment process**.
5. Double-click the **Segment process** in the flowchart.

   The Segment Process Configuration dialog box opens. Cells from processes that are connected to the **Segment process** display in the **Input** list.

6. On the **Segment** tab, open the **Input** list and select the input to the **Segment process**. To select multiple cells, use the ellipsis button next to the **Input** list.

7. Select **Segment by Query**.
8. Determine the number of segments that you want to create, and enter that number in the **# of Segments** field.
9. To construct a query for each segment, select the segment and click **Edit** to access the Edit Segment window. For details, see “Segment process: New Segment and Edit Segment controls” on page 182.
10. Set the remaining configuration options:
    - “Segment process: Segment tab” on page 180
    - “Segment process: Extract tab” on page 181
    - “Segment process: General tab” on page 182
11. Click **OK**.
The process is now configured. You can test run the process to verify that it returns the results you expect.

**Segment process: Segment tab**

Use the Segment tab of the Segment Process Configuration dialog to indicate how to divide incoming data into distinct groups, or segments.

The following table describes the controls on the Segment tab of the Segment Process Configuration dialog.

*Table 23. Segment tab*

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Specifies the input to the Segment process. The drop-down list contains all output cells from any process connected to the Segment process. Select Multiple Cells if you want to select more than one input.</td>
</tr>
<tr>
<td>Segment by field</td>
<td>Specifies a field to use for segmenting data. The data is segmented using the distinct values that exist for the selected field. Each distinct value in the field will create a separate segment.</td>
</tr>
<tr>
<td>Profile button</td>
<td>Opens the Profile Selected Field window, which calculates the values and distributions of records in the selected field. Active only when segmenting by field.</td>
</tr>
<tr>
<td>Derived Fields button</td>
<td>Opens the Create Derived Field window. Active only when segmenting by field.</td>
</tr>
<tr>
<td>Segment by Query</td>
<td>Segments data based on a query that you create.</td>
</tr>
<tr>
<td># of Segments</td>
<td>Specifies the number of segments to create. Active only when segmenting by query. By default, three segments are created, with default names &quot;Segment1,&quot; &quot;Segment2,&quot; and &quot;Segment3.&quot; When segmenting by field: The # of Segments field is updated based on the profiling results of the selected field.</td>
</tr>
<tr>
<td>Mutually Exclusive Segments</td>
<td>Specifies whether the segment is to be mutually exclusive (that is, each qualifying record is guaranteed to fall into no more than one segment).</td>
</tr>
<tr>
<td>Create Extract tables</td>
<td>Indicates whether the segment should create Extract tables for each output cell. Selecting this option ensures that Campaign can provide a later process with the information necessary to keep track of duplicate target audiences across segments. Selecting this check box enables the options on the Extract tab.</td>
</tr>
<tr>
<td></td>
<td>This check box is disabled if Mutually Exclusive Segments is selected.</td>
</tr>
</tbody>
</table>
Table 23. Segment tab (continued)

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segment Name</td>
<td>Lists all segments by name. By default, three segments are created, with default names “Segment1,” “Segment2,” and “Segment3.” When segmenting by field: Segment names are updated based on the profiling results of the selected field. For example, if you are segmenting on a field called “Acct_Status” which has two distinct values “A” and “B”, two segments are created, named “Acct_Status_A” and “Acct_Status_B.”</td>
</tr>
<tr>
<td>Max. Size</td>
<td>Maximum number of records allowed in each segment.</td>
</tr>
<tr>
<td>Size</td>
<td>Number of records that meet the criteria for the segment. Before the process is run, this number defaults to the total number of records in the output cell.</td>
</tr>
<tr>
<td>Query</td>
<td>Query that defines the criteria for this segment. Appears only when segmenting by query.</td>
</tr>
<tr>
<td>Up 1, Down 1</td>
<td>Reorder the selected segment. Segments are processed in the order listed in the table.</td>
</tr>
<tr>
<td>New Segment button</td>
<td>Opens the New Segment window. Active only when segmenting by query.</td>
</tr>
<tr>
<td>Edit button</td>
<td>Opens the Edit Segment window for editing the selected segment.</td>
</tr>
<tr>
<td>Remove</td>
<td>Removes the selected segment. When a segment is removed, the # of Segments field updates automatically.</td>
</tr>
<tr>
<td>Do Not Run Subsequent Processes For Empty Segments</td>
<td>Prevents processes downstream from this process from running for empty segments.</td>
</tr>
</tbody>
</table>

Segment process: Extract tab

Use the Extract tab of the Segment Process Configuration dialog to select fields to extract. In this way, you allow the output from the Segment process to be accessible as input to Mail List or Call List processes in a flowchart.

The following table describes the fields, buttons, and controls on the Extract tab.

Table 24. Extract tab

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Data Source</td>
<td>Location to which the output from this process is written. The Campaign Server and any other data sources to which you are connected are available from the Target Data Source drop-down list.</td>
</tr>
<tr>
<td>Candidate Fields</td>
<td>List of fields available to extract, including field name and data type, based on your input data source. If your input source is a landing page in eMessage, each field name is an attribute of the landing page. If the attribute contains special characters or spaces, it is converted to a valid field name. Data types of all landing page attributes are listed as text. Note: Schema object names are limited to 30 characters. Restrict your attribute names to 30 characters or less to produce valid column names for extracted output.</td>
</tr>
</tbody>
</table>
Table 24. Extract tab (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fields to Extract</td>
<td>Fields that you selected to extract from the Candidate Fields list. The Output Name defaults to the field name in the Fields to Extract column.</td>
</tr>
<tr>
<td>Profile button</td>
<td>Opens the Profile Selected Field window, which calculates the values and distributions of records in the selected field. Active only when a field name is selected in the Candidate Fields list.</td>
</tr>
<tr>
<td>Derived Fields button</td>
<td>Opens the Create Derived Field window.</td>
</tr>
<tr>
<td>More button</td>
<td>Opens the Advanced Settings window, which includes the option to skip duplicate records and to specify howCampaign identifies duplicates.</td>
</tr>
</tbody>
</table>

Segment process: General tab
Use the General tab of the Segment Process Configuration dialog to modify the Process Name, Output Cell names, or Cell Codes, or enter a Note about the process.

Segment process: New Segment and Edit Segment controls
The following table describes the controls on the New Segment and Edit Segment dialog boxes. You access these dialog boxes when configuring a Segment process.

Note: The New Segment dialog box can be accessed only when you are segmenting by query. When you segment by field, only the Name and Max. Size fields can be accessed on the Edit Segment dialog box.

Table 25. New Segment and Edit Segment dialog box controls

<table>
<thead>
<tr>
<th>Control</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name of the segment.</td>
</tr>
<tr>
<td>Max. Size</td>
<td>Maximum number of records that are allowed in the segment.</td>
</tr>
<tr>
<td>Select Based On</td>
<td>Specifies a data source on which to base your query.</td>
</tr>
<tr>
<td>Select All data source type</td>
<td>Includes all the IDs from the data source in the Input drop-down list.</td>
</tr>
<tr>
<td>Select data source type with</td>
<td>Provides access to the functions for creating a query to select only certain IDs based on criteria you define.</td>
</tr>
<tr>
<td>Advanced button</td>
<td>Opens the Advanced tab, which provides the following options:</td>
</tr>
<tr>
<td></td>
<td>• Use Raw SQL: Use a raw SQL query to segment data.</td>
</tr>
<tr>
<td></td>
<td>• Use Query Scope from Input Cell: Available only if a source cell to this Segment process uses a query. Select the check box to have the source cell’s query combined (using “AND”) with the current selection criteria.</td>
</tr>
<tr>
<td>Derived Fields button</td>
<td>Opens the Create Derived Field window.</td>
</tr>
<tr>
<td>Query text box and buttons</td>
<td>For information about using the query text box and related fields and buttons, see “Creating queries in processes” in the IBM Campaign Administrator’s Guide.</td>
</tr>
</tbody>
</table>
**The Select process**

Use the Select process to define the criteria to build lists of contacts, such as customers, accounts, or households, from your marketing data.

Select is one of the most frequently used processes in Campaign. Most flowcharts begin with one or more Select processes. The Select process outputs a cell that contains a list of IDs, such as customer IDs, which can be modified and refined by other processes.

**Selecting a list of contacts**

Configure a Select process to select contacts from your marketing data.

To select contacts, you can specify all IDs in a segment or table, or you can use a query to find just the contacts that you want. One or more Select processes can then be used as input into another process. For example, you can select all Gold customers, then create another selection of Silver customers. You can then use a Merge process to create a single list of eligible contacts.

1. Open a campaign and click a flowchart tab.
2. Click the Edit icon in the flowchart window.
3. Drag the Select process from the palette to your flowchart.
4. Double-click the Select process box in the flowchart.
   The Select Process Configuration dialog box opens.
5. On the Source tab, use the Input list to select a Segment or Table to provide the data source for the process.
   You can select one segment, or one or multiple tables. To select multiple tables, select the first table from the Input list and then use the ellipsis button next to the field.
6. Choose one of the Select options. The option names vary, depending on the audience level that is specified in the input data source.
   - **Select audience IDs**: Include all rows from the segment or table that you selected in the previous step.
   - **Select audience IDs with**: Select IDs by specifying a query.
7. If you chose **Select audience IDs with**, use one of the following methods to create a query:
   - **Point & Click**: Click in the Field Name, Oper., and Value cells to select values to build an expression. Use And/Or to combine expressions. This method provides the easiest way to create a query and helps to avoid syntax errors.
   - **Text Builder**: Use this tool to write raw SQL or use the provided macros. You can use the Formula Helper within Text Builder to select supplied macros, including logical operators and string functions.
   With either method, you can select fields from the Available Fields list, including IBM Campaign Generated Fields and Derived Fields.
   
   **Note**: If your query includes a table field that has the same name as a Campaign Generated Field, you must qualify the field name. Use the following syntax: `<table_name>.<field_name>`
8. If you want to limit the number of IDs generated by the process, use the Cell Size Limit tab.
9. Use the General tab as follows.
a. **Process Name:** Assign a descriptive name, such as Select_Gold_Customers. The process name is used as the box label on the flowchart. It is also used in various dialogs and reports to identify the process.

b. **Output Cell Name:** This name matches the Process Name by default. It is used in various dialogs and reports to identify the output cell (the set of IDs that the process retrieves).

c. (Optional) **Link to Target Cell:** Perform this step if your organization pre-defines target cells in a Target Cell Spreadsheet (TCS). To associate the pre-defined target cell with the flowchart process output, click **Link to Target Cell,** then select a target cell from the spreadsheet. The **Output Cell Name** and **Cell Code** are inherited from the TCS, and both of those field values are shown in italics to indicate that there is a link relationship. For more information, read about using Target Cell Spreadsheets.

d. **Cell Code:** The cell code has a standard format that is determined by your system administrator and is unique when generated. Do not change the cell code unless you understand the implications of doing so.

e. **Note:** Use the **Note** field to explain the purpose of the Select process. Common practice is to reference the selection criteria.

10. Click **OK.**

The process is now configured. You can test run the process to verify that it returns the results you expect.

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### Run processes

Campaign provides the following run processes:

- “The Call List process”
- “The Create Seg process” on page 189
- “The Cube process” on page 191
- “The Mail List process” on page 192
- “The Schedule process” on page 197
- “The Snapshot process” on page 201

### The Call List process

Use the Call List process to assign offers to contacts, generate a contact list for a telemarketing campaign, and log the contact history. The Call List process is often referred to as a **contact process.**

You configure a Call List process the same way as you configure a Mail List process. See “Configuring contact processes (Mail List or Call List).”

### Configuring contact processes (Mail List or Call List)

Follow these instructions to configure a Mail List or Call List process in a Campaign flowchart. Configure a Mail List or Call List process to assign offers to contacts, generate a contact list for a direct mail or telemarketing campaign, and write the results to contact history.

1. Open a campaign and click a flowchart tab.
2. Click the **Edit** icon in the flowchart window.
3. Drag a contact process (Mail List or Call List) from the palette to your flowchart.
4. Connect one or more configured processes as input to the contact process.
The processes that you connect must produce output cells, which serve as input to the contact process. For example, a Select process produces a list of IDs, so its output can serve as input to a contact process.

**Important:** All of the cells that you select as input cells must have the same audience level.

5. Double-click the contact process in the flowchart workspace.
   The process configuration dialog opens.

6. Use the **Fulfillment** tab to specify what input is used to build the contact list and to specify whether output is generated to a list or table.
   a. From the **Input** list, specify the cells to use as the data source for the contact list.

   **Note:** The **Multiple Cells** option is available only if the input process generates multiple cells or if there are more processes that are feeding into the contact process.

   b. The **Enable Export To** check box is selected by default. To export your list data to a table or file, leave **Enable Export To** checked, then use the appropriate options:
      - To write the output to a database table, select a table from the **Enable Export To** list.
      - If the database table that you want to use is not in the list, or if you want to write the output to an unmapped table, select **Database Table**. Use the Specify Database table dialog to indicate the table and database name. User variables are supported in the table name that you specify.
      - To write the output to a file, select **File** from the **Enable Export To** list, then provide a file name and other details. You can write to a file to test the output of the contact process. After you run the process, review the file to confirm that the results are what you expect.
      - To create a user table, select **New Mapped Table** from the **Enable Export To** list. For instructions, see the Campaign Administrator’s Guide.
      - Specify how to handle updates to the output file or table:
        - **Append to Existing Data.** Add the new information to the end of the table or file. This option is the best practice for database tables. If you select this option for a delimited file, labels are not exported as the first row.
        - **Replace All Records.** Remove any existing data from the table or file and replace it with the new information.
        - **Create New File.** This option is available if you specify a new file in the **Enable Export To** field.
   c. If you only want to write to contact history, and you do not want to generate output to a table or file, clear the **Enable Export To** option. (Use the Log tab, explained later in these steps, to specify how to log to the Contact History tables.)
   d. (Optional) **Summary File:** Enter a path and file name in the **Summary File** field, or navigate to a location by clicking the ellipsis button. A summary file is a text file with the extension .sum. This file contains information about the contents of the list. Typically, you include this file with the list when you send it to the fulfillment center. A summary file is generated only if you select the **Enable Export To** option.
   e. (Optional) To send a trigger when the process finishes running, select the **Send Trigger(s)** option, and choose the trigger that you want to send. To
send multiple triggers, use Ctrl+Click to select more than one trigger. The selected triggers are listed in the Send Trigger(s) field, and they are separated by commas.

7. Use the Treatment tab to assign one or more offers or offer lists to each target cell:
   a. Click the Offer field next to the cell, then select an offer. To assign offers to multiple cells, select all rows to which you want to assign offers, then click Assign Offers.

   Note: If the input cells are linked to a top-down cell defined in the Target Cell Spreadsheet (TCS), and offers are already assigned in the TCS, the offers are displayed here. You can override these assignments. Any changes that you make here are reflected in the TCS after you save the flowchart.

   b. If you want to exclude some IDs from the contact list, select Use Holdout Control Groups, then change the Control? field to Y for each cell that you want to use as a control. Those cells appear in the Control Cell list and cannot be assigned offers.

   c. For each non-control cell, you can specify a control cell and an offer.

8. Use the Parameters tab if your organization is using parameterized offers. For example, an offer might be parameterized with values of 10% and 20%. The Parameters tab shows the values for each offer that was assigned on the Treatment tab. If there are no parameterized offers, you can skip this tab.
   a. Use the For Cell(s) list to select the cells that you want to affect.

      To save data entry time, select [All Cells] to assign values that apply to most of the cells, then select individual cells to override the values.

      When you select [All Cells], you see one row per offer per parameter. Values that you enter in the Assigned Value field apply to every cell that gets that offer.

      If you assigned the same offer to multiple cells on the Treatment tab, but you assign different parameter values for each cell, the [All Cells] view displays the text [Multiple Values] in the Assigned Value column, and the For Cell(s) list shows the value is assigned to each cell.

      When you select an individual cell, you see only the offers assigned to the selected cell. Values that you enter in the Assigned Value field apply only to that cell.

   b. Click in the Assigned Value field (or select a row in the table and click Assign Value), then select or type a value to assign to the parameter. You can use constants, derived fields, or table fields as values. For example, you can use a derived field to produce values that can be assigned to offer attributes.

      The configuration setting Campaign | partitions | partition[n] | server | flowchartConfig | disallowAdditionalValForOfferParam determines whether you are allowed to specify additional values or whether you are restricted to values in the list for offer attributes of type Single Select drop down.

9. Use the Personalization tab to specify which fields to write out to the contact list. For example, if you are building a mailing list, include contact names and addresses.
   • The Export Field list indicates which fields to write to the output list.
   • If you selected a table on the Fulfillment tab, the Export Field list includes all of the fields from that table. You must map each data field to a
corresponding table column. To automatically find matching fields, click **Match**. Fields with exact matches for the table field names are automatically added to the list. If there are multiple matching fields, the first match is taken.

- If you selected a file on the Fulfillment tab, the Export Field list is empty and you must specify which fields to output.
- When you select Candidate Fields, you can click the arrow next to an item to expand it. For example, you can expand the **IBM Campaign Generated Fields** list, then select **Treatment Code**. By including the **Treatment Code** in your output, you can use it to track responses. Direct Response tracking requires customers to provide the same code when they respond to the offer (for example, by using a coupon). Use **Ctrl+Click** or **Shift+Click** to select multiple fields.
- To view the values in a field, select the field and click **Profile**.
- Use the **Add** and **Remove** controls to adjust the contents of the list.
- The order of the fields in the Export Fields list determines the order that the data is written out.

10. To sort the output and specify how to handle duplicate IDs in the list, click **More** on the **Personalization** tab.

You see the Advanced Settings dialog.

- **a.** Decide whether your list will include or omit duplicate IDs. For example, if your Audience ID is Household, there might be duplicate Audience IDs for each person in that household. You may or may not want each person included in the list. To omit duplicate IDs, choose **Skip Records with Duplicate IDs**, and specify which record to retain if duplicate IDs are returned. For example, to keep only the family member with the highest household income, select **MaxOf** and **Household_Income**.

  **Note:** This option removes duplicates that occur in the same input cell. If the same ID exists in multiple input cells, your contact list might still contain duplicates. If your goal is to remove all duplicates from the list, use a Merge or Segment process upstream of the contact process to purge duplicate IDs or create mutually exclusive segments.

  **Note:** This option pertains only to the fulfillment table (the list) and not to contact history. The contact history tables always contain unique IDs only. For example, say that your output list includes multiple family members (duplicate IDs for Households). The contact history will contain only one record for Household, using the first CustomerID found. The flowchart designer must ensure that the result set obtains the correct records before the records reach the contact history tables. Use the Extract process to de-dupe the results before the contact process box to ensure that the correct records are written to both the fulfillment table and contact history.

- **b.** To sort the output, use the **Order By** options. For example, to sort by surname in reverse order, select the **Last_Name** field and **Descending**.
- **c.** Click **OK** to close the Advanced Settings window.

11. Use the **Log** tab to control what is written to contact history.

You must have the appropriate permissions to enable or disable the contact history log options.

- **a.** To log contact history to the system tables, check **Log to Contact History Tables**. This option makes contact information available for tracking and reporting throughout Campaign.
Note: When you create a mailing list, do not log to contact history if you plan to send the list to a mailing house for processing (such as validating addresses). Instead, consider using a Track process to log the information after it is returned from the mailing house. In this way, you capture only the list of customers who were mailed an offer. Another approach is to allow the Mail List to update contact history, then use the Track process to update the contact history records that were created by the Mail List process.

b. (Optional) To store contact information in another location, in addition to or instead of the contact history tables, check Log into Other Destination. This option is useful if your organization requires further processing of the information in another format, or if you want to examine the output before you update contact history.

12. If you selected Log into Other Destination on the Log tab:

   a. Use Select cells to specify which input to use (if there are multiple inputs).

   b. Use Log to to select a destination table or file. If you select File, define the output file name and parameters. Indicate which field data to include by moving candidate fields to the Fields to Output list. You can automatically find matching fields by clicking Match. Fields with exact matches for the Table Field names are automatically added to the Field to Log list. If there are multiple matching fields, the first match is taken. The order of fields in the list determines the order of data in the file.

   c. Use the following options to specify how updates to the destination file or table are handled:

      • Append to Existing Data: Add the new contact information to the end of the table or file. Appending data is a safe choice for database tables because it preserves existing data. If you select this option for a delimited file, labels are not exported as the first row.

      • Replace All Records: Remove any existing data from the table or file, and replace it with the new contact information.

      An informational field indicates whether Skip records with duplicate IDs is set to Yes or No. You set this option on the Personalization tab but it also applies to the table or file that you specified for Log into Other Destination, where you are additionally logging contact history.

13. To customize the information that gets written to contact history, click More Options on the Log tab.

   The Contact History Logging Options dialog opens.

   a. To avoid updating contact history when this process runs, select Create Treatments Only.

      This option generates new treatments in the Treatments table without updating the contact history, allowing for a delayed update to the history tables. For example, use this option if you plan to remove invalid and duplicate addresses through post-processing. By waiting to update contact history with the final list of IDs to which offers are sent, the resulting contact history will be smaller and more accurate.

      If you select this option, the other options in this dialog that no longer apply are disabled.

      By default, this option is not selected, so contact history is updated when the process runs.

   b. To generate new treatments with the same package ID as in the most recent process run, select Use Last Package ID.
All offers given to an individual in the same contact process are considered to be a single "package". By default, Use Last Package ID is not selected. Not selecting this option ensures that each package is assigned a unique ID for each production run of the contact process.

If you selected Create Treatments Only to prevent customer history from being updated, you can also select Use Last Package ID to ensure that the package ID from the prior run is assigned to each set of offers. This action links the offers to the existing contact history.

c. Use the Tracking Audience Level to determine which audience level is written to contact history.

Note: The contact process de-dupes records based on the Audience level of the input process. Changing the Tracking Audience Level does not affect how records are de-duped. For example, say the input process for a Maillist process uses Audience level 1. However, you want to log records to contact history at Audience level 2. In this case, you must configure an Audience process to change the audience level. Then connect the Audience process as input to the contact process. Now you can select a Tracking Audience Level of 2.

d. Use the Contact Date field to specify when to contact the people in the contact list. If you do not specify a date, Campaign uses the flowchart run date.

e. Use the Contact Status Code list to specify a status code for tracking.
f. Use the controls to add fields from the Candidate Fields list to the Fields to Log list.
g. Click Close to return to the Log tab of the process configuration dialog.

14. (Optional) To clear some or all existing contact history and associated response history entries before the next run of the contact process, click Clear History on the Log tab.

Important: Clear History permanently deletes contact and response history records from the system tables. This data is not recoverable.

15. (Optional) Use the General tab to assign a name and descriptive notes to the process.

16. Click OK.

The process is now configured. You can test run the process to verify that it returns the results you expect. A test run does not output data or update any tables or files, but it does run any triggers that were selected on the Fulfillment tab.

The Create Seg process

Use the Create Seg process to create lists of audience IDs from customer database tables. Define the Create Seg process in the Sessions area of Campaign so that the segments are available globally for use in all campaigns.

The Create Seg process is intended to be used by Campaign administrators. A Create Seg process that is defined in a session flowchart creates a strategic segment, which can then be used in any flowchart. The segments can then be used as input for processes. They can also be used to create dimensions and cubes, or as the global suppression segment for an audience level.

Note: A best practice is to create all global constructs in a session flowchart.
To work with strategic segments, you do the following:

- Create segments in the **Sessions** area, using Create Seg.
- Manage segments from the **Segments** area.
- Use the segments in campaigns from the **Campaign** section.

### Creating segments for global use in multiple campaigns

Administrators use the Create Seg process to create segments for global use across campaigns and sessions. These are called *strategic segments*.

Define a Create Seg process in the Sessions area of the application so the segments are available globally. Users can then use the segments in any campaign.

1. Open a session flowchart.
2. Click the **Edit** icon in the flowchart window.
3. Drag the CreateSeg process from the palette to your flowchart.
4. Connect one or more data manipulation processes (for example, a Select process) as input to the Create Seg process.
5. Double-click the Create Seg process.
6. On the **Define Segments** tab.
   a. Select one or more source cells from the **Input** list. These source cells will be turned into segments.
   b. Select **Create Mutually Exclusive Segments** if you want to ensure that each qualifying record belongs to no more than one segment.
   c. In the **Result Segments** area, highlight an input cell and click **Edit** to configure the segment.

The Edit Segment dialog opens.

7. In the Edit Segment dialog:
   a. Give the segment a name that describes its purpose. Provide a brief description of the segment contents (for example, what input was used to create the segment).
   b. From the **Create Under** list, select a folder where the segment will be stored.
   c. From the **Temp Table Data Source** list, select a data source in which to cache the strategic segment. Use the **Ctrl** key to select multiple data sources. If you prefer to store the temporary tables in a binary file on the server, rather than in a user data source, do not select a data source. To deselect a data source (for example, to revert to no data source selection), **Ctrl+click** the item again.

   **Note:** Selecting a data source is required only if the `doNotCreateServerBinFile` property on the `Campaign|partitions|partition[n]|Server|Optimization Configuration` page is set to TRUE. If this property is set to TRUE, at least one valid data source must be selected.
   
   d. From the **Security Policy** list, select a security policy, if applicable, to apply to the new segment.
   e. Click **OK** to return to the **Define Segments** tab.
8. (Optional) Use the **General** tab to assign a name and descriptive note.
9. Click **OK**.
The process is configured in the flowchart.

You can test run the Create Seg process, but test runs do not create strategic segments or update existing ones.

Note: To create or update strategic segments, run the Create Seg process in production mode.

The Cube process
Administrators use the Cube process to allow users to drill into data from multiple sources. Data cubes consist of dimensions that are based on strategic segments.

The Cube process is intended for technical users or IBM consultants. A best practice is to create all global constructs, such as cubes and strategic segments, in the Sessions area of the application.

Users can select one or more defined segments, create a cube, and then drill into the data to select a target audience. The audience can then be converted into the appropriate processes, such as Select, for inclusion in a flowchart.

Creating a multi-dimensional cube of attributes
Configure a Cube process to create a multi-dimensional cube of attributes. Any cubes created in the Sessions area will be available globally.

Before you can create a cube using a Cube process, you must create a strategic segment or dimension hierarchy.

1. Open a session flowchart.
2. Click the Edit icon in the flowchart window.
3. Drag the Cube process from the palette to your flowchart.
4. Double-click the Cube process in the flowchart workspace.
5. On the Source tab, use the Input Segments list to select one or more segments as input for the cube.

Important: If you select more than one source segment, ensure that they all have the same audience level.
6. Click the Cube Definitions tab to define your cube.
   From the Cube Definitions window you can:
   • Click Add to add a new cube.
   • Select an existing cube and click Edit to modify it.
   • Select an existing cube and click Remove to delete it.
7. To add a cube:
   a. Click Add.
   b. Enter a name and description.
   c. Select up to three dimensions from the corresponding lists. The dimensions must be related to the strategic segments that the cube source is based on.
   d. Click OK. The Edit Cube window closes and the new cube definition is displayed in the list of cubes on the Cube Definitions tab.
8. Click the Select Additional Fields to Track tab to specify additional fields for tracking.
   From the Select Additional Fields window you can:
• Select and move the fields you want to track from the Available Fields list
to the Selected Fields list, using the Add>> button
• Click Derived Fields to select or create derived fields to track.
• Click Profile to see the contents of the selected field.

9. (Optional) Click the General tab to assign a name and descriptive note.
The name appears on the process in the flowchart. The notes appear when
you mouse over the process in the flowchart.

10. Click OK.
The process is configured. You can test the process to verify that it returns the
results you expect.

The Mail List process
Use the Mail List process to assign offers to contacts, generate a contact list for a
direct mail campaign, and log the contact history. The Mail List process is often
referred to as a contact process.

Configuring contact processes (Mail List or Call List)
Follow these instructions to configure a Mail List or Call List process in a
Campaign flowchart. Configure a Mail List or Call List process to assign offers to
contacts, generate a contact list for a direct mail or telemarketing campaign, and
write the results to contact history.

1. Open a campaign and click a flowchart tab.
2. Click the Edit icon in the flowchart window.

3. Drag a contact process (Mail List or Call List) from the palette
to your flowchart.
4. Connect one or more configured processes as input to the contact process.
The processes that you connect must produce output cells, which serve as
input to the contact process. For example, a Select process produces a list of
IDs, so its output can serve as input to a contact process.

**Important:** All of the cells that you select as input cells must have the same
audience level.
5. Double-click the contact process in the flowchart workspace.
The process configuration dialog opens.
6. Use the Fulfillment tab to specify what input is used to build the contact list
and to specify whether output is generated to a list or table.
a. From the Input list, specify the cells to use as the data source for the
contact list.

**Note:** The Multiple Cells option is available only if the input process
generates multiple cells or if there are more processes that are feeding into
the contact process.
b. The Enable Export To check box is selected by default. To export your list
data to a table or file, leave Enable Export To checked, then use the
appropriate options:
• To write the output to a database table, select a table from the Enable
Export To list.
• If the database table that you want to use is not in the list, or if you
want to write the output to an unmapped table, select Database Table.
Use the Specify Database table dialog to indicate the table and database name. User variables are supported in the table name that you specify.

- To write the output to a file, select File from the Enable Export To list, then provide a file name and other details. You can write to a file to test the output of the contact process. After you run the process, review the file to confirm that the results are what you expect.

- To create a user table, select **New Mapped Table** from the Enable Export To list. For instructions, see the *Campaign Administrator's Guide*.

- Specify how to handle updates to the output file or table:
  - **Append to Existing Data.** Add the new information to the end of the table or file. This option is the best practice for database tables. If you select this option for a delimited file, labels are not exported as the first row.
  - **Replace All Records.** Remove any existing data from the table or file and replace it with the new information.
  - **Create New File.** This option is available if you specify a new file in the Enable Export To field.

  If you only want to write to contact history, and you do not want to generate output to a table or file, clear the Enable Export To option. (Use the Log tab, explained later in these steps, to specify how to log to the Contact History tables.)

- (Optional) **Summary File:** Enter a path and file name in the Summary File field, or navigate to a location by clicking the ellipsis button. A summary file is a text file with the extension .sum. This file contains information about the contents of the list. Typically, you include this file with the list when you send it to the fulfillment center. A summary file is generated only if you select the Enable Export To option.

- (Optional) To send a trigger when the process finishes running, select the Send Trigger(s) option, and choose the trigger that you want to send. To send multiple triggers, use Ctrl+Click to select more than one trigger. The selected triggers are listed in the Send Trigger(s) field, and they are separated by commas.

7. Use the **Treatment** tab to assign one or more offers or offer lists to each target cell:

   a. Click the Offer field next to the cell, then select an offer. To assign offers to multiple cells, select all rows to which you want to assign offers, then click Assign Offers.

   **Note:** If the input cells are linked to a top-down cell defined in the Target Cell Spreadsheet (TCS), and offers are already assigned in the TCS, the offers are displayed here. You can override these assignments. Any changes that you make here are reflected in the TCS after you save the flowchart.

   b. If you want to exclude some IDs from the contact list, select **Use Holdout Control Groups**, then change the Control? field to Y for each cell that you want to use as a control. Those cells appear in the Control Cell list and cannot be assigned offers.

   c. For each non-control cell, you can specify a control cell and an offer.

8. Use the **Parameters** tab if your organization is using parameterized offers. For example, an offer might be parameterized with values of 10% and 20%. The Parameters tab shows the values for each offer that was assigned on the Treatment tab. If there are no parameterized offers, you can skip this tab.
a. Use the **For Cell(s)** list to select the cells that you want to affect.

To save data entry time, select [All Cells] to assign values that apply to most of the cells, then select individual cells to override the values.

When you select [All Cells], you see one row per offer per parameter. Values that you enter in the **Assigned Value** field apply to every cell that gets that offer.

If you assigned the same offer to multiple cells on the Treatment tab, but you assign different parameter values for each cell, the [All Cells] view displays the text [Multiple Values] in the **Assigned Value** column, and the **For Cell(s)** list shows the value is assigned to each cell.

When you select an individual cell, you see only the offers assigned to the selected cell. Values that you enter in the **Assigned Value** field apply only to that cell.

b. Click in the **Assigned Value** field (or select a row in the table and click **Assign Value**), then select or type a value to assign to the parameter. You can use constants, derived fields, or table fields as values. For example, you can use a derived field to produce values that can be assigned to offer attributes.

The configuration setting Campaign | partitions | partition[n] | server | flowchartConfig | disallowAdditionalValForOfferParam determines whether you are allowed to specify additional values or whether you are restricted to values in the list for offer attributes of type **Single Select drop down**.

9. Use the **Personalization** tab to specify which fields to write out to the contact list. For example, if you are building a mailing list, include contact names and addresses.

   - The Export Field list indicates which fields to write to the output list.
   - If you selected a table on the Fulfillment tab, the Export Field list includes all of the fields from that table. You must map each data field to a corresponding table column. To automatically find matching fields, click **Match**. Fields with exact matches for the table field names are automatically added to the list. If there are multiple matching fields, the first match is taken.
   - If you selected a file on the Fulfillment tab, the Export Field list is empty and you must specify which fields to output.
   - When you select Candidate Fields, you can click the arrow next to an item to expand it. For example, you can expand the **IBM Campaign Generated Fields** list, then select **Treatment Code**. By including the **Treatment Code** in your output, you can use it to track responses. Direct Response tracking requires customers to provide the same code when they respond to the offer (for example, by using a coupon). Use **Ctrl+Click** or **Shift+Click** to select multiple fields.
   - To view the values in a field, select the field and click **Profile**.
   - Use the **Add** and **Remove** controls to adjust the contents of the list.
   - The order of the fields in the Export Fields list determines the order that the data is written out.

10. To sort the output and specify how to handle duplicate IDs in the list, click **More** on the **Personalization** tab.

    You see the Advanced Settings dialog.

    a. Decide whether your list will include or omit duplicate IDs. For example, if your Audience ID is Household, there might be duplicate Audience IDs for each person in that household. You may or may not want each person
included in the list. To omit duplicate IDs, choose **Skip Records with Duplicate IDs**, and specify which record to retain if duplicate IDs are returned. For example, to keep only the family member with the highest household income, select **MaxOf** and **Household_Income**.

**Note:** This option removes duplicates that occur in the same input cell. If the same ID exists in multiple input cells, your contact list might still contain duplicates. If your goal is to remove all duplicates from the list, use a Merge or Segment process upstream of the contact process to purge duplicate IDs or create mutually exclusive segments.

**Note:** This option pertains only to the fulfillment table (the list) and not to contact history. The contact history tables always contain unique IDs only. For example, say that your output list includes multiple family members (duplicate IDs for Households). The contact history will contain only one record for Household, using the first CustomerID found. The flowchart designer must ensure that the result set obtains the correct records before the records reach the contact history tables. Use the Extract process to de-dupe the results before the contact process box to ensure that the correct records are written to both the fulfillment table and contact history.

b. To sort the output, use the **Order By** options. For example, to sort by surname in reverse order, select the **Last_Name** field and **Descending**.

c. Click **OK** to close the Advanced Settings window.

11. Use the **Log** tab to control what is written to contact history.

You must have the appropriate permissions to enable or disable the contact history log options.

a. To log contact history to the system tables, check **Log to Contact History Tables**. This option makes contact information available for tracking and reporting throughout Campaign.

**Note:** When you create a mailing list, do not log to contact history if you plan to send the list to a mailing house for processing (such as validating addresses). Instead, consider using a Track process to log the information after it is returned from the mailing house. In this way, you capture only the list of customers who were mailed an offer. Another approach is to allow the Mail List to update contact history, then use the Track process to update the contact history records that were created by the Mail List process.

b. (Optional) To store contact information in another location, in addition to or instead of the contact history tables, check **Log into Other Destination**. This option is useful if your organization requires further processing of the information in another format, or if you want to examine the output before you update contact history.

12. If you selected **Log into Other Destination** on the Log tab:

a. Use **Select cells** to specify which input to use (if there are multiple inputs).

b. Use **Log to** to select a destination table or file. If you select **File**, define the output file name and parameters.

Indicate which field data to include by moving candidate fields to the **Fields to Output** list. You can automatically find matching fields by clicking **Match**. Fields with exact matches for the **Table Field** names are automatically added to the **Field to Log** list. If there are multiple matching fields, the first match is taken. The order of fields in the list determines the order of data in the file.
c. Use the following options to specify how updates to the destination file or table are handled:

- **Append to Existing Data**: Add the new contact information to the end of the table or file. Appending data is a safe choice for database tables because it preserves existing data. If you select this option for a delimited file, labels are not exported as the first row.

- **Replace All Records**: Remove any existing data from the table or file, and replace it with the new contact information.

An informational field indicates whether **Skip records with duplicate IDs** is set to Yes or No. You set this option on the **Personalization** tab but it also applies to the table or file that you specified for **Log into Other Destination**, where you are additionally logging contact history.

13. To customize the information that gets written to contact history, click **More Options** on the Log tab.

The Contact History Logging Options dialog opens.

- a. To avoid updating contact history when this process runs, select **Create Treatments Only**.

  This option generates new treatments in the Treatments table without updating the contact history, allowing for a delayed update to the history tables. For example, use this option if you plan to remove invalid and duplicate addresses through post-processing. By waiting to update contact history with the final list of IDs to which offers are sent, the resulting contact history will be smaller and more accurate.

  If you select this option, the other options in this dialog that no longer apply are disabled.

  By default, this option is *not* selected, so contact history is updated when the process runs.

- b. To generate new treatments with the same package ID as in the most recent process run, select **Use Last Package ID**.

  All offers given to an individual in the same contact process are considered to be a single "package". By default, **Use Last Package ID** is not selected. Not selecting this option ensures that each package is assigned a unique ID for each production run of the contact process.

  If you selected **Create Treatments Only** to prevent customer history from being updated, you can also select **Use Last Package ID** to ensure that the package ID from the prior run is assigned to each set of offers. This action links the offers to the existing contact history.

- c. Use the **Tracking Audience Level** to determine which audience level is written to contact history.

  **Note**: The contact process de-dupes records based on the Audience level of the input process. Changing the **Tracking Audience Level** does not affect how records are de-duped. For example, say the input process for a Maillist process uses Audience level 1. However, you want to log records to contact history at Audience level 2. In this case, you must configure an Audience process to change the audience level. Then connect the Audience process as input to the contact process. Now you can select a Tracking Audience Level of 2.

- d. Use the **Contact Date** field to specify when to contact the people in the contact list. If you do not specify a date, Campaign uses the flowchart run date.

- e. Use the **Contact Status Code** list to specify a status code for tracking.
f. Use the controls to add fields from the **Candidate Fields** list to the **Fields to Log** list.

14. (Optional) To clear some or all existing contact history and associated response history entries before the next run of the contact process, click **Clear History** on the **Log** tab.

   **Important:** Clear History permanently deletes contact and response history records from the system tables. This data is not recoverable.

15. (Optional) Use the **General** tab to assign a name and descriptive notes to the process.

16. Click **OK**.

The process is now configured. You can test run the process to verify that it returns the results you expect. A test run does not output data or update any tables or files, but it does run any triggers that were selected on the **Fulfillment** tab.

The **Schedule process**

Use the Schedule process to initiate a process, a series of processes, or an entire flowchart. The Schedule process works only if the flowchart is running.

A Schedule process is active for a defined period of time. During that time, specified events might occur that cause subsequent connected processes to begin running. The most common use of the Schedule process is to control timing of the entire flowchart.

**Note:** A flowchart can include multiple Schedule process boxes as long as they are in independent branches. However, errors can occur if a process has more than one Schedule ancestor in different ancestral branches leading to the same process.

You can configure a Schedule process to define the total scheduling period by setting up a time limit in days, hours, and minutes starting from when the process begins running.

- You can schedule a process to run in a variety of ways, including repetitively, by trigger, and by calendar.
- You can combine multiple scheduling options. For example, you can schedule a process to run every Monday at 9:00 a.m., and whenever it is triggered by a specific event, such as a hit on the website.
- You can schedule a batch process, for example, to run late at night when it will not interfere with daytime jobs.

There are no limits on the number of options that you can use simultaneously in scheduling a flowchart, as long as the selections do not conflict. (For example, you cannot schedule a flowchart to run both "Once Only" and "Every Monday.")

In general, a process runs only when all of its inputs have run successfully (that is, when all processes connected to the current process have run, even if the dependency is only temporal). However, when multiple schedule inputs exist within a branch, the process will run whenever any one of its inputs completes (an "OR" rather than an "AND" of its inputs).

A contact process with tracking enabled contains an inherent schedule. Using a Schedule process in the middle of a flowchart is an advanced feature. Make sure that you are getting the desired behavior and correct results.
Note: If the Schedule process in your flowchart tells the flowchart to run before a previous run is complete, Campaign holds the request until the previous run is finished. Only one run can be held in this manner. In certain cases, this might mean that the flowchart does not run as many times as you expect.

For example, if your flowchart takes two hours to run, and you have a Schedule process that tries to trigger three runs that are only 10 minutes apart, Campaign will start the first run. When the Schedule process attempts to start the second run, Campaign will queue it. When the Schedule process attempts to start the third run, Campaign will ignore it. When the first run is finished, Campaign will start the second run. The third run will never start.

Scheduling processes in a running flowchart
Configure the Schedule process to initiate processes in a running flowchart. The Schedule process works only if the flowchart is running.
1. Open a campaign and click a flowchart tab.
2. Click the Edit icon in the flowchart window.
3. Drag the Schedule process from the palette to your flowchart.
4. On the Schedule tab, specify the scheduling conditions.
   a. Specify a value for Total Schedule Period by entering the appropriate values in the Days, Hours, and Minutes fields. The total schedule period is the total time over which the Schedule process is to be active. By default, the total schedule period is set to 30 days.
   b. Select a run frequency from the Schedule to Run drop-down list, to specify exactly when the Schedule process will activate subsequent connected processes.
      • If you select the Once Only option, the flowchart will run exactly once, regardless of what other schedule options have been added. If any other value is selected, then the scheduling options are connected as OR statements and the Schedule process kicks off any process to which it is connected when any option is satisfied.
      • The first option that is satisfied will begin the Schedule run. If Schedule To Run is the only option enabled and the setting is Once Only, the process runs immediately (unless a delay or user authorization has been enabled).
      • The Hours and Minutes fields enable you to specify the time at which you want the schedule to run. The time entry form is based on a 24 hour clock (also referred to as "military time"). In other words, 9 hours 30 minutes is 9:30 a.m., and 22 hours 45 minutes is 10:45 p.m. Because the time base is 24 hours, there is no need to designate a.m. or p.m.
5. If you select Custom Run from the Schedule to Run list, you can use one or both of the following options to specify when the schedule runs.
   • Choose Run On Time, then specify dates and times for the process to run. Multiple entries must be separated by commas. Click Calendar to access the Calendar feature for choosing dates and times.
   • Choose Run On Trigger(s) if you want the schedule to be triggered by an event.
     The named trigger(s) must be defined using Tools > Stored Triggers for the Schedule process to be fully configured. Enter the name of each trigger that can activate this Schedule process. Separate multiple triggers with commas. A trigger name
does not have to be unique. You can use the same trigger in multiple campaigns or flowcharts and activate them all at the same time.

For more information about triggers, see the Campaign Administrator’s Guide.

6. Use one or both of the following options if you want to specify a delay or require authorization.
   • If you choose **Wait for User Authorization Before Each Run**, a prompt for user authorization will appear each time any other schedule conditions are satisfied, and the Schedule process will not activate unless specific authorization is provided. This option takes precedence over any other schedule indicators; the process will not start unless authorization is given.

   **Note:** When a flowchart is running with a client attached, user authorization can only occur through the client. If no client is attached, any user with read/write privileges for the campaign can authorize it to continue.

   • If you choose **Delay Period Before Each Run**, specify the amount of time to wait after a schedule condition has been satisfied before the process runs, using the **Days**, **Hours**, and **Minutes** fields. This delay applies to all other specified schedule options. For example, if a Schedule process is configured to run at 9:00 a.m. on Monday morning with a delay of one hour, subsequent processes will begin to run at 10:00 a.m.

7. (Optional) Specify triggers to send after the Schedule run is completed.
   If you select the **Send Trigger(s) After Each Run** check box, Campaign runs one or more triggers each time the Schedule process is activated. An outbound trigger executes a command line, which can be a batch file or a script file. Any named triggers must be defined using **Tools > Stored Triggers**. If you specify multiple trigger names, they must be separated by commas.

8. (Optional) Click the **General** tab to assign a name and descriptive note.
   The name appears on the process in the flowchart. The notes appear when you point to the process in the flowchart.

9. Click **OK**.

The process is configured and appears enabled in the flowchart. You can test the process to verify that it returns the results you expect.

**Scheduling based on triggers**

You can configure the Schedule process to be triggered by an event and to trigger events upon completion. Use **Tools > Stored Triggers** to define triggers, then call the triggers by configuring the Schedule process in a flowchart.

**Note:** For performance advantages, use the IBM EMM Scheduler to send triggers to Campaign. To learn more about the Scheduler, see the Marketing Platform Administrator’s Guide.

**Inbound triggers: Events that activate the Schedule process**

An inbound trigger is an external event that sets a flowchart or campaign in motion. A trigger can be anything that you define. Examples include clicking a website link, receiving an email message, a telemarketer’s response indicator, completion of a database upload, or any other defined event.

To specify inbound triggers that activate the Schedule process, configure the Schedule process and select **Custom Run** from the **Schedule to Run** list, then use the **Run On Trigger(s)** option.
The Run On Trigger(s) option uses unica_actrg (included with your Campaign installation) to run. To understand how Run On Trigger works behind the scenes, it is helpful to look at an example: “Example: Run on Trigger” on page 201.

**Outbound triggers: Events activated by the Schedule process**

An outbound trigger executes a command line, which can be a batch file or a script. Campaign can run one or more triggers each time the Schedule process activates the trigger names in the Send Trigger(s) After Each Run field. If you specify multiple trigger names, they must be separated by commas.

This function allows you to send an outbound trigger to an executable file. The full path and the name of the file must be defined in the Stored Trigger Definitions dialog. Each time that the Schedule process is activated, Campaign runs the specified executable file.

**Using triggers with other scheduling options**

Triggers can be used with any other scheduling options or alone. Used in combination, you can, for example, set up a flowchart to run every Monday at 9:00 a.m. as well as every time someone clicks on an internet banner advertisement.

If, for example, you scheduled the flowchart to Run On Trigger(s) based on hits on a website, and you also specify a Delay Period Before Each Run, the flowchart will not begin until both the event (the Web hit) occurs and the delay period expires.

**To configure a Schedule process to run on a trigger:**

1. On the Schedule tab of the Schedule process configuration dialog, select Custom Run from the Schedule to Run drop-down list.
   The Custom Run features become enabled.

2. In the Run On Trigger(s) field, enter the name of each trigger that can activate this Schedule process. Separate multiple triggers with commas.
   • The trigger name can contain any characters except commas.
   • A trigger name does not have to be unique. You can use the same trigger in multiple campaigns or flowcharts and activate them all at the same time.

**Running on triggers:** When you select Custom Run from the Schedule to Run drop-down list, the Run On Trigger(s) option is available. Enable this option to specify one or more inbound triggers that activate the Schedule process.

If you enable Run on Trigger(s), you must specify one or more triggers. The named trigger(s) must be defined using Tools > Stored Triggers for the Schedule process to be fully configured.

An inbound trigger is an external event that will automatically set a flowchart or a campaign in motion. A trigger can be anything that you define; for example, clicking a website link, receiving an email message, a telemarketer’s response indicator, completion of a database upload, or any other defined event.

The Run On Trigger(s) option uses the IBM application unica_actrg (included with your Campaign installation) to run. To understand how Run On Trigger works behind the scenes, it is helpful to look at an example.
**Example: Run on Trigger:** An online retailer has a cross-sell campaign that runs on a trigger, so that when a customer makes a purchase, it triggers cross-sell offers.

Specifically, when the customer makes a purchase:
- The website runs the unica_actrg executable, passing the campaign code and the trigger name (web_purchase).
- The Campaign listener checks that the campaign is active and the trigger name exists, then runs the Schedule process, and the campaign flowchart is triggered.

For more details about triggers, see the *Campaign Administrator’s Guide*.

**Sending triggers after each run:** An outbound trigger executes a command line, which can be a batch file or a script file. You can have Campaign run one or more triggers each time the Schedule process activates the trigger names in the *Send Trigger(s) After Each Run* field. If you specify multiple trigger names, they must be separated by commas.

This function allows you to send an outbound trigger to an executable file. The full path and the name of the file must be defined in the Stored Trigger Definitions window. Each time the Schedule process is activated, Campaign runs the specified executable file.

**Using triggers with other scheduling options:** Triggers can be used with any other scheduling options or alone. Used in combination, you can, for example, set up a flowchart to run every Monday at 9:00 a.m. as well as every time someone clicks on an internet banner advertisement.

If, for example, you have scheduled the flowchart to *Run On Trigger(s)* based on hits on a website, and you also specify a *Delay Period Before Each Run*, the flowchart will not begin until both the event (the Web "hit") occurs and the delay period has expired.

**The Snapshot process**

Use the Snapshot process to capture data for export to a table or a file.

To make sure that duplicate rows are not exported, set *Skip Records with Duplicate IDs* to *Yes* in the snapshot configuration. Or you can use an Extract process and then snapshot the results.

To associate or track offers with the list, use the snapshot as input to a Mail List or Call List process. When you configure the Mail List or Call List process, export the necessary data to an alternate location (either a file or a table).

**Taking a snapshot of data**

Use the Snapshot process to capture data for export to a table or file. Select the source of the values that you want to capture and define the output table or a file for those values.

1. Open a campaign and click a flowchart tab.
2. Click the *Edit* icon in the flowchart window.
3. Drag the Snapshot process from the palette to your flowchart.
4. Connect one or more processes to provide input to the Snapshot process.

**Note:** All of the cells that you select as input must have the same audience level.

6. Use the Snapshot tab to specify how to capture data.
   a. Use the Input list to specify which cells to use as the data source for the snapshot.

      **Note:** If the Snapshot process is not connected to a process that provides output cells, there are no cells to select from in the Input list. The Multiple Cells option is only available if the input process generates multiple cells.

   b. Use the Export To list to specify the table or file for the Snapshot output.

      **Note:** You can test the Snapshot process by running the process with output exported to a temporary file that you can review.
      • If the table that you want to use is not in the list, or if you want to output to an unmapped table, select Database Table. Use the Specify Database table dialog box to specify the table and database names. User variables are supported in the table name you specify here.
      • If you select File from the Export To list, you can specify the type of file you want to write the output to, the file name, and corresponding data dictionary.
      • If you want to create a new user table, select New Mapped Table from the Export To list. For instructions, see the IBM Campaign Administrator’s Guide.
      • You can also export to an extract table.
   c. Select an option to specify how updates to the output file or table are handled:
      • Append to Existing Data. Add the new information to the end of the table or file. If you select this option for a delimited file, labels are not exported as the first row. This is a best practice for database tables.
      • Replace All Records. Remove any existing data from the table or file, and replace it with the new information.
      • Update Records. Available only if you are exporting to a table. All fields that are specified for the snapshot are updated with the values from the current run of the process.
      • Create New File. Available only if you are exporting to a file. This option is selected by default if you are exporting to a file. Each time that you run the process, a new file is created with "_1," "_2" and so on, appended to the file name.

7. Specify which fields to snapshot.
   a. Use the Candidate Fields list to select the fields that you want to include in your output.

      You can use Campaign Generated Fields by expanding the list of Campaign Generated Fields, or use derived fields by clicking Derived Fields. Select multiple fields by using Ctrl+Click, or select a contiguous range of fields by using Shift+Click.

   b. Move the selected fields to the Fields to Snapshot list by clicking Add.
   c. If you selected a table as the snapshot destination, the fields in that table display in the Candidate Fields list under the Field Name column. You can automatically find matching fields by clicking Match. Fields with exact matches for the table field names are automatically added to the Export
Fields list. If there are multiple matching fields, the first match is taken. You can manually modify the pairings by clicking Remove or Add.

d. You can reorder the fields in the Fields to Snapshot list by selecting a field and clicking Up1 or Down1 to move it up or down in the list.

**Note:** To view the values in a field, select the field in the Candidate Fields list and click Profile.

8. To skip records with duplicate IDs or to specify the order in which records are output, click More.

The Advanced Settings window opens.

a. To remove duplicate IDs within the same input cell, select Skip Records with Duplicate IDs. Then choose the criteria to determine which record to retain if duplicate IDs are found. For example, you can select MaxOf and Household_Income to specify that when duplicate IDs are found, Campaign exports only the ID with the highest household income.

**Note:** This option removes duplicates only within the same input cell. Your snapshot data can still contain duplicate IDs if the same ID displays in multiple input cells. To remove all duplicate IDs, use a Merge or Segment process upstream of the Snapshot process to purge duplicate IDs or to create mutually exclusive segments.

b. To sort the snapshot output, select the **Order By** check box, then select the field to sort by and the sort order. For example, you can select Last_Name and Ascending to sort IDs by surname in ascending order.

9. Click OK.

10. (Optional) Click the **General** tab to assign a name and descriptive note. The name displays on the process box in the flowchart. The note displays when you hover the cursor over the process box in the flowchart.

11. Click OK.

The process is now configured. You can test run the process to verify that it returns the results you expect.

### Optimization processes

Use the optimization processes to help determine a campaign's effectiveness and refine your marketing campaigns over time.

The Track and Response processes help you to track who is contacted and who responds. In this way, you can evaluate the response to your campaigns and modify them over time.

The Model process automates the creation of a response model that can be used to predict responders and non-responders.

The Score process scores contacts against a data model to rate the likelihood of each customer making a purchase or responding to an offer. Scoring accurately identifies the best customers or prospects for a campaign. In this way, you can determine the most effective campaign, offer, and channels.

For more information, see the following topics:
- “The Track process” on page 206
- “The Response process” on page 204
The SPSS Model and SPSS Score processes require IBM SPSS Modeler Advantage Marketing Edition. For information, see the IBM Campaign and IBM SPSS Modeler Advantage Marketing Edition Integration Guide.

The Response process

The Response process tracks the responses of customers who were contacted in a contact process, such as Mail List or Call List.

Based on rules that you define during process configuration, the Response process evaluates which responses are considered valid and how they are credited back to campaigns or offers. The output of the Response process is written to several response history system tables, where the data can be accessed for analysis using Campaign performance and profitability reports.

In its simplest form, the Response process can appear in its own flowchart connected to a Select process (and optionally a Segment process). In such a flowchart, the Select process selects IDs from a mapped table containing data about responders and their response actions. These IDs are segmented by the Segment process into meaningful groups, and finally passed to a Response process, where response tracking rules are applied and output is written to response history tables.

A Response process is tightly aligned with its corresponding contact process, in which the responders now being tracked were possibly members of cells targeted with particular offers.

Updating response history

Use the Response process to update response history. The Response process compares campaign response information with contact history and writes information to the response history tables for the appropriate audience level.

A Response process is tightly aligned with its corresponding contact process, in which the responders now being tracked were possibly members of cells targeted with particular offers. Therefore, before you can configure a Response process, you must:

• Know the audience level of your contact list.
• Ensure that contact history and response history system tables are mapped for each audience level that you are contacting and tracking. This is usually done by the Campaign administrator.
• Set up a separate Response process for each audience level in which you are tracking responders.
• Know the codes representing the response types that you want to track.
• Know what Campaign-generated codes (campaign, cell, offer, or treatment codes) were sent to your contact list, so you can map them for tracking.
• Enable the ability to create temp tables in the Campaign system tables database (set the AllowTempTables configuration property to true).

Follow the steps below to configure a Response process.

1. Navigate to the list of campaigns where you created your contact flowcharts (the flowcharts that assigned the offers that you plan to analyze).
2. Typically, you create a separate flowchart to handle the response process. You could also have one response flowchart per channel or one global response tracking flowchart for all campaigns.
3. Click the **Edit** icon in the flowchart window.

4. Drag the Response process from the palette to your flowchart.

5. Connect a Select or Extract process as input to the Response process.
   The Select or Extract process typically reads from an action table. An *action table* is an optional database table or file containing response data that is collected after offers are presented to customers. Often, data originates from several tables such as transactions or sales information.

   **Note:** Administrators must ensure that the action table is locked during response processing. Administrators must also clear rows after each Response process run to ensure that responses are not credited multiple times. For example, use Campaign to run SQL after the Response process to purge the action table. For important information, see the *Campaign Administrator’s Guide*.

6. Double-click the Response process in the flowchart to open the process configuration dialog.

7. Use the **Source** tab as follows.
   a. If you followed the steps in this procedure, the **Input** list already displays the correct input. The input should originate from the mapped action table that holds your customer response information.

      **Note:** If you are using a delimited flat file as input to the Response process, you must ensure that all of the data types in the input files are mapped appropriately, as this is not enforced by the Response process. Using a mismatched data type (for example, having a treatment code mapped as "numeric" when the `UA_Treatment.TreatmentCode` field is a "string" type) causes a database error on some databases (for example, system tables on DB2).

   b. For **Response Date**, select a date from your action table to associate with the records that will be output by the Response process. By default, a value of "Today" is selected.

   c. For **Response Type Code**, choose a field from your action table. The response type codes are globally defined and available for all campaigns. Response types are the specific actions that you are tracking, such as click-through, inquiry, purchase, activation, and use. Each response type is represented by a unique response code.

8. Use the **Mapping to Treatments** tab to select the fields to be tracked and match them to a list of offer and treatment attributes.
   a. In the **Candidate Action Fields** list, expand the action table that you are using, so you can see the list of fields.

   b. Use the **Add** button to match **Candidate Action Fields** to the corresponding attributes in the **Matched Offer/Treatment Fields** list. The **Offer/Treatment Attribute** column lists all offer or treatment attributes in the system. It is best to match at least one Attribute of Interest and one Response Code.

      **Note:** Unmapped fields and fields for which values are not available (or are NULL) are not used for response attribution. For a treatment instance to receive response credit, all populated fields must match, except for controls. For controls, all codes are ignored.
9. Click the **Log** tab to specify additional fields to log to response history.

Use the controls to match fields from the **Candidate Fields** list with fields in the **Fields to Log** list.

You can automatically match fields by clicking **Match**. Fields with exact matches for the **Table Field** names are automatically added to the **Fields to Log** list. If there are multiple matching fields, the first match is taken.

10. Click the **General** tab to assign a name and descriptive note to the process.

11. Click **OK**.

The process is now configured. You can test run the process to verify that it returns the results that you expect.

When you save and run the flowchart, information is written to the response history system tables. Campaign administrators must be sure to clear rows after each Response process run to ensure that responses are not credited multiple times.

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**The Track process**

Use the Track process to update the contact statuses or additionally tracked fields for existing records in contact history. The Track process can update existing contact history records, create new records, or do a combination of both.

The Track process lets you log contact information to the contact history tables, separate from the contact process that generated the list of contacts.

For example, if your mail house does post-processing to remove invalid and duplicate addresses, then you probably would not write your initially-generated list to contact history. Instead, you would wait for the mail house to send you a confirmation list of IDs to which they actually sent offers.

In this case, your input to the Track process will be the final mailing list used by the mail house after they performed post-processing, and your contact history will be more accurate. Later, if some direct mail pieces are returned as undeliverable, you can use the Track process to update the contact status for those contacts as "Undeliverable."

Additionally, there are times when the target list is large, and it is not necessary to load all of this information into contact history. Instead, you can log only those contacts who were actually contacted. Often, you do not know who was or was not contacted until you receive feedback from call centers or mail houses. You can use the Track process so that when feedback is received from different sources you can insert it into the contact history tables.

**Example 1**

You create two separate flowcharts to take advantage of the Track process’s delayed writing to contact history.

Create your contact list in Flowchart 1: A Select process selects data and provides input to a Segment process, where the data is segmented by value tier. The segmented data from the Segment process is input to a Mail List process. You configure the Mail List process to output a list of IDs to a file, without logging contact history, because you want the contact list to undergo post-processing by the mail house.
Create Flowchart 2 to handle the contact list that the mail house returns to you, and to write the final list of contacts to contact history. Flowchart 2 consists of a Select process whose input is the list of customers who were actually contacted by the mail house, connected to a Track process which then writes the information to contact history.

**Example 2**

In a variation of the previous example, the mail house returns a list of IDs that could not be contacted. To obtain the list of contacted IDs, select the original output contact list from Flowchart 1 and use a Merge process to suppress the undeliverables that were provided by the mail house. The output from the Merge process is then your list of contacted IDs, and these can be passed to a Track process for writing to contact history.

**Note:** In both examples, the Treatment code is needed to map the updated data back to the original list.

**Tracking contact history**

Configure a Track process to update existing rows in contact history or create new rows.

For examples, see “The Track process” on page 206.

1. Open a campaign and click a flowchart tab.
2. Click the **Edit** icon in the flowchart window.
3. Drag the Track process from the palette to your flowchart.
4. Connect one or more configured processes as input into the Track process.
5. Double-click the Track process in the flowchart.
6. Use the **Source** tab to select input cells that contain potential responders. Cells from processes that are connected to the Track process appear in the **Input** list.
   a. Use the **Input** list to select different or additional source cells.
   b. Use the **Contact Date** field to select a date to associate with records that the Track process will update. By default, a value of "Today" is selected. You can also use derived fields to populate the **Contact Date**.
   c. Select a **Contact Status Code** to associate with the records that you are updating in contact history.
7. Click the **Mapping to Treatments** tab.
   Use the **Candidate Action Fields** list to choose the relevant field to match to the Treatment Code. The treatment code uniquely identifies the row in the contact history to update.
   Select a field to use for matching, and click **Add** to move it to the **Matched Offer/Treatment Fields** list, so it is paired with a Treatment Code.
8. Click the **Log** tab to specify how to update contact history.

**Note:** You must have the appropriate permissions to enable or disable updates to contact history tables.

a. To update contact history in the system tables, select the **Log to Contact History Tables** check box.

b. Specify how to update the contact history tables:
- **Update Existing Records**: If a record exists, update it. If a record does not exist, do not create it.

- **Create New Records Only**: If a record does not exist, create it. Do not update existing records.

- **Update Existing and Create New**: If a record exists, update it. If a record does not exist, add it.

c. To write additional fields to the contact history, click **Additional Fields** to display the Contact History Logging Options dialog. Use the Add, Remove, Match, Up1, and Down1 buttons to select and move fields from the **Candidate Fields** list to the **Fields to Log** list. Unmatched fields will not be updated.

d. Click **OK**.

9. If you want to log to a destination other than, or in addition to, the contact history in the system tables, select the **Log into Other Destination** check box. This option allows you to write to an alternate table or file.

   a. Use the **Log To** list to specify whether the output should be written to a file or a new or existing table in the database:
      - If you select **File**, use the Specify Output File dialog to specify the output file type, the file name, and the corresponding data dictionary.
      - If you select **New Table**, use the New Table Definition dialog to specify information about the new table to which you want to write the log output.

   b. To specify which fields to output, select fields from the **Candidate Fields** list and move them to the **Fields to Output** list. If you do not see the fields that you want to select, expand the items in the Candidate Fields list. You can also used derived fields for Candidate Fields.

   c. You can automatically find matching fields by clicking **Match**. Fields with exact matches for the **Table Field** names are automatically added to the **Field to Log** list. If there are multiple matching fields, the first match is taken.

   d. Select an option to specify how to handle updates to the output file or table:
      - **Append to Existing Data**: Append the new contact information to the end of the table or file. If you select this option for a delimited file, labels will not be exported as the first row. This is the best practice for database tables.
      - **Replace All Records**: Remove any existing data from the table or file, and replace it with the new contact information.

10. (Optional) Click the **General** tab to assign a name and descriptive notes to the process.

11. Click **OK**.

The process is now configured. You can test run the process to verify that it returns the results you expect.
Appendix C. About processes

Processes are the building blocks of flowcharts. You configure processes to perform specific tasks and connect the configured processes to build your flowchart. For example, you can use the Select process to select a set of prospects (IDs). You can use the Merge process to merge two distinct audience groups. And you can use the contact processes (Call List or Mail List) to write out the results of an entire campaign.

Typically, each process in a flowchart takes one or more cells as input, transforms the data, and produces one or more cells as output. A cell is a list of identifiers of marketing message recipients, such as customer or prospect IDs.

The Campaign processes are visible on the flowchart process palette. To create a flowchart, you move processes from the palette to the flowchart workspace. In the workspace, you configure and connect the processes to build your flowchart.

Types of processes

Campaign processes are divided into three types by function, which are distinguished by color in the flowchart process palette.

- Data manipulation processes - blue
- Run processes - purple
- Optimization processes - green

Note: Interact, Contact Optimization, and eMessage provide additional processes for use in campaign flowcharts. For information about those processes, see the separate documentation for those products.

Contact processes

The Mail List and Call List processes are called contact processes (in previous releases, these were called "contact-style processes" (CSPs)). These processes generate contact lists.

Note: The Mail List and Call List processes are also run processes.

Data manipulation processes

Use data manipulation processes to select contact IDs from your data sources and work with those IDs to create meaningful groups or target audiences.

Examples of the tasks that you can complete by using data manipulation processes follow.

- You can select potential contacts that meet the criteria that you define, such as repeat customers within a certain income range.
- You can merge lists to include or exclude contacts.
- You can segment customers into meaningful groups, for example by language or gender.
- You can set up test or control groups.
- You can change the target audience for your campaign, for example from Household to Individual.
You can extract sets of data for additional processing to improve performance.

The following data manipulation processes are available:
- “The Select process” on page 183
- “The Merge process” on page 172
- “The Segment process” on page 176
- “The Sample process” on page 173
- “The Audience process” on page 157
- “The Extract process” on page 167

Run processes

Once you have built your campaign to select the audience you want, you need to output the results in a usable way using the run processes. Run processes control the running of the flowchart and trigger actual customer contact.

Run processes control the actual execution of completed campaigns, which includes the management and output of contact lists, the treatment of target audiences, the tracking of responses and contacts, the logging of data, and the scheduling of campaign or session runs.

The run processes are:
- “The Snapshot process” on page 201
- “The Schedule process” on page 197
- “The Cube process” on page 191
- “The Create Seg process” on page 189
- “The Mail List process” on page 192
- “The Call List process” on page 184

Note: The Mail List and Call List processes are also referred to as contact processes.

Working with process boxes

Campaign process boxes are the building blocks of flowcharts. The processes are visible on the flowchart process palette at the left of the workspace.

To create a campaign flowchart, you drag process boxes from the palette to the workspace. You then configure each process box to perform a specific operation, such as selecting customers to target for a mailing. By dragging connector lines from one box to another, you connect processes in the workspace in a logical flow to determine the order of events.

For example, you might start with a Select process that chooses specific customers, use a Merge process to add additional customers, and end with a Call List process, which generates a list of customers to contact by phone.

You can move and delete process boxes as you experiment with different flowchart scenarios. To confirm that your flowchart is progressing successfully, you can test run each process as you build your flowchart. Save your flowchart frequently as you work.
Adding processes to flowcharts
You can add a process to a flowchart by dragging a process box from the palette to the workspace.

The procedure that follows explains how to drag processes into a flowchart. Other methods of adding processes are to copy an existing process (right-click, copy, then paste), or paste a template from the template library. Templates contain one or more configured processes and connections. For more information, read about using templates.

Follow these steps to add processes to a flowchart.
1. Select Campaign > Campaigns.
2. Use one of the following methods to open a flowchart:
   • Click the name of a campaign, then click a flowchart tab, then click the Edit icon in the toolbar.
   • Use the Edit a tab icon next to a campaign name to open a flowchart in that campaign.

   The flowchart window opens and the palette appears at the left of the workspace.
3. Drag a process box from the palette to the flowchart. You can drop the process box into the workspace as soon as the box turns green and displays a plus sign.

   Newly added process boxes are transparent until they are configured.

Typically, the next step is to configure the process, by double-clicking it in the workspace to open the configuration dialog.
To see a list of available actions, you can right-click a process box in the workspace.
Configured process boxes have a solid background and border. The round status icon is blank to indicate that the process has not yet run.

4. Click the Save and Continue icon frequently to save your changes.
As you develop the flowchart, place each subsequent box in a logical position, such as left to right or top to bottom, and connect the boxes to indicate the flow of data. Some processes must be connected before they are configured because they require input from the source process.

For example, configure a Select process to select households in a specific earning bracket, then connect it to an Audience or Merge process. Finally, you test run the process or branch.

See the other available topics for information about configuring, connecting, and running processes.

**Copying processes within a flowchart**

Copying a configured process can save time when you build campaign flowcharts. You can paste the process elsewhere in the workspace.

1. Within a campaign, open a flowchart for editing,
2. In the workspace, click the process that you want to copy.

   **Note:** To select multiple processes, you can Ctrl+Click the processes, drag a selection box around them, or use Ctrl+A to select all the processes in the flowchart.

3. Click the **Copy** icon.
   You can also select **Copy** from the menu or press Ctrl+C.

4. Click the **Paste** icon.
   You can also select **Paste** from the menu or press Ctrl+V.

   A copy of the process appears in the workspace.

5. Click and drag the copied process to the desired location.

**To cut a process**

1. Within a campaign, open a flowchart for editing,
   You see the process palette and workspace.
2. From the processes that are already in the workspace, click the process that you want to cut.

   **Note:** To select multiple processes, you can Ctrl+Click the processes, drag a selection box around them, or use Ctrl+A to select all the processes in the flowchart.

3. Click the **Cut** icon on the Flowchart toolbar.
   You can also click **Cut** from the menu, or press Ctrl+X.

The process is removed from the flowchart and saved on the clipboard. You can then paste this process back into the current flowchart or into another flowchart.

**Pasting processes from the template library**

Templates contain one or more configured processes and connections. Using templates can save time when you build flowcharts because you can copy and then paste configured processes from one flowchart to another.

1. Within a campaign, open a flowchart for editing.

2. Click the **Options** icon and select **Stored Templates**, or select **Paste from Template Library** from the right-click menu.
You see the Stored Templates window, which lists the available templates.

3. Select a template from the **Items List** and click **Paste Template**.
   All of the processes are pasted from the template into the flowchart.
   If one or more process boxes are pasted on top of existing process boxes in the
   flowchart workspace, click the top process box and move it to a new position.

### Moving processes in flowcharts

You can move any process in a flowchart by dragging the process to a different
location in the workspace. Moving a process does not affect the workflow; it only
affects the visual appearance of the flowchart.

This procedure assumes that you have a flowchart open for editing.

You might want to move processes so that you can see the process boxes and
connections more clearly. In general, it is best to avoid positioning processes on top
of each other because it is harder to see the overall flow. If you have a large
flowchart with many processes, you can move the processes and then use the
zoom feature to see them all.

The position of processes in the flowchart workspace does not affect the logical
flow of data. The connections between the processes determine data flow.

Follow the steps below to move process boxes in a flowchart.
1. In the flowchart workspace, drag a process to a new location.
   Existing connections to and from the process remain, and are redrawn for the
   new location.
2. Click **Save**.

### Deleting processes from flowcharts

As you design and build flowcharts, you can delete processes if you decide that
you no longer need them. For example, you might add two Select processes but
then decide that you only need one of them.

This procedure assumes that you have a flowchart open for editing.
1. In the flowchart workspace, right-click the process that you want to delete, and
   select **Delete** from the menu.
   You can select more than one process at the same time by holding down the
   **Ctrl** key.
2. Click **OK** to confirm the deletion.

The selected processes are removed from the workspace. Any connections to and
from the processes are also deleted.

### Connecting processes in flowcharts

Connect processes in a flowchart to specify the direction of data flow and the order
in which the processes run. If you move processes within the workspace, existing
connections remain and visually adjust to the new location. This visual adjustment
does not affect data flow. You affect data flow only by adding or deleting
connections.
1. Open a campaign flowchart for editing.
2. Move your cursor over the process box that you want to connect to another
   box.
Four arrows appear around the box.

3. Drag one of the arrows from the source process to the destination process.

When four arrows appear on the destination process, release the mouse button to complete the connection.

The processes are now connected. An arrow indicates the direction of data flow (from - to). The source process will run before the destination process. Data that is output from the source process is then available as input to the destination process. For example, a Select process generates output, which can then serve as input to a Segment process.

Deleting a connection between two processes

If two processes are no longer connected, or if the direction of the data flow between them changes, you can delete the connection.

1. Within a campaign, open a flowchart for editing.
   You see the process palette and workspace.
2. Click the connection that you want to delete.
3. Do one of the following:
   - Right-click the connection, and select Delete Selected from the menu.
   - Press the Delete key.
   - Click the Cut icon \(\text{Cut}^\text{Cut}\) in the flowchart window.
   - Press Ctrl+X.

The connection is deleted.

Example: process connections

The way processes are connected in a flowchart determines the flow of data.

Flowchart scheduled to run every night

The following flowchart starts with a Schedule process that is configured to run automatically every night. The dotted lines from the Schedule process to the three Select processes indicate a temporal dependency. The Select processes will not run until the Schedule process finishes running. However, no data is passed from the Schedule process to the Select processes. The solid lines between the other processes show the flow of data. For example, the merged selections flow from the Merge process (labeled “Exclusions”) into a Segment process (“SegByScore”). The segmented selections then flow into Mail List and Call List processes, so the offers can be delivered by different channels.
Appearance of connection lines

When a destination process receives data from a source process, the connection is shown as a solid line.

When a destination process depends on a source process but does not receive data from it, the connection is shown as a dotted line. A dotted line indicates that the destination process cannot run successfully until the source process completes. In this way, you can identify processes that are time-dependent on each other.

Connection lines can be angled (slanted) or straight (right angles only). The lines in the previous example are straight.

To change line appearance, right-click in the flowchart workspace, choose View, and check or uncheck Angled Connections.

Configuring processes

You must configure a process after adding it to your flowchart. By configuring a process, you provide Campaign with important information, such as the source of the data the process will use, which IDs to work with, and what to do with the output. For example, you could configure a Select box to select all customers who made a purchase in the last six months.

A best practice is to place the processes in your flowchart in the order in which they will be used when the campaign is run. Some processes must be connected before they are configured because they require input from a source process.

To access a process configuration window

1. Within a campaign or session, open a flowchart for editing.
   You see the process palette and workspace.
2. Double-click the process that you want to configure. You can also right-click the process and select Process Configuration from the menu.
   You see the process configuration window for the process.
3. Enter information into the fields on each tab of the process configuration window. For assistance, click Help.
4. When you have finished entering the configuration details, click OK.
   Correctly configured processes are displayed in color (the specific color reflects the type of process). A gray process with its name in italics has a configuration error. To find out more information about the error, hold your mouse over the process to display a descriptive error message.
Running or testing a process

To ensure that your configuration is successful and the results are what you expect, test run each process after you configure and connect it.

Note: When you run a process, any results from a previous run are lost.

1. Open a flowchart for editing.
2. Click the process that you want to run.
   If the process requires data from a source process, be sure that the source process has already run successfully so that its data is available.
3. Open the Run menu in the toolbar, or right-click the process box, and select an option:
   - **Test Run Selected Process**: Use this option while you build your flowchart, so you can troubleshoot errors as they occur. Test runs do not output data or update any tables or files. (However, triggers run on completion of test runs, and global suppression is applied.)
     
     Tip: When you test run a data manipulation process (Select, Merge, Extract, Audience), you can limit the number of records that are selected for output. Use the **Limit output cell size** option on the Cell Size Limit tab in the process configuration dialog.
   - **Save and Run Selected Process**: Do a production run. The contact processes, Mail List and Call List, write entries into Contact History. Each production run can generate contact history only one time. Contact processes that already ran for that production run can be rerun only if the contact history from the current run is first deleted. Triggers run on completion of the production run.

     Note: Running only a process or a branch of a flowchart does not increment the Run ID of a flowchart. When you run only a process or a branch, if contact history records exist, you are prompted to choose run history options before you can proceed. For details, see “Updating contact history by doing a production run.”

4. When the process finishes running, click OK.

The process displays a green check mark after it runs successfully. If there are errors, the process displays a red X.

Updating contact history by doing a production run

When you do a production run, you can update contact history for the current Run ID. Use the **Run History Options** window to choose how the new contact history you generate is written to the contact history table. You can append results to the contact history or replace the contact history for the Run ID.

When you do a production run, and if contact history records exist, you are prompted to choose run history options. The **Run History Options** window is available only when you run a branch or process that previously generated contact history for the current Run ID. You can choose to either append information to contact history or replace existing contact history for the Run ID.

Run History Options scenario:

In this example, you have a flowchart with two branches and two contact processes, A and B, both configured to log to contact history.
You run the entire flowchart (from the top, by using the Run Flowchart command) once. This creates a new Run ID (for example, Run ID = 1) and generates contact history for this Run ID.

After this first successful run of the entire flowchart, you edit contact process A to give a follow-up offer to the same individuals who received the first offer. Therefore, you want to rerun contact process A. The current Run ID is "1" and contact history exists for process A and Run ID = 1.

When you select contact process A and click Run Process, the Run History Options window opens. You can choose to leave the Run ID unchanged (Run ID = 1) and replace the existing contact history that is associated with this Run ID, or you can create a new run instance (that is, increment the Run ID to 2), leave the contact history associated with Run ID = 1 untouched, and append new contact history to Run ID = 2.

You are sending a follow-up offer and do not want to lose the contact history that is associated with the first offer, so you choose Create a new run instance. This changes the Run ID to "2" and appends contact history records for the same IDs who received the first offer to the contact history table.

If you now edit and run contact process B, the Run History Options window does not open, because the current Run ID = 2 and no contact history is associated with Run ID = 2 for contact process B. Running only contact process B generates more contact history records for Run ID = 2.

Run History Options window reference:

The Run History Options window contains the following options.

Table 26. Run History Options window options

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a new run instance</td>
<td>Rerun a specific branch or process of the flowchart using a new Run ID. Append the results, associated with the new Run ID, to the contact history table. Existing contact history remains intact.</td>
</tr>
<tr>
<td>Replace the contact history of the previous run</td>
<td>Reuse the previous Run ID and replace the contact history previously generated for that Run ID (only for the process or branch that is being run). Contact history records that were previously generated for other branches or processes of the flowchart remain intact.</td>
</tr>
<tr>
<td>Cancel</td>
<td>Cancel the branch or process run and do nothing to existing contact history. The flowchart remains open in Edit mode.</td>
</tr>
</tbody>
</table>

You cannot replace contact history if associated response history exists. Therefore, if you selected Replace the contact history of the previous run and associated response history records exist, you can choose one of two options:

- Click OK to clear the associated response history records as well as the contact history records. This is your only option if response history exists and you want to replace the contact history from the previous run.
- Click Cancel to cancel clearing the contact history records. You can choose Create a new run instance instead, to create a new run instance to run the current contact process.
Data sources for processes

In many processes, including Select, Segment, Audience, Extract, Model, Response, Create Seg, and Cube, you must specify a source of the data that the process will act on. The data source for a process can be an incoming cell, segment, table, or multiple tables.

In most cases, you specify the data source for a process in the Input field on the first tab of the process configuration window. The Input field displays all of the base tables that are currently mapped in the table catalog, along with their audience levels. If there is an incoming cell, then only those tables with the same audience level as the cell are displayed.

For instructions, see the instructions for configuring each process.

To select an incoming cell, segment, or table as the input to a process

On the first tab of the process configuration dialog, select the incoming cell, segment, or table from the Input drop-down list. The Input drop-down list displays all the base tables currently mapped in the table catalog, along with their audience levels. If there is an incoming cell, then only those tables with the same audience level as the cell are displayed.

Selecting multiple tables as the input to a process

You can select more than one table as input to a process. When you select multiple tables, the tables must have the same audience level.

1. In the process configuration dialog box, select Tables > Multiple Tables from the Input drop-down list.

   You can also click the ellipsis button. The Select Tables to Use window displays all the base tables in the campaign’s table catalog.

2. Select the check box next to each table that you want to select.

3. Click OK to return to the process configuration dialog box. The Input field displays "Multiple Tables", which you can view by clicking the ellipsis button.

To map a new table for selecting as a source

In the process configuration dialog, select Tables > New Table from the Input drop-down list.

The New Table Definition window preselects the Base Record Table type. You map a new base table in a process configuration dialog in the same way that you map a table from the Table Mappings dialog.

Note: You must have the appropriate permissions to be able to map tables. For details about mapping tables, see the Campaign Administrator’s Guide.

Creating queries to identify contacts

You can use queries to select, segment, or extract data from your data sources when you design a marketing campaign in IBM Campaign.

When you configure a Select, Segment, or Extract process in a flowchart, you can use a query to identify contacts from your databases or flat files. You can use any of the following query methods:
How queries are evaluated in Campaign processes

Queries in Campaign processes are evaluated left to right using mathematical rules.

For example, the following statement:

\[ \text{[UserVar.1]} < \text{PDF} < \text{[UserVar.2]} \]

is evaluated as:

\[ ([\text{UserVar.1]} < \text{PDF}) < \text{[UserVar.2]} \]

That is, the first part of the statement \(([\text{UserVar.1]} < \text{PDF})\) is evaluated as true or false (1 or 0), and the result is passed to the second statement:

\[ [1 \mid 0] < \text{[UserVar.2]} \]

For the example to be evaluated as PDF greater than [UserVar.1] and less than [UserVar.2], you would need to construct the following query:

\[ \text{[UserVar.1]} < \text{PDF} \text{ AND PDF} < \text{[UserVar.2]} \]

This statement is equivalent to the following:

\[ ([\text{UserVar.1]} < \text{PDF}) \text{ AND (PDF} < \text{[UserVar.2]}) \]

To create a query with Point & Click

These instructions explain how to create a query using the default Point & Click method in a process configuration dialog. You can also follow these instructions to edit a query. Selecting a new item from the Select Based On drop-down list removes the existing query.

1. Begin configuring a process that uses queries, such as Segment, Select, or Extract.

2. Access the query option for the process:
   - For a Select process, choose Select <audience> IDs With.
   - For a Segment process, use Segment by Query, double-click a segment to edit it, then use Select IDs With.
   - For an Extract process, use Select records With.

   The Point & Click query builder is displayed.

3. Construct your query by creating an expression:
   a. To specify which field to query, click in the Field Name cell. The Available Fields list should appear. If the list does not appear, click in the Field Name cell again. Select an available field by double-clicking it or highlighting it and clicking Use. When deciding which available field to use, you can highlight a field and click Profile to see a list of field values.
   b. You can use the Derived Fields button if you want to create or select an existing variable for querying.
c. Click in the **Oper** cell, then double-click a comparison operator in the **Operators** list (such as =, <, >, Between).

d. Click in the **Value** cell, then double-click a value. If no values appear, click **Profile** to see a list of field values. You can also double-click in the **Value** cell to edit the value directly.

**Note:** If you do not see the expected list (**Available Fields**, **Operators**, **Values**, **For Selected Expression**), try either single clicking or double clicking on a cell in the **Expressions** area.

You now have an expression that consists of a field name, operator, and value, such as **Status=Active**.

4. To add and combine multiple expressions, follow the guidelines below:

a. To add another expression, click the **And/Or** cell, then double-click **AND** or **OR** in the **Values** list to indicate how to combine the expressions.

b. Build your next expression, consisting of a field name, operator, and value.

c. To add parentheses to control evaluation order, double-click the **Field Name** in any row to display the **For Selected Expression** list. In the list of expressions, double-click **Add (...)** to add a set of parentheses, **Remove (...)** to remove a single set of parentheses, or **Clear all (...)** to remove all of the parentheses in the selected expression. Parentheses allow you to group expressions when defining complex queries. For example, (AcctType = 'Gold' AND Rank = 'A') OR NewCust = 'Yes' is different from AcctType = 'Gold' AND (Rank = 'A' OR NewCust = 'Yes').

d. To reorder the selected expression, double-click **Move Up** or **Move Down**.

e. To add a blank row below the selected expressions, double-click **Insert**.

f. To delete the selected expression, double-click **Delete**.

5. Click **Check Syntax** to confirm whether your query syntax is valid. Checking the syntax does not put any load on the database server.

Campaign indicates whether the syntax contains any errors.

6. (Optional) Use **Test Query** to see how many IDs the query returns.

A progress bar is displayed while the query is being tested. Close the progress window if you want to cancel the test. When testing is complete, Campaign indicates the number of rows the query returned.

**Important:** Global suppressions and cell size limits are not applied in Test Query counts. Test queries might also return non-normalized data. To obtain an accurate result count, test run the process.

7. Click **OK**.

**To create a query with Text Builder**

These instructions describe how to create a query using the Text Builder feature in a process configuration dialog.

To edit an existing query, edit the text of the query directly in the query text box, after clicking the **Text Builder** button.

1. Begin configuring a process that uses queries, such as Segment, Select, or Extract.

2. Access the query option for the process:

- For a Select process, choose **Select <audience> IDs With**.
- For a Segment process, use **Segment by Query**, double-click a segment to edit it, then use **Select IDs With**.
For an Extract process, use **Select records With**.

3. Click **Text Builder** to change from the default Point & Click query method. The Point & Click query columns are replaced by a query text box. Any existing queries are displayed in the text box.

4. Choose an **Input** data source, and a data source to query from the **Select Based On** list. Your selections determine which fields can be used to build your query:

5. Create your query by:
   - Selecting the field or table name(s) from the **Available Fields** list and double-clicking to enter them in the query text box. You can also click once then click `<Use` to move it to the query text box.
   - Entering the required operators and values. To see the values of a selected field, you can click **Profile**.

   **Note:** Although you can enter field and table names directly in the query text box, selecting them from the list helps to avoid syntax errors.

6. To check the syntax of the query, click **Check Syntax**. Checking the syntax does not put any load on the database server.

7. (Optional) Use **Test Query** to see how many IDs the query returns.
   - A progress bar is displayed while the query is being tested. Close the progress window if you want to cancel the test. When testing is complete, Campaign indicates the number of rows the query returned.

   **Important:** Global suppressions and cell size limits are not applied in Test Query counts. Test queries might also return non-normalized data. To obtain an accurate result count, test run the process.

8. When you finish creating your query, click **OK**.
   - The process configuration box closes and you are returned to the flowchart page in **Edit** mode.

### To create a query with Formula Helper

Use the Formula Helper to build a query by selecting macros and functions from pre-defined lists. Use the supplied buttons to insert operators and punctuation.

1. Begin configuring a process that uses queries, such as Segment, Select, or Extract.

2. Access the query option for the process:
   - For a Select process, choose **Select <audience> IDs With**.
   - For a Segment process, use **Segment by Query**, double-click a segment to edit it, then use **Select IDs With**.
   - For an Extract process, use **Select records With**.

3. Click **Text Builder** to change from the default Point & Click query method.

4. Click **Formula Helper**.
   - The Formula Helper window opens. It contains a set of buttons for inserting commonly used operators, and a list of macros and functions.

5. (Optional) To work only with SQL operators and functions, check **SQL**.

6. Build your query by selecting fields from the **Available Fields** list as you normally would. Additionally, use the **Formula Helper** window:
   - Expand the list of macros or functions to locate the item you want to use.
   - Select an item to see a description and syntax example. Double-click an item to add it to the query text box.
Note: If you select a custom macro, the description and syntax were created by the person who wrote the macro.

b. Use the Formula Helper buttons to add operators and punctuation. The **Clear** button acts as a backspace (erase) key.

c. You can also edit the query directly. However, you can avoid syntax errors by selecting items, such as field and table names, from the lists provided.

d. Click **Close**.

7. Use **Check Syntax** to detect any errors. Checking the syntax does not put any load on the database server.

8. (Optional) Use **Test Query** to see how many IDs the query returns.

A progress bar is displayed while the query is being tested. Close the progress window if you want to cancel the test. When testing is complete, Campaign indicates the number of rows the query returned.

**Important**: Global suppressions and cell size limits are not applied in Test Query counts. Test queries might also return non-normalized data. To obtain an accurate result count, test run the process.

**Specification of pre- or post-processing SQL statements**

If you are using a Select or Extract process, you can optionally include raw SQL statements to run before or after the process.

- **Pre-processing**: Enter raw SQL to be processed before the query runs.
- **Post-processing**: Enter raw SQL to be processed after the query runs.

Use this feature to include SQL procedures as part of the process run, which can be useful for ETL, routine data mart updates, performance tuning, and security. For example, you can use pre- and post-processing SQL statements to:

- Run stored procedures in the database
- Create, drop, and re-create tables and indexes
- Grant or change privileges to other users or groups
- Organize multistep database commands
- Run complex database routines without having to use external scripts to connect to the database

**Note**: For important information, see “Creating queries using SQL.”

**Creating queries using SQL**

Experienced SQL users can write their own SQL queries or copy and paste SQL queries from other applications. Writing raw SQL is an advanced operation; users are responsible for correct syntax and query results.

Follow these guidelines when using raw SQL:

- A SQL query must return a list of only the unique IDs as defined by the key on a base table.
- A SQL query must use the following syntax:

  ```sql
  SELECT DISTINCT(<key1> [,<key2>,...]) FROM <table> WHERE <condition>
  ORDERBY <unique_id>
  ```

  This query instructs the database to perform sorting and data deduplication. If you omit the DISTINCT or ORDERBY clause, Campaign sorts and deduplicates the data on the application server, so you still receive the correct results, but performance will be slower.
If in-database optimization is enabled and there is an input cell to the Select process, you must use the <TempTable> token to obtain the correct list of audience IDs.

To significantly improve performance with large tables, use the <TempTable> token even when not using in-database optimization.

If your database allows multiple commands to be passed, enter as many valid SQL commands as you need, with the following rules:

- Separate commands with the appropriate delimiter
- The last command must be a select command.
- This select command must select all the relevant fields required in defining your audience level in the same order the audience level is defined.
- No other select statements are used

Data filters do not apply to raw SQL queries or to custom macros that use raw SQL. To learn about data filters, see the IBM Marketing Platform Administrator’s Guide.

Using the TempTable and OutputTempTable tokens in raw SQL queries
Temporary tables provide a workspace for intermediate results when processing or passing data. When the operation is finished, temp tables are discarded automatically.

- For best performance, use the <TempTable> token in raw SQL queries, especially when querying large tables.
- If you are using in-database optimization and you specify a raw SQL query in a Select process with an input cell, you must use the <TempTable> token to ensure correct behavior. See below for a full explanation.
- If you are using in-database optimization, also use the <OutputTempTable> token to prevent audience IDs from being unnecessarily copied from the database to the Campaign server.

When you use a raw SQL query in a Select process with an input cell, the processing behavior depends on whether you are using in-database optimization. (In-database optimization is controlled globally with the Use In-DB Optimization configuration setting. It is controlled for individual flowcharts with the useInDbOptimization during Flowchart Run option on the Admin menu.)

- When in-database optimization is off: The list of IDs from the raw SQL query is automatically matched against the ID list from the incoming cell. The resulting list of IDs is a subset of the cell, as expected.
- When in-database optimization is on: Campaign assumes that the ID list generated from the Select process is the final list. Campaign does not match this list against the ID list of any incoming cell. Therefore, the raw SQL query written for an intermediate Select process (a Select process with an input cell) must use the <TempTable> token to properly join against the incoming cell. Joining against the input cell ensures correct results and improves performance by preventing extraneous processing for audience IDs that are not in the input cell.

In-database optimization is explained in the IBM Campaign Administrator’s Guide.

Example: Using the TempTable and OutputTempTable tokens: Assume that you have a Select1 process that selects 10,000 customers who are “Gold” customers (for example, Indiv.AcctType = ‘Gold’). You then connect Select1 to a second Select process (“Select2”) using a raw SQL query:
Select p.CustID from Indiv p, <TempTable> where p.CustID = <TempTable>.CustID group by p.CustID having sum(p.PurchAmt) > 500

This example selects customers the sum of whose purchases exceeds $500 and who are in the input cell (in other words, customers who have a “Gold” account type).

In contrast, a raw SQL query omitting the <TempTable> token and join:

Select p.CustID from Purchases p group by p.CustID having sum(p.PurchAmt) > 500

first calculates the sum of purchases for all customers in the Purchases table (which could be millions of customers) and then selects all customers the sum of whose purchases exceed $500, regardless of whether they are “Gold” customers or not.

Therefore, for best performance, even if in-DB optimization is disabled, write your raw SQL queries using the <TempTable> token when there is an input cell.

For simplicity, this example does not use the <OutputTempTable> token, but to maintain in-DB optimization and prevent the audience IDs from being retrieved from the database back to the Campaign server, you must include the <OutputTempTable> token in your raw SQL query. For example:

Create table <OutputTempTable> as Select p.CustID from Purchases p, <TempTable> where p.CustID = <TempTable>.CustID group by p.CustID having sum(p.PurchAmt) > 500

**Referencing Extract tables in raw SQL queries**

You can reference an Extract table in downstream processes via raw SQL using the <Extract> token. Use this token to specify subsets of data for subsequent processing, which can improve performance when working with large tables.

The following example queries an Extract table to select the customer IDs of all customers whose account balance exceeds $1,000.

Select p.CUSTOMERID from USER_TABLE p, <Extract> where p.CUSTOMERID = <Extract>.CUSTOMERID group by p.CUSTOMERID having sum(p.BALANCE) > 1000

For flowcharts containing multiple Extract processes, the <Extract> token always refers to the latest available Extract table.

**Note:** After a Merge, the <Extract> token may or may not be valid. Test run the flowchart to determine if the token works as expected.

**To create a raw SQL query**

1. Begin configuring a Select or Segment process.
2. For a Select process, you must switch to the Text Builder in order to write a SQL query:
   a. Choose Select <audience> IDs With.
   b. Change to the Text Builder (instead of the default Point & Click method).
   c. Click Advanced.
   d. In the Advanced Settings dialog, check Use Raw SQL for Record Selection. This option enables the use of raw SQL in the Text Builder when you specify your selection criteria. If you do not select this option, you can only use IBM EMM expressions and Custom Macros.
e. Select a data source to query from the Database list. Select the target audience from the Audience Level list.

f. If you want to run SQL commands before or after the Select process, you can specify raw SQL in the Pre-Processing or Post-Processing area. See “To specify pre- or post-processing SQL statements.”

g. Click OK to close the Advanced Settings dialog.

h. Enter raw SQL in the text entry area. You can use the Formula Helper to help construct the SQL. Check SQL in the Formula Helper to restrict the list of operators and functions to SQL-specific options.

3. For a Segment process:
   a. Choose Segment by Query, then create or edit a segment.
   b. Choose Select IDs With, click Text Builder, then click Advanced.
   c. In the Advanced Settings dialog, check Use Raw SQL, select a data source, and click OK.
   d. Enter raw SQL in the text entry area. Optionally, use the Formula Helper to help construct the SQL. Check SQL in the Formula Helper to restrict the list of operators and functions to SQL-specific options.

To pass multiple commands in a raw SQL statement
You can pass multiple commands in a raw SQL statement.

If your database allows multiple commands to be passed, you can enter as many valid SQL commands as you need, with the following rules:
• Commands are separated with the appropriate delimiter;
• The last command must be a select command;
• This select command must select all the relevant fields required in defining your audience level in the same order the audience level is defined;
• No other select statements are used.
1. Enable the Select records with option in the Source tab of the Select process.
2. Click Advanced.
   The Advanced Settings window appears.
3. Click to enable Use Raw SQL.
   This activates raw SQL, a feature that passes your exact query syntax to the database.
4. Select the database to use and the desired audience level.
   Click OK.
5. Enter your SQL commands in the Select records with text box.
   Click OK.

To specify pre- or post-processing SQL statements
1. Begin configuring a Select or Extract process.
   You can select all records or use a query to select specific IDs. For the Select process, you can apply pre or post processing regardless of the query type (standard query or Use Raw SQL for Record Selection).
2. Click the Advanced button.
   The Advanced Settings window appears.
3. Double-click in the Pre-Processing area and enter a raw SQL statement to run before the process.
4. Click in the Database cell, and select the database on which you want to run this statement.
The **Database** list shows all available databases (those for which a data source category was configured on the Configuration page in Marketing Platform). If your database does not appear in the list, contact your Campaign system administrator. You must enter a SQL statement before you can select a database.

The SQL statements are processed in the order in which they appear.

5. Follow the same procedure to enter any **Post-Processing** SQL statements to run after the process.

   The SQL statements are processed in the order in which they appear.

**Note:** For information about the **Use Raw SQL for record selection** option in the Advanced Settings dialog, see “To create a raw SQL query” on page 224.

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### Previewing field values from your user data

You can use the **Profile** feature to preview field values when you configure a process in a flowchart. This feature allows you to see actual values from fields in your user data.

You can then select values to use in the current operation, for example to build a query for a Select process.

In addition to listing the values, the **Profile** feature also indicates each value’s frequency of occurrence in the selected field. You can use this information to ensure that you are targeting the intended contacts.

You can profile any field that is available in any process where the **Profile** button appears. Examples include the **Segment by Field** list in the Segment process and the **Available Fields** or **Candidate Fields** lists in other process configuration dialogs. Only records in the current cell are included in the count, unless the counts were pre-computed.

**Note:** You must have the appropriate permissions to profile fields. Ask your system administrator if you have questions about your access to this feature. Also note that your administrator can prevent fields from being profiled. Campaign generates a warning if you try to profile a field that is also an audience. Profiling an audience can return many records and potentially impact performance.

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### To profile a field

Campaign profiles a field when you select it in a list then click the **Profile** button. You can profile any field in any mapped data source. You can also profile derived fields.

1. In the configuration window of a process that includes the **Profile** button, select the field that you want to profile.

2. Click **Profile**.

   The Profile Selected Field window opens.

Campaign profiles the data in the selected field. The categories and frequency counts update as profiling progresses.

**Note:** Wait until profiling is complete before using the results, to ensure that all categories are processed and counts are complete.
When profiling is complete, the Profile Selected Field window shows the following information:

- The list of values in the selected field, shown in the **Category** column, and the corresponding **Count** of IDs with that value.

**Note:** Campaign organizes values by category, grouping them to create approximately equal-sized segments. The default maximum number of categories (distinct bins of values) for display is 25. You can change the maximum number of categories.

- The **Statistics** pane on the right shows the total count of IDs and other details about the data for that field, including:
  - The number of NULL values found
  - The total number of categories, or values, for that field
  - Statistical values for the data including the mean, standard deviation, minimum, and maximum values.

  **Note:** **Mean**, **Stdev.**, **Min.**, and **Max.** are not available for ASCII fields. When you profile text fields, these values appear as all zeros.

**Restricting input for profiling**

When Campaign profiles a field, it creates only those segments that are available in the input to the process where you are performing profiling.

In other words, if you restrict input to the Segment process, and you profile a field based on the restricted input, the Profile only displays segments that were available in the restricted input.

Consider this example:

1. You configure a Select process that does a query that returns only 354 records.
2. You use that Select process as input to a Segment process.
3. In the Segment process configuration dialog, you use the **Profile** feature to see which values are available in various fields.
4. The selection that you make in the **Input** list of the **Profile Selected Field** dialog determines how many records are profiled. If you choose **None**, Campaign profiles all of the records. If you choose the incoming Select box as the **Input**, Campaign profiles only the records that were selected by that process. If the Select process query resulted in only 354 records, Campaign profiles only those records.

The following example shows a restricted profile, where the **Input** is set to Select1.
Disallowing profiling

Real-time profiling allows you to view and use characteristics of a selected field. It can affect performance, however, when working with large databases. For this reason, Campaign allows this option to be disabled.

When real-time profiling is disabled, and you click Profile, a message at the bottom of the Profile Selected Field window indicates that real-time profiling is disallowed.

If profiling is disallowed and the field is not configured to be pre-computed, the Profile Selected Field window indicates that no data is available, no counts or categories are displayed, and all Statistics counts are zero.

If pre-computed values are available for a field, the pre-computed values are displayed instead of live values when profiling is performed. The Profile Selected Field window indicates that the data source is "Imported," and shows the date and time that the values were last computed.

For more information about disallowing real-time profiling, see the IBM Campaign Administrator’s Guide.

Setting profiling options

You can affect how the Profile feature performs by:

- “Restricting input for profiling” on page 227
- “Disallowing profiling”

In addition, you can set these options in the Profiling Options window:

- “To change the maximum number of profile segments” on page 229
- “To profile field values by meta type” on page 229

To access the Profiling Options window

1. From any process configuration dialog in which the Profile option is available, select a field for profiling, or click Profile.
   The Profile Selected Field window appears.
2. From the Profile Selected Field window, click Options.
   The Profiling Options window appears.
To change the maximum number of profile segments

When you profile fields in flowchart process boxes, Campaign automatically creates up to a maximum number of 25 segments. You can change this value for the current flowchart session.

When you use the Profile option in a process configuration dialog, you can specify the maximum number of segments to generate when previewing field values. The new value is used by all process boxes in the current flowchart. However, the value applies only to the current flowchart and session. When you open another flowchart or close and then reopen the same flowchart, the value reverts to the default value of 25.

1. Open any process configuration dialog in which the Profile option is available.
2. Select a field for profiling and click Profile.
3. In the Profile Selected Field dialog, click Options.
4. In the Profiling Options dialog, enter a new value in the Number of Segments field to indicate the maximum number of segments into which you want the field values grouped.

The profile is recomputed with the new value.

If the number of distinct values in the field exceeds the maximum allowed number of segments, the profile will group values together into equal sized segments to avoid exceeding the maximum number of segments.

To set the maximum number of segments for profiling

1. On the Profile Selected Field window, click Options. The Profiling Options window appears.
2. In the Number of Segments field, enter an integer to indicate the maximum number of segments into which you want the field values grouped. The default value is 25.
3. Click OK.

The profile is recomputed using the new maximum number of segments setting.

To profile field values by meta type

The Profile By Meta Type option in the Profiling Options dialog specifies how to sort field values for data types such as dates, money, and other numeric data.

Profiling by meta type affects how data is sorted when you profile a field in a process configuration dialog.

To change this setting, open any process configuration dialog in which the Profile option is available. Then, select a field for profiling, or click Profile. In the Profile Selected Field dialog, click Options.

The Profile By Meta Type option is enabled by default, so field values that represent dates, money, telephone numbers, and similar data types are correctly sorted and binned. For example, dates are sorted as dates, not as numeric values. If you disable this option, the values are sorted as ASCII text.

The following example shows how this setting affects a date field. Meta type profiling recognizes that the data type is Date and sorts the dates accordingly.
To refresh a profile count

Refresh the profile count when something occurs that might change the results. For example, you can refresh the count when new values are added to a field or when a database table is updated.

To refresh the profile results for a field from the Profile Selected Field window, click Recompute.

Note: When you first profile a field from a dimension table, Campaign returns counts that match the field in the dimension table. When you click Recompute to refresh the profile results, Campaign returns counts from the resulting join with the base table that is linked to the dimension table. If you want to profile a dimension table field without joining to a base table, map the dimension table as a base table.

To insert a profile category into a query

While building a query expression in a process configuration dialog, you can insert a field value into your query expression.

1. Perform profiling on the selected field.
2. When profiling is finished, from the Profile Selected Field window, double-click a category to insert that value at the current cursor location in the query text box.

Note: If you do not see the value you want, this might be due to multiple values being grouped together into a profile segment. If you set the maximum number of profile segments to a number greater than the number of categories (reported in the Profile Selected Field window), each field value will be listed as a separate category. This makes it possible to access all of the existing categories.

To print the results of a profile

1. Click Print from the Profile Selected Field window.
   The Page Setup page appears, from which you can specify the printer and printing options.
2. Click OK to confirm sending the print job to the printer.

To export profile data

After you profile a field, you can export the profile data to a comma-separated values (CSV) text file. You can open the CSV file in any text editor. If you open the file in Microsoft Excel, your Excel settings determine how the data is displayed. For example, Excel might interpret a range value, such as "1-5", as a date (January 5).

1. In the Profile Selected Field dialog, click Export.

   Note: The Export button is available only when profiling is finished.
   The Export Report Data dialog opens. Enter a file name in the File name field,
or accept the default value. Do not specify a path or extension. The extension .csv will be used when the file is created.

2. (Optional) Select Include Column Labels if you want to include column headers in the file to identify each field.
3. Click Export. (If this button is disabled, you must enter a file name first.)
4. Use the resulting dialog box to open or save the .csv file.
5. If you save the file, you are prompted for a location. You can also change the file name at that time.

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### Specifying an output file or table for contact logging

Contact processes such as Mail List or Call List can write results to:
- system tables
- a new or existing external file that you specify
- an unmapped database table

#### Defining the output file for contact logging

When a contact process, such as Mail List or Call List, is run in production mode with logging to contact history enabled, details are written to the contact history tables in the Campaign system database.

1. Open a flowchart in Edit mode.
2. In the Process Configuration dialog box for a contact process, select File from the Enable Export To or Log To drop-down list. The File option usually displays at the bottom of the list, following the list of mapped tables.
   - The Specify Output File dialog box opens.
3. Select an output file type:
   - **Flat file with data dictionary**: Create a fixed-width file and a new data dictionary file.
   - **Flat file based on existing data dictionary**: Create a fixed-width file and select an existing data dictionary file.
   - **Delimited File**: Create a file in which field values are delimited by a tab, comma, or other character.
4. If you selected Delimited File:
   a. Select the Tab, Comma, or Other option. If you select Other, enter the character to use as the delimiter in the Other field.
   b. Check Include Labels in Top Row if you want the first row of the file to contain a column header for each column of data.
5. Enter the complete path and file name in the File Name field or use Browse to select an existing file.

**Note:** You can include user variables in the output file name (Options > User Variables).

For example, if you specify MyFileUserVariable.a.txt as the file name, and the value of UserVariable.a is "ABC" at the time that the process is run, the output is written to MyFileABC.txt. You must set the Initial Value and the Current Value of the user variable before running the flowchart.

6. Campaign completes the Data Dictionary field with a .dct file with the same name and location as the file that you entered. If you want to use a different data dictionary, or to rename the data dictionary, enter the complete path and name of the data dictionary file in the Data Dictionary field.
7. Click OK.
The Specify Output File window closes. You return to the Process Configuration dialog box, and the Export/Log to field displays the path and file name that you entered.

Defining a database table for contact logging
You can log contact information to a database when you configure a contact process.

1. In the Process Configuration dialog box, from the Enable Export To or Log To drop-down list select New Mapped Table or Database Table. This option usually displays at the bottom of the list, following the list of mapped tables. The Specify Database Table window opens.
2. Specify the table name.

   **Note:** You can use user variables in the table name.
   For example, if you specify MyTableUserVar as the table name, and the value of the user variable UserVar is "ABC" at the time that the process is run, the output is written to a table named MyTableABC. You must set the Initial Value and the Current Value of the user variable before you run the flowchart.
3. Select the database name from the drop-down list.
4. Click OK.
The Specify Database Table window closes. The Export/Log to field in the process configuration dialog displays the name of the database table that you entered.
5. If a table of the name you specified exists, choose an option for writing the output data:
   - **Append to Existing Data:** If you choose this option, the existing table must have a schema compatible with the output data. In other words, field names and field types must match, and field sizes must allow for the output data to be written.
   - **Replace All Records:** If you choose this option, existing rows in the table are replaced with the new output rows.

Changing the seed for random selection
The random seed represents the starting point that Campaign uses to select records randomly. If you are selecting records randomly, you might want to change the random seed in situations such as the following:

   - You have the same number of records in the same sequence, and using the same seed value each time you run this process results in records being created into the same samples.
   - Your current random sample produces highly skewed results (for example, if all males in your data fall into one group and all females into another).

Changing the random seed for record selection
The random seed represents the starting point that Campaign uses to select records randomly.

If you are selecting records randomly, there are times when you might want to change the random seed. For example:

   - Your random sample is producing highly skewed results (for example, if all males in your data fall into one group and all females into another).
- You have the same number of records in the same sequence, and using the same seed value each time that you run this process results in records being created into the same samples.

Follow the steps below to generate a different starting point for random record selection.
1. Click the Cell Size Limit tab of a process configuration dialog.
2. Use one of the following methods:
   - Enter a numeric value in the Random Seed text box.
   - Click the Pick button to randomly select a new seed value.

### Skipping duplicate IDs in process output

The Extract, Call List, Mail List, and Snapshot processes allow you to specify how to treat duplicate IDs in the process output. The default is to allow duplicate IDs in the output. Follow these steps to exclude records with duplicate IDs from the output.

1. From the configuration window of the process, click More.
   You see the Advanced Settings window.
   a. Select Skip records with duplicate IDs, and specify the criteria to determine which record to retain if duplicate IDs are returned. For example, select MaxOf and Household_Income to export only the ID with the highest household income.

   **Note:** This option only removes duplicates within the same input field. Your data can still contain duplicate IDs if the same ID appears in multiple fields. To remove all duplicate IDs, you must use a Merge or Segment process upstream of the Extract process to purge duplicate IDs or create mutually exclusive segments.

2. Click OK to close the Advanced Settings window.
   Your duplicate ID settings are displayed on the configuration window.

   **Note:** In the Mail List or Call List process box, the Skip records with duplicate IDs option pertains only to the fulfillment table created by the process and not to records that are written to contact history. The contact history tables only handle unique IDs. The flowchart designer must ensure that the result set obtains the correct records before reaching the contact history tables. Use the Extract process to de-dupe the result set before the Mail List or Call List process box to ensure that the correct records are written to both the fulfillment table and contact history.
Appendix D. User variables

Campaign supports user variables, which can be used during process configuration when creating queries and expressions.

Guidelines for using user variables

The following guidelines apply to user variables:

- User variables are local to the flowchart in which they are defined and used, but have global scope within that flowchart.
- User variables use the following syntax: UserVar.UserVarName
- User variables have Initial Values, which is the value assigned when a user variable is initially defined in the User Variables dialog. The Initial Value is only used to set the Current Value before executing a flowchart run. It is the Current Value that Campaign uses during a flowchart run.

Note: If the Current Value for a user variable is not set and you execute a process run or a branch run, Campaign will not be able to resolve the user variable. Campaign only sets the Current Value of a user variable to the Initial Value before a flowchart run.

- You can change the Current Value of a user variable in the Derived Field window of a Select process.
- User variables can be set to constants or to expressions, such as UserVar.myVar = Avg(UserTable.Age).

Note: If you use an expression that returns multiple values (such as UserTable.Age+3, which will return one value for each record in the table), the user variable is set to the first value returned.

- When using user variables within SQL statements, do not enclose user variables in quotation marks, either single or double.
- If you pass object names to your database (for example, if you use a user variable that contains a flowchart name), you must ensure that the object name contains only characters supported by your particular database. Otherwise, you will receive a database error.
- The values of user variables can be passed in on process execution.
- User variables are supported in outbound triggers.
- User variables are supported for use in custom macros.

Creating user variables

You can define variables for use in the processes that you add to a flowchart.

1. Open a flowchart in Edit mode.
2. Click Options and select User Variables.
   The User Variables dialog opens.
3. In the Variable Name column, enter a name for the new user variable: Click the <Click here to add new item> hotspot.
4. In the Data Type column, select a data type from the list. If you do not select a data type, the application selects None when you click OK.
The None data type can produce unpredictable results, so it is best to specify the correct data type.

5. In the Initial Value column, enter a starting value. You can also profile fields for available values by clicking the ellipsis button (...) that becomes available when you click inside the column.

6. In the Current Value column, enter a current value for the user variable. You can also profile fields for available values by clicking the ellipsis button (...) that becomes available when you click inside the column.

7. Repeat these steps for each user variable that you want to create.

8. Click OK.
   The application stores the new user variables. You can access them later when you configure processes.

After a flowchart runs, the Current Value of each user variable displays in the Current Value section for each user variable. If the current value is different from the initial value, you can restore the initial value by clicking Restore Defaults.

Note: If the Current Value of a user variable is redefined in a Select process, resetting the Current Value to the Initial Value manually has no effect on the value of the user variable during a flowchart, branch, or process run.
Before you contact IBM technical support

If you encounter a problem that you cannot resolve by consulting the documentation, your company’s designated support contact can log a call with IBM technical support. Use these guidelines to ensure that your problem is resolved efficiently and successfully.

If you are not a designated support contact at your company, contact your IBM administrator for information.

Information to gather

Before you contact IBM technical support, gather the following information:

- A brief description of the nature of your issue.
- Detailed error messages that you see when the issue occurs.
- Detailed steps to reproduce the issue.
- Related log files, session files, configuration files, and data files.
- Information about your product and system environment, which you can obtain as described in “System information.”

System information

When you call IBM technical support, you might be asked to provide information about your environment.

If your problem does not prevent you from logging in, much of this information is available on the About page, which provides information about your installed IBM applications.

You can access the About page by selecting Help > About. If the About page is not accessible, check for a version.txt file that is located under the installation directory for your application.

Contact information for IBM technical support

For ways to contact IBM technical support, see the IBM Product Technical Support website: (http://www.ibm.com/support/entry/portal/open_service_request).

Note: To enter a support request, you must log in with an IBM account. This account must be linked to your IBM customer number. To learn more about associating your account with your IBM customer number, see Support Resources > Entitled Software Support on the Support Portal.
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