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IBM Interact User's Guide

IBM

Note

Before using this information and the product it supports, read the information in "Notices" on page 129.

This edition applies to version 11, release 0, modification 1 of IBM Interact and to all subsequent releases and modifications until otherwise indicated in new editions.

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Chapter 1. IBM Interact overview

IBM® Interact is an interactive engine that targets personalized offers to visitors of inbound marketing channels. You can configure Interact to be behavioral, strictly event-based, situational, strategic, and so on. Interact is a module within the IBM Marketing Software suite of tools.

What Interact does

Interact uses both online and offline data, including in-depth historical knowledge of customers plus current customer activities, to create real-time customer interactions. These interactions increase sales, build relationships, generate leads, increase conversion rates, optimize channel usage, and lower attrition. You can establish the business rules and sales or service strategies that drive real-time interactions, and modify them to reflect the continuous learning from your marketing efforts.

Use Interact to enhance your marketing efforts

Use Interact to give your marketing organization the ability to coordinate real-time inbound customer treatment strategies with your traditional outbound campaigns. With Interact, you use the power of IBM Marketing Software to enhance your real-time marketing efforts in several ways:

- Use your multi-channel operations.
Use information from your customer touchpoints, including web, call center, in-store, branch, to develop knowledge of customers and prospects, create a consistent brand, and maximize customer communications.
- Create leading-edge website personalization.
Engage known and anonymous visitors, consider behavior, and personalize interactions with them by making cross-sell offers, selecting editorial content, offering appropriate service options, and coordinating banner messages.
- Optimize contact center interactions.
Use the power of your contact center for increased revenue generation and customer retention. Provide better interactive voice response (IVR) navigation, on-hold message selection, instant offers for retention and cross-selling, prioritization of offers, and website intervention (such as chat or VoIP).

Use Interact to refine your marketing strategies

You use Interact to control and fine-tune the real-time, analytical content that is delivered to your touchpoint systems. Your strategies can include factors that you consider important. These strategies can drive the response to specific customer actions, driving personalized content from an instant offer link on a website, to a cross-sell opportunity at a call center. Interact gives you control over critical online selling, marketing, and service strategies, and the ability to respond quickly to opportunities or changes in your marketplace.

Understanding Interact

Interact integrates with your customer facing systems-such as websites and call centers-and allows you to retrieve optimal personalized offers and visitor profile information in real-time to enrich the interactive customer experience.

For example, a customer logs into a book store website and peruses the site. Interact recalls the customer's prior purchasing habits (Japanese literature and books by a certain author). When the customer goes to a page you have integrated with Interact, Interact chooses what offers to present to the customer (a retelling of a famous Japanese story by the same author) based on the previous interactions.

You configure Interact to integrate with your touchpoints using an application programming interface (API). Using this API, you configure Interact to gather a customer's information, add data to that information, and present offers based both on actions taken by the customer in the touchpoint and the customer's profile information.

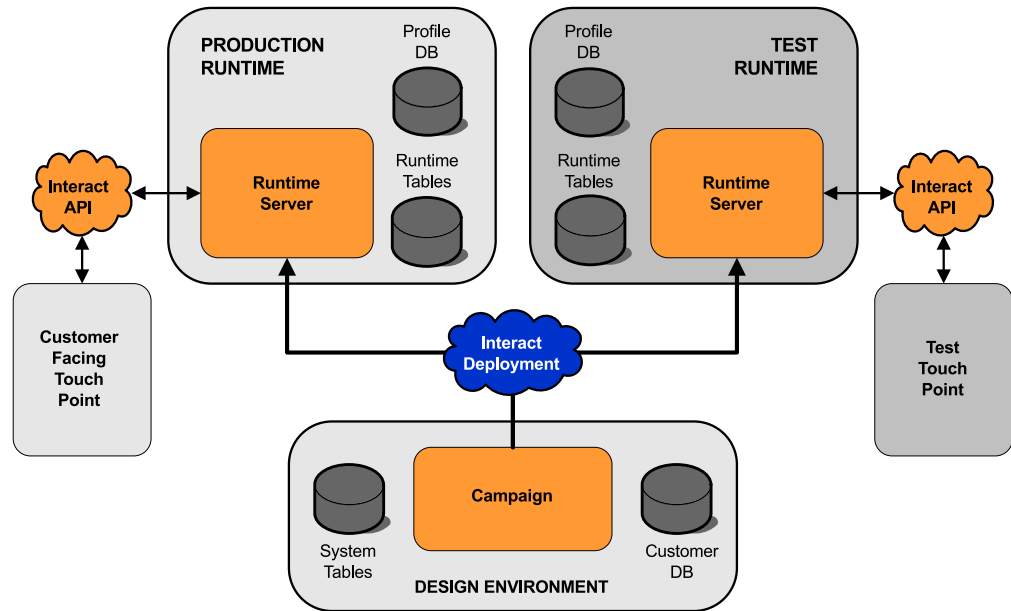
Interact is closely integrated with Campaign to define which offers are assigned to which customer. Because of this integration, you can use the same offers across all of your campaigns, along with all of Campaign's offer management tools. You can also integrate all the contact and response history across all of your campaigns and, for example, use email and direct mail contacts to influence offers presented to the user in real time.

The following sections describe the different components of Interact and how they work together.

Interact architecture

Understanding Interact architecture helps you understand how Interact communicates with the customer-facing touch point, the runtime servers, and IBM Campaign. Interact architecture uses the Interact API to closely work with the design environment, the runtime environment, and sometimes the testing runtime environment to meet your performance requirements.

Interact consists of at least two major components, the design environment and the runtime environment. You may have optional testing runtime environments as well. The following figure shows the high-level architecture overview.

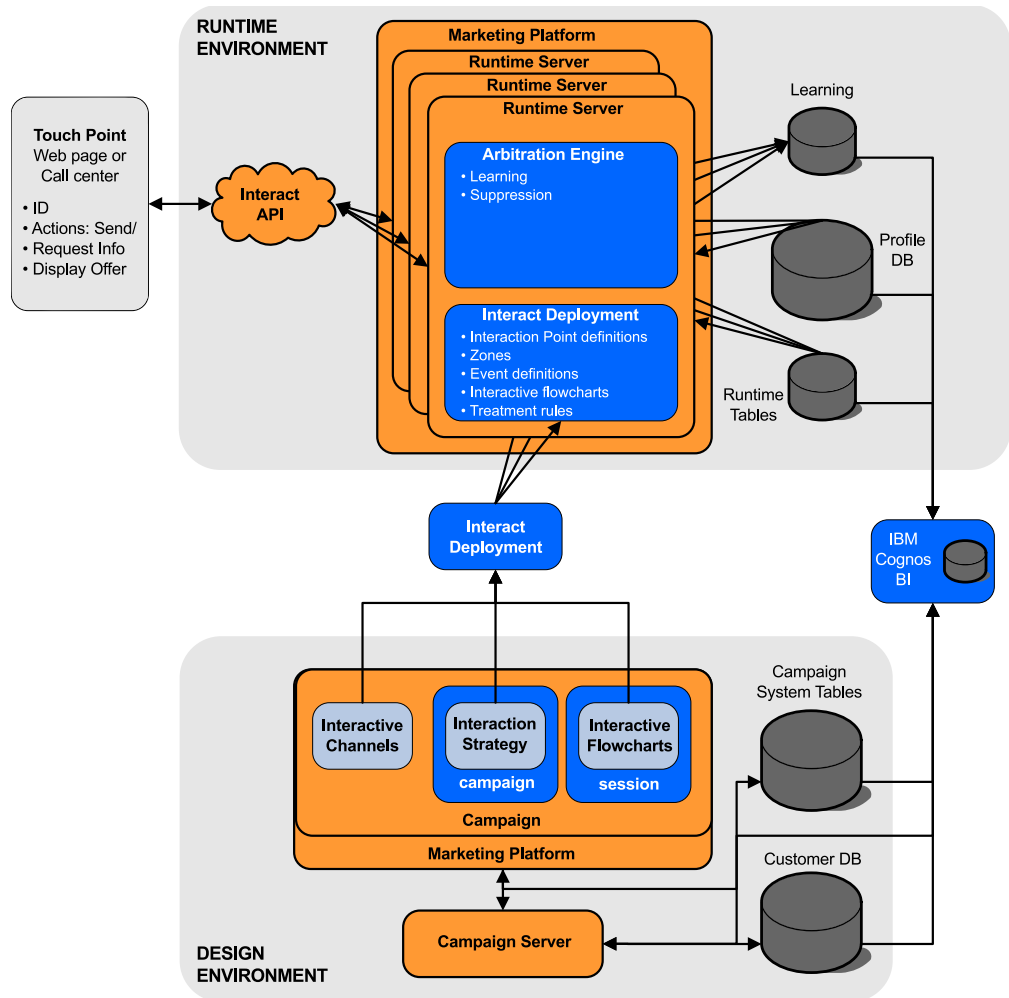


The design environment is where you perform the majority of your Interact configuration. The design environment is installed with Campaign and references the Campaign system tables and your customer databases.

After you design and configure how you want Interact to handle customer interactions, you deploy that data to either a testing runtime environment for testing or a production runtime environment for real-time customer interaction.

In production, the architecture may be more complicated. For example, a runtime environment may have several runtime servers connected to a load balancer to meet your performance requirements.

The following figure shows the Interact environment in more detail.



In the design environment, you define what Interact does at certain points in your touchpoint by configuring interactive channels. You then divide your customers into segments by creating interactive flowcharts. Within interactive flowcharts, you can perform test runs to confirm that your customer data is segmented correctly. Next, you must define offers. You then assign the offers to segments within an interaction strategy. Once you have configured all of the Interact components, you are ready to deploy the configuration to a staging runtime environment.

Interact deployments consist of the following:

- Interact configuration data including interactive channels and interaction strategies
- a subset of Campaign data including smart segments, offers, and interactive flowcharts

While not part of your Interact deployment, your customer data may be required in the runtime environment. You must ensure this data is available to the runtime environment.

In the staging runtime environment-which is the same as a production runtime environment except that it is not customer-facing - you can test the entirety of your Interact configuration, including the API integration with your touchpoint. During runtime, a customer-or in the case of a staging server, someone testing the

system-takes actions in the touchpoint. These actions send events or requests for data to the runtime server by means of the Interact API. The runtime server then responds with results, such as presenting a set of offers (data) or re-segmenting a customer into a new segment (event). You can continue modifying your Interact configuration in Campaign and re-deploying it to the runtime environment until you are satisfied with the behavior. You can then deploy the configuration to the production runtime environment.

The production runtime servers record statistical and historical data such as contact history and response history. If configured, a utility copies the contact history and response history data from staging tables in the production runtime server group to your Campaign contact and response history. This data is used in reports that you can use to determine the effectiveness of your Interact installation and revise your configurations as necessary. This data can also be used by Campaign and other IBM products such as Contact Optimization, integrating your real time campaigns with your traditional campaigns. For example, if a customer has accepted an offer on your website, you can use that data in Campaign to ensure either that the same offer is not sent by mail, or that you follow up the offer with a telephone call.

The following sections describe important terms and concepts in both Campaign and Interact.

Campaign key concepts

Interact integrates with IBM Campaign to define the offers that are assigned to customers. Integration between Interact and Campaign ensures that you can use the same offers across multiple campaigns, and integrate all the contact and response history across all your campaigns.

Before you use Interact, there are several Campaign concepts you should be familiar with. These are brief descriptions of the concepts. For more information, see the *Campaign User's Guide*.

About Campaign

Campaign is a solution that enables users to design, execute, and analyze direct marketing campaigns. Campaign provides an easy-to-use graphical user interface that supports the direct marketing processes of selecting, suppressing, segmenting, and sampling lists of customer IDs.

Once you have selected your targets, you can use Campaign to define and execute your marketing campaign by assigning offers, sending e-mails, and so on. You can also use Campaign to track the response to the campaign, creating output lists and logging contacts to contact history, and use that information in your next campaign.

Audience levels

An audience level is a collection of identifiers that can be targeted by a campaign. You can define audience levels to target the correct set of audiences for your campaign.

For example, a set of campaigns can use the audience levels "Household," "Prospect," "Customer," and "Account." Each of these levels represents a certain view of the marketing data available for a campaign.

Audience levels are typically organized hierarchically. Using the examples above:

- Household is at the top of the hierarchy, and each household can contain multiple customers and one or more prospects.
- Customer is next in the hierarchy, and each customer can have multiple accounts.
- Account is at the bottom of the hierarchy.

Other, more complex examples of audience hierarchies exist in business-to-business environments, where audience levels can exist for businesses, companies, divisions, groups, individuals, accounts, and so on.

These audience levels can have different relationships with each other, for example one-to-one, many-to-one, or many-to-many. By defining audience levels, you allow these concepts to be represented within Campaign so that users can manage the relationships among these different audiences for targeting purposes. For example, although there might be multiple prospects per household, you might want to limit mailings to one prospect per household.

Campaigns

In marketing, a campaign is a selection of related activities and processes that are performed to achieve a marketing communication or sales objective. Campaign also contains objects called campaigns which are representations of marketing campaigns that facilitate design, testing, automation, and analysis.

Campaigns include one or more flowcharts that you design to perform a sequence of actions on your data for executing your campaigns.

Cells

A cell is a list of identifiers (such as customer or prospect IDs) from your database. In Campaign, you create cells by configuring and running data manipulation processes in flowcharts. These output cells can also be used as input for other processes in the same flowchart (downstream from the process which created them).

There is no limit to the number of cells you can create. Cells to which you assign one or more offers in Campaign are called target cells. A target cell is a distinct group of homogeneous audience members. For example, cells can be created for high-value customers, customers who prefer to shop on the web, accounts with on-time payments, customers who opt to receive email communications, or loyal repeat buyers. Each cell or segment you create can be treated differently, with different offers or contact channels, or tracked differently, for comparison in performance reporting.

Cells containing IDs qualified to receive an offer but that are excluded from receiving the offer for analysis purposes, are called control cells. In Campaign, controls are always hold-out controls.

The term "cell" is sometimes used interchangeably with "segment." Strategic segments are cells that are created in a session rather than in a campaign flowchart. A strategic segment is no different from other cells (such as cells that are created by a Segment process in a flowchart) except that it is available globally, for use in any campaign. A strategic segment is a static list of IDs until the flowchart that created it originally is rerun.

Flowcharts

In Campaign, flowcharts represent a sequence of actions that you complete on your data, as defined by building blocks called *processes*. Flowcharts can be run manually, by a scheduler, or in response to some defined trigger.

You use flowcharts to accomplish particular marketing goals, such as determining qualified recipients for a direct mail campaign, generating a mailing list for this group of recipients, and associating each recipient with one or more offers. You can also track and process respondents to your campaign, and calculate your return on investment for the campaign.

Within each of your campaigns, you design one or more flowcharts to implement the campaign, configuring the processes that make up the flowchart(s) to complete the required data manipulation or actions.

Each flowchart has the following elements:

- Name
- Description
- One or more mapped tables from one or more data sources
- Interconnected processes that implement the marketing logic

Offers

An offer represents a single marketing message, which can be delivered in various ways.

In Campaign, you create offers that can be used in one or more campaigns.

Offers are reusable:

- In different campaigns
- At different points in time
- For different groups of people (cells)
- As different "versions" by varying the offer's parameterized fields

You assign offers to interaction points in the touchpoints that are presented to visitors.

Sessions

A session is a construct in Campaign where fundamental, persistent, global data constructs (such as strategic segments and cubes) are created by Campaign administrators and then made available to all campaigns.

Like campaigns, sessions are also composed of individual flowcharts.

Interact key concepts

IBM Interact is an interactive engine that targets personalized marketing offers to various audiences.

This section describes some of the key concepts you should understand before you work with Interact.

Design environment

Use the design environment to configure various Interact components and deploy them to the runtime environment.

The design environment is where you complete most of your Interact configuration. In the design environment, you define events, interaction points, smart segments, and treatment rules. After you configure these components, you deploy them to the runtime environment.

The design environment is installed with the Campaign web application.

Interactive channels

Use interactive channels in Interact to coordinate all the objects, data, and server resources that are involved in interactive marketing.

An interactive channel is a representation in Campaign of a touchpoint where the method of the interface is an interactive dialog. This software representation is used to coordinate all of the objects, data, and server resources that are involved in interactive marketing.

An interactive channel is a tool that you use to define interaction points and events. You can also access reports for an interactive channel from the Analysis tab of that interactive channel.

Interactive channels also contain production runtime and staging server assignments. You can create several interactive channels to organize your events and interaction points if you have only one set of production runtime and staging servers, or to divide your events and interaction points by customer-facing system.

Interactive flowcharts

Use interactive flowcharts to divide your customers into segments and assign a profile to a segment.

An interactive flowchart is related to but slightly different from a Campaign batch flowchart. Interactive flowcharts perform the same major function as batch flowcharts: dividing your customers in to groups known as segments. For interactive flowcharts, however, the groups are smart segments. Interact uses these interactive flowcharts to assign a profile to a segment when a behavioral event or system event indicates that a visitor re-segmentation is needed.

Interactive flowcharts contain a subset of the batch flowchart processes, and a few interactive flowchart-specific processes.

Note: Interactive flowcharts can be created in a Campaign session only.

Interaction points

An interaction point is a place in your touchpoint where you want to present an offer.

Interaction points contain default filler content in cases where the runtime environment does not have other eligible content to present. Interaction points can be organized into zones.

Events

An event is an action that is taken by a visitor and that triggers an action in the runtime environment. Examples of an event can be: placing a visitor into a segment, presenting an offer, or logging data.

Events are first created in an interactive channel and then triggered by a call to the Interact API by using the `postEvent` method. An event can lead to one or more of the following actions that are defined in the Interact design environment:

- **Trigger re-segmentation:** The runtime environment runs all the interactive flowcharts for the current audience level that is associated with the interactive channel again, by using the current data in the visitor's session.

When you design your interaction, unless you specify a specific flowchart, a resegmentation action runs all interactive flowcharts that are associated with this interactive channel with the current audience level again, and that any request for offers waits until all flowcharts are finished. Excessive resegmentation within a single visit can affect the performance of the touchpoint in a customer-visible way.

Place the customer in new segments after significant new data is added to the runtime session object, such as new data from requests from the Interact API (such as changing the audience) or customer actions (such as adding new items to a wish list or shopping cart).

- **Log offer contact:** The runtime environment flags the recommended offers for the database service to log the offers to contact history.

For web integrations, log the offer contact in the same call where you request offers to minimize the number of requests between the touchpoint and the runtime server.

If the touchpoint does not return the treatment codes for the offers that Interact presented to the visitor, the runtime environment logs the last list of recommended offers.

- **Log offer acceptance:** The runtime environment flags the selected offer for the database service to log to response history.

- **Log offer rejection:** The runtime environment flags the selected offer for the database service to log to response history.

- **Trigger user expression:** An *expression action* is an action that you can define by using Interact macros, including functions, variables, and operators, including `EXTERNALCALLOUT`. You can assign the return value of the expression to any profile attribute.

When you click the edit icon next to Trigger User Expression, the standard User Expression editing dialog is displayed, and you can use this dialog to specify the audience level, optional field name to which to assign the results, and the definition of the expression itself.

- **Trigger events:** You can use the Trigger Events action to enter an event name that you want to be triggered by this action. If you enter an event that is already defined, that event is triggered when this action is run. If the event name you enter does not exist, this action causes the creation of that event with the specified action.

You can also use events to trigger actions that are defined by the `postEvent` method, including logging data to a table, including data to learning, or triggering individual flowcharts.

Events can be organized into categories for your convenience in the design environment. Categories have no functional purpose in the runtime environment.

Interact API

Use the Interact application programming interface (API) to integrate Interact with your touchpoints.

The Interact API can work as Java™ serialization over HTTP or as a SOAP implementation to integrate Interact with your touchpoints.

Profiles

A profile is the set of customer data that is used by the runtime environment. This data can be a subset of the customer data available in your customer database, data that is collected in real time, or a combination of the two.

The customer data is used for the following purposes:

- To assign a customer to one or more smart segments in real-time interaction scenarios.

You need a set of profile data for each audience level by which you want to segment. For example, if you are segmenting by location, you might include only the customer's postal code from all the address information you have.

- To personalize offers
- As attributes to track for learning

For example, you can configure Interact to monitor the marital status of a visitor and how many visitors of each status accept a specific offer. The runtime environment can then use that information to refine offer selection.

This data is read-only for the runtime environment.

Runtime environment

The runtime environment connects to your touchpoint and performs interactions. The runtime environment can consist of one or many runtime servers that are connected to a touchpoint.

The runtime environment uses the information that is deployed from the design environment in combination with the Interact API to present offers to your touchpoint.

Runtime sessions

A runtime session exists on the runtime server for each visitor to your touchpoint. This session holds all the data for the visitor that the runtime environment uses to assign visitors to segments and recommend offers.

You create a runtime session when you use the `startSession` call.

Smart segments

A smart segment is similar to a strategic segment in that it is a group of customers with defined traits. Instead of a list of IDs, however, a smart segment is the definition of what IDs are allowed in the list.

For example, a smart segment would be "All customers living in Colorado with an account balance greater than \$10,000 who have applied for a car loan in the last 6 months." These definitions are represented by interactive flowcharts. Smart segments are only available in Interact.

Touchpoints

A touchpoint is an application or place where you can interact with a customer. A touchpoint can be a channel where the customer initiates the contact (an "inbound" interaction) or where you contact the customer (an "outbound" interaction).

Common examples are websites and call center applications. Using the Interact API, you can integrate Interact with your touchpoints to present offers to customers based on their action in the touchpoint. Touchpoints are also called client-facing systems (CFS).

Treatment rules

Treatment rules assign an offer to a smart segment. These assignments are further constrained by the custom-defined zone you associate with the offer in the treatment rule.

For example, you have one set of offers you assign a smart segment in the "login" zone, but a different set of offers for the same segment in the "after purchase" zone. Treatment rules are defined on an interaction strategy tab of a campaign.

Each treatment rule also has a marketing score. If a customer is assigned to more than one segment, and therefore more than one offer is applicable, the marketing scores help define which offer Interact suggests. Which offers the runtime environment suggests can be influenced by a learning module, an offer suppression list, and global and individual offer assignments.

Triggered messages

Triggered messages allows you to deliver offers to a different channel than the one where the request was sent in Interact. These offers are triggered by predefined user events and/or event patterns.

In Interact, events are posted for an audience ID, which triggers a predefined notification rule. The rule results in a push of the selected offer to this audience ID in a different outbound channel. The inbound channel, which triggered this message does not receive the offers from Interact as the result of the triggered event post. However, the same offer may still be returned to the inbound channel as the result of `getOffers` or `getOffersForMultipleInteractionPoints` API calls.

Events and event patterns are the two types of triggers that are used in the triggered messages process flow.

Once an event or event pattern is triggered, the eligibility conditions determine what offer selection method is used and which channel is used for offer delivery. You can select an audience level eligibility and add conditions based on eligible segments, profile attributes, and session attributes.

You also have to set offer criteria. You can choose between automatically selecting the next best offer or selecting the best offer from a list of offers.

After you select the offers for your triggered messages, you must specify at least one outbound channel for these offers. You can also add a delay factor for the channel so that messages are sent at a later calculated time from the time the trigger occurred. The delay factor is specified between event or event pattern execution and offer delivery time. Without a delay factor, the message is sent the moment it is triggered.

Zones

Interaction points are organized into zones. You can limit a treatment rule to apply to a certain zone only.

If you create a zone that contains all of your "welcome" content, and another zone for "cross-sell" content, you can present a different set of offers to the same segment based on where the customer is in your touchpoint.

Interact users

In Interact, you can create user roles, and add single or multiple users for each user role. Users can be common across user roles.

Interact is used by many people within your organization. Because Interact is a connection point between your touchpoints and your marketing campaigns, the people that are involved with both parts of your organization will either be using or affected by Interact.

The following list describes potential Interact user roles. These duties may be divided among several individuals in your organization, or a few people may perform multiple roles.

- A user who oversees all of the infrastructure that surrounds a touchpoint. While this user may not actively touch any configuration in the design environment, this person is in charge of making sure the touchpoint stays up and running, and writes the integration between the touchpoint and the runtime environment with the Interact API. This user approves deploying new configurations to production runtime servers. This user may also review statistics and reports from staging servers to analyze the effect of deploying new configurations to production runtime servers.
- A user who installs and configures Marketing Platform, Campaign, and Interact. This user also installs and configures the runtime server groups, and might also perform the steps to deploy new configurations. This user could be considered the Interact administrator.
- A user who designs real-time interactions. This user defines offers and which customers should receive them by working with interactive channels and campaigns. While this user may not perform the actual steps of configuration in the runtime environment, this user defines what the configurations are and spends a lot of time reviewing reports detailing performance and ROI.
- A user who designs segmentation logic for interactive channels by creating interactive flowcharts.
- A user who manages the data used by Interact. This person may not ever 'use' Interact, but is integral to your design team. This person must work with the user who designs the segmentation logic and the user managing the touchpoint to ensure that the correct data is where it needs to be, and is formatted and indexed properly to meet all performance requirements.

Interact workflow for implementing the marketing plan

When you configure Interact, you use a workflow to outline the process from an idea to deployment in detail. Configuring Interact is a multi-step, multi-person, iterative process. The process from an idea to deployment involves: design, configuration, testing, review, and deployment.

Workflow process

There are several steps in the workflow to implement the marketing strategy in Interact:

1. Design the interaction. During the design step, the team identifies the interaction points, zones, events, and categories in the interactive channel. The Interact administrator uses the names of the interaction points and events and configures the touchpoint with the Interact API. The Interact user uses the user interface to enter the components into the system.
2. Configure the interaction. The design is configured in Campaign and Interact. The using interactive flowcharts in Campaign, the Interact API, and the Interact user interface. The Campaign and Interact users are involved in the configuration as well as the Interact administrator, who works with the Interact API.
3. Test the interaction. The Interact user and administrator create the interaction components in Interact. Then, the Interact administrator deploys them to a staging server for testing.
4. Review the interaction. After the interaction is tested, review it again before deployment.
5. Deploy the interaction. The administrator deploys the interaction to the production server.

Design the interaction

During the design phase, you brainstorm about what kinds of interactive marketing strategies you would like to use. When you have a strategy for how you want the visitor to interact with your touchpoint, you need to determine how to implement that strategy with Interact.

This brainstorming is a cooperative effort between the person who:

- Manages the touchpoint with the Interact API
- Works with the Interact user interface
- Designs the marketing plan

Using business goals and target metrics, they can create a list of interaction points and zones, and a rough list of segmentation and suppression strategies. These design meetings also identify the data that is required to do the segmentation.

Configure the interaction

During the configuration phase, the touchpoint administrator and an Interact user implement the design. The Interact user defines offer-to-segment assignments and configures the interactive channel with the user interface in the design environment. The Interact administrator configures the Interact API to make the touchpoint work with the runtime server. The data administrator configures and creates the data tables that are required for both testing and production.

Test the interaction

After the interaction is configured in the Interact design environment, you mark the various components for deployment to staging runtime environments. The Interact administrator deploys the configuration to the staging servers and the testing can begin.

All members of the team that is involved with designing the interaction review the results to confirm that the:

- Configured interaction is working as designed
- Performance of the runtime environment is within tolerable limits for response time and throughput

The designers might need to change the design and more testing might need to be done. After everyone is pleased by the results, the manager can mark the configuration for deployment to production servers.

Review the interaction

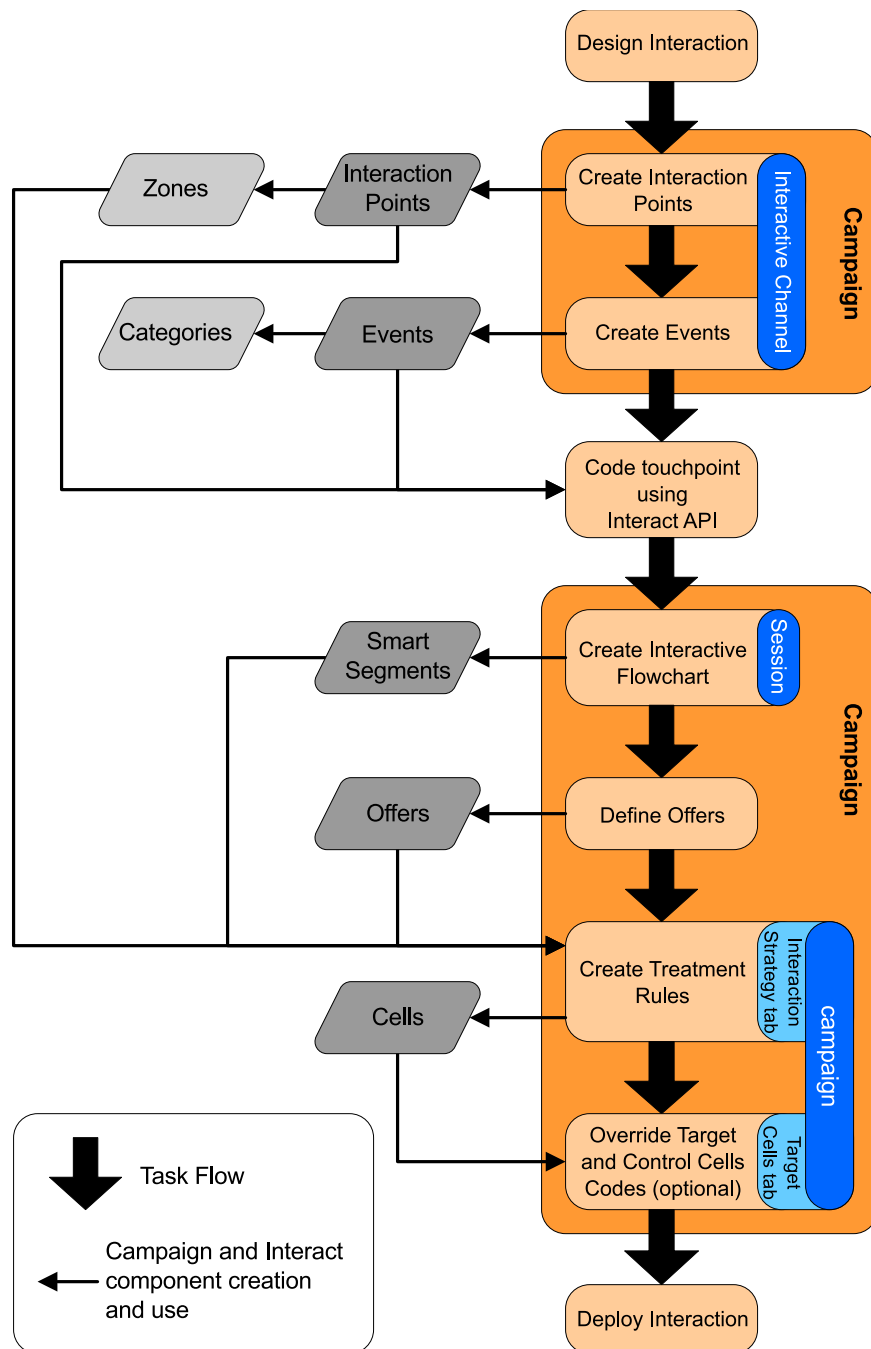
After testing, the touchpoint manager can review all the results as well to ensure that the configuration will have no adverse effects on the customer-facing system.

Deploy the interaction

After the configuration has approval from all parties, it can be deployed to production runtime servers.

Design workflow diagram

This diagram shows a sample design workflow.



While this diagram shows a linear progression, in practice, many people are working on different components at the same time. It is also an iterative process. For example, to use Interact API to configure the touchpoint to work with Interact, the administrator must reference events that are created in the interactive channel. As the Interact administrator configures the touchpoint in the runtime environment, the administrator might realize that more events are needed. After they are approved by the design team, the Interact user creates these events in the design environment.

Planning your visitor interaction

When you plan the design of your Interact implementation, you must consider the following factors: the strategies that you use to interact with your customers, and the data that is required to segment your customers. Designing the Interact implementation requires the coordination of several components.

Determine how to interact with the visitors

The first step of designing the implementation is asking, "How and where do I want to interact with my customers?"

This question has an almost unlimited number of answers, for example:

- Are you considering integrating with a website, an interactive voice response (IVR) system, or a point of sale (POS) system?
- Do you want to display banner ads that are based onsite navigation, a list of further choices that are based on previous selections, or money-saving coupons that are based on the current purchases?

Most touchpoints have more than one location available for interaction, so you might need to ask this question several times.

Define the components you configure in Interact

After the team identifies the strategy, you list and define what configuration components the Interact user creates in Interact. The Interact user must coordinate with the Interact administrator to define what interaction points and events must be created with the Interact API.

The team must also consider what offers to present, how you segment the visitors, and what sampling, integration, or tracking strategies to use. The answers to these questions help define what information to create in the profile database. At the same time, consider how to organize the interaction points into groups or zones that are meant to serve a common purpose to fine-tune your offer presentation.

Evaluate extra options

There are several optional features, including offer suppression, learning, individual offer assignments, and score override, which the team might want to implement. Most of these features require specific database tables, and require little or no configuration in the design environment. For more information about these features, see the *Interact Administrator's Guide*.

Consider performance

Since performance is a part of Interact, the team must consider the data that is required to segment the customers. Since there is a performance impact each time data is retrieved from the database, carefully design the information that is provided for the runtime environments. For more information about designing and maintaining customer data, see the *Interact Administrator's Guide*.

Logging in to IBM Marketing Software

Use this procedure to log in to IBM Marketing Software.

You need the following.

- An intranet (network) connection to access your IBM Marketing Software server.
- A supported browser installed on your computer.
- User name and password to sign in to IBM Marketing Software.
- The URL to access IBM Marketing Software on your network.

The URL is:

```
http://host.domain.com:port/unica
```

where

host is the machine where Marketing Platform is installed.

domain.com is the domain in which the host machine resides.

port is the port number where the Marketing Platform application server is listening.

Note: The following procedure assumes that you are logging in with an account that has Admin access to Marketing Platform.

Access the IBM Marketing Software URL using your browser.

- If IBM Marketing Software is configured to integrate with Windows Active Directory or with a web access control platform, and you are logged in to that system, you see the default dashboard page. Your login is complete.
- If you see the login screen, log in using the default administrator credentials. In a single-partition environment, use `asm_admin` with `password` as the password. In a multi-partition environment, use `platform_admin` with `password` as the password.
A prompt asks you to change the password. You can enter the existing password, but for good security you should choose a new one.
- If IBM Marketing Software is configured to use SSL, you may be prompted to accept a digital security certificate the first time you sign in. Click **Yes** to accept the certificate.

If your login is successful, IBM Marketing Software displays the default dashboard page.

With the default permissions assigned to Marketing Platform administrator accounts, you can administer user accounts and security using the options listed under the **Settings** menu. To perform the highest level administration tasks for IBM Marketing Software dashboards, you must log in as **platform_admin**.

Setting your start page

The start page is the page that displays when you log in to IBM Marketing Software. 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 Marketing Software, 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 Marketing Software product and by your permissions in IBM Marketing Software.

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.

Interact documentation and help

Interact provides documentation and help for users, administrators, and developers.

Use the following table to get information about how to get started with Interact:

Table 1. Get up and running

Task	Documentation
View a list of new features, known issues, and workarounds	<i>IBM Interact Release Notes</i>
Learn about the structure of the Interact database	<i>IBM Interact System Tables and Data Dictionary</i>
Install or upgrade Interact and deploy the Interact web application	One of the following guides: <ul style="list-style-type: none"> • <i>IBM Interact Installation Guide</i> • <i>IBM Interact Upgrade Guide</i>
Implement the IBM Cognos® reports provided with Interact	<i>IBM Marketing Software Reports Installation and Configuration Guide</i>

Use the following table to get information about how to configure and use Interact:

Table 2. Configure and use Interact

Task	Documentation
<ul style="list-style-type: none"> • Maintain users and roles • Maintain data sources • Configure Interact optional offer serving features • Monitor and maintain runtime environment performance 	<i>IBM Interact Administrator's Guide</i>
<ul style="list-style-type: none"> • Work with interactive channels, events, learning models, and offers • Create and deploy interactive flowcharts • View Interact reports 	<i>IBM Interact User's Guide</i>
Use Interact macros	<i>IBM Macros for IBM Marketing Software: User's Guide</i>
Adjust components to obtain optimal performance	<i>IBM Interact Tuning Guide</i>

Use the following table to get information about how to get help if you face issues when you use Interact:

Table 3. Get help

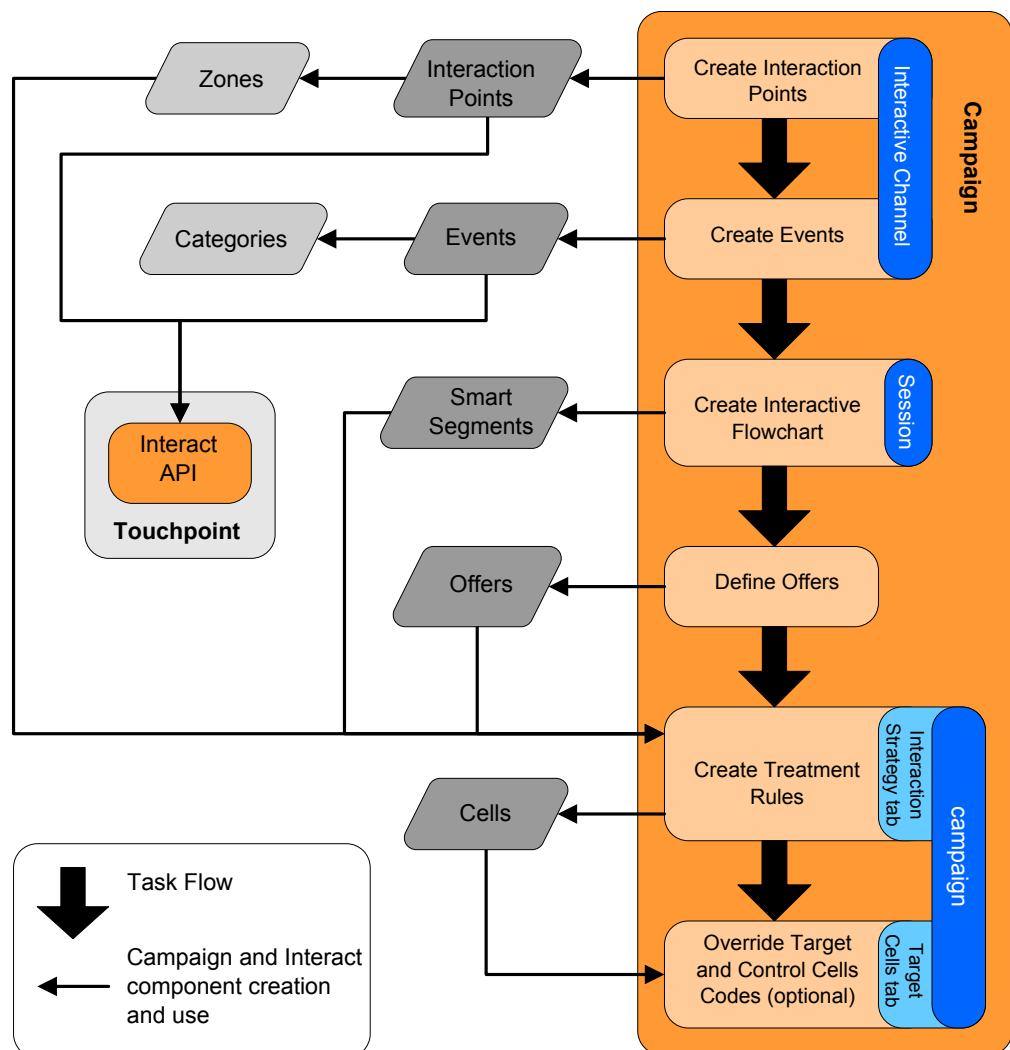
Task	Instructions
Open online help	<ol style="list-style-type: none"> 1. Choose Help > Help for this page to open a context-sensitive help topic. 2. Click the Show Navigation icon in the help window to display the full help. <p>You must have web access to view context-sensitive online help. Contact IBM Support for more information about accessing and installing IBM Knowledge Center locally for offline documentation.</p>
Obtain PDFs	<p>Use either of the following methods:</p> <ul style="list-style-type: none"> • Choose Help > Product Documentation to access Interact PDFs. • Choose Help > All IBM Marketing Software Documentation to access all available documentation.
IBM Knowledge Center	<p>To access the IBM Knowledge Center, choose Help > Support for this product.</p>
Get support	<p>Go to http://www.ibm.com/support to access the IBM Support Portal.</p>

Chapter 2. Create the marketing campaign in the design environment

Designing the Interact configuration is a multi-step process that involves many people in your organization. You work with the Interact user interface, the Interact API, and Campaign flowcharts to configure your interactive marketing campaign.

Workflow diagram

This diagram is an extract from the full design workflow, and shows only the configuration tasks that you do in the design environment.



The diagram shows a linear progression even though several people can be working on different components at the same time. It is also an iterative process. For example, as you work with treatment rules, you might discover that you need to reorganize your interaction points and zones. Working with Interact configurations is also related to creating and working with traditional campaigns.

Sample workflow

A sample workflow can contain the following steps:

1. Create an interactive channel to hold the resources for your touchpoint with the visitor.
2. Create interaction points that the visitor uses to interact with the touchpoint.
3. Create events that trigger actions when the visitor makes selections in the touchpoint.
4. Use interactive flowcharts to define smart segments to assign offers to visitors.
5. Define offers to present to the visitor.
6. Define treatment rules to refine the offers that are presented to the visitor.
7. (Optional) Override the content of the target and control cells that are assigned to segments.
8. Deploy the interaction.

After the Interact administrator deploys the configurations to the runtime servers, and the touchpoint is integrated with the Interact API, your Interact implementation is complete.

Configuration information shared by the user interface and the Interact API

Configuring Interact to work with your touchpoint involves two Interact components. The Interact user interface where you define the configuration in the design environment. The Interact API that the Interact administrator configures for the touchpoint to work in the runtime environment.

While these two components of configuration take place in two different areas, they are related. The Interact API must reference several of the configuration elements within the design environment. You and the person who works with the Interact API must work together to agree on naming conventions, element purpose, and so on. The design is an iterative and collaborative process. As the person works with the Interact API and the touchpoint, you might have to create more events and interaction points. As you design the interaction in the design environment, you might have more requirements for the person who works with the API.

Element shared by name

Several elements of the Interact configuration are referenced by the Interact API. However, only the following three elements are referred to by name:

- Interactive channels
- Interaction points
- events

When you work with the Interact API, you must reference these elements by name. These names must match and they are case insensitive. The names `myinteract`, `myInteract`, and `mYiNtErAcT` all match.

Interact API and runtime information requests

During runtime, the Interact API does request information from interactive flowcharts and treatment rules, however the API calls for that information

indirectly. For example, the API never calls an interactive flowchart. However, the API does call an event that requests a resegmentation, which runs all of the interactive flowcharts that are associated with the interactive channel. Likewise, when the API requests offers with the `getOffers` method, that starts a sequence of events that includes referencing the treatment rules.

Shared Campaign elements

Several Campaign elements can be used in your Interact configuration. You can use these elements in the Interact API to enhance your interaction, including smart segments, campaign start and end dates, offers, and interactive flowcharts.

Use the Interact API to reference these Campaign elements:

- Audience ID
- Audience level
- Custom offer attributes
- Offer code
- Offer description
- Offer effective date
- Offer expiration date
- Offer name
- Offer treatment code

Since these elements are shared across the whole of the design environment, you must decide standards for these elements across your organization. Some of this information you must provide to properly call the Interact API, such as audience ID, and some you request with the API, such as offer attributes.

You can also reference the score for an offer with the Interact API. In general, this score is the marketing score that is assigned to an interaction strategy. This score is relevant for Interact only, not your entire Campaign environment. You can modify or override the marketing score. For more information about the Interact API, see the *Interact Administrator's Guide*.

Interact API interactions in the runtime environment

When a runtime session starts, that is, when the visitor initiates a contact, the Interact API triggers a `startSession`. This call can include:

1. Creating a runtime session.
A runtime session is an instance on the runtime server, which contains all data that is associated with the visitor. This instance includes all known profile data and the results of any requests to the runtime server, such as segment membership or a list of offers.
2. Loading the visitor profile data into the runtime session.
3. Running all interactive flowcharts that are associated with the interactive channel and places the visitor into segments.

As the visitor interacts with the touchpoint, the Interact API can complete several actions that include triggering events, requesting profile information, and changing the audience level of the visitor. When the visitor reaches an interaction point in the touchpoint, the Interact API can request one or more offers or trigger an event. When the visitor leaves the touchpoint by logging out, hanging up, or timing out, the runtime server ends the runtime session.

Use interactive channels to coordinate your touchpoint resources

An interactive channel is a representation of a client-facing touchpoint that is used to coordinate all of the objects, data, and server resources that are involved in interactive marketing.

Guidelines

In general, create one interactive channel for each touchpoint you are integrating with Interact. For example, if you have a website and a call center to integrate with Interact, create two interactive channels, one for each type of touchpoint.

You might also want to create different interactive channels for representing same-type touchpoints. For example, if you have different websites for your company's different brands, create an interactive channel for each brand, even if each site is hosted on the same server.

Interactive channels and the other components

Interactive channels are where you organize and configure several components of the interaction configuration, including interaction points, zones, events, and categories. The interactive channel is also where you map profile tables and deploy the interaction's processes and strategies to the runtime servers. You can find links to the other components of the interaction configuration (interactive flowcharts and treatment rules) from the **Summary** tab.

Interactive channels and the Interact API

Interactive channels are one of the three elements of the Interact configuration in Campaign that interacts directly with the Interact API. You must use the exact name of the interactive channel when you use the `startSession` method in the API. This name is case insensitive.

Number of interactive channels used

You can have as many interactive channels as required for your organization. Different campaigns can reference the same interactive channel for the interaction strategy. The interaction strategies for the interactive channel are accessed from the **Summary** tab of the interactive channel.

For example, you have one campaign for new cell phones and another campaign for new calling plans and each campaign has an interaction strategy for the website interactive channel. The same campaign can have several interactive strategies, each referencing a different interactive channel. Therefore, the new cell phone campaign can have an interaction strategy for the website and an interaction strategy for the call center.

Restrict how often an offer is presented

You can set the maximum number of times an offer is presented to a visitor in a single runtime session. Default strings that you enter for offers that are presented to everyone regardless of their actions are not counted.

Set the maximum number of times an offer is presented

You can set the number of times your touchpoint can display a single offer to a single visitor during a single runtime session. This number is tracked by the number of times the offer is logged as a contact, not by the number of times the runtime environment recommends an offer. If you never log offer contacts, the runtime environment assumes that the offer is not presented, and therefore continues to recommend the offer, even if the maximum is exceeded.

Default strings not counted as offers

The runtime environment also does not consider default strings as offers for calculating the maximum number of times an offer can be shown. For example, all your interaction points have the same default string that presents the same default offer and something happened on your network so that the touchpoint cannot reach the runtime server. Therefore, the touchpoint displays the default string from the interaction point. Although the touchpoint is presenting the same offer multiple times, none of the times the offer is presented are counted.

Creating an interactive channel to coordinate your interactive campaign resources

Use an interactive channel to coordinate all the objects, data, and server resources that are involved in interactive marketing. You specify a security policy for the channel. You can create a security policy or you can use the default security policy.

Before you begin this task, you must have this information:

1. The name of the interactive channel.
2. The description for the interactive channel.
3. The security policy for the interactive channel. If you did not create any security policies, the default global policy is selected for you, and you cannot change it. You cannot edit the security policy for the interactive channel after you create the interactive channel.
4. the server group for the interactive channel.
5. The production server for the interactive channel.
6. The maximum number of times you want to show an offer to a visitor in a single session on this interactive channel.

You create an interactive channel to coordinate the resources for your interactive campaign strategy. You create the interactive channel before you create any of the other resources for the interactive campaign strategy. You can edit or delete any interactive channels that you created.

To edit the interactive channel, click the **Edit summary** icon on the **Summary** tab.

1. Select **Campaign > Interactive channels**.
The All interactive channels page opens.
2. Click the **Add interactive channel** icon on the All interactive channels page.
The **Interactive channel summary** dialog opens.
3. Enter a **Name** and **Description** for the interactive channel. The name and description you enter here are for your reference, and is displayed in windows and reports.
4. Select the **Security policy** for the interactive channel.

5. Select the server groups that you want to associate with this interactive channel from the **Runtime server groups** list.
You can select multiple server groups by using **Shift+Click** or **Ctrl+Click**.
6. Select the production server from the **Production runtime server groups** list.
7. Enter an amount for the **Maximum # of times to show any offer during a single visit** field.
8. Click **Save and return**.

To delete an interactive channel, select the check mark next to the interactive channel on the All interactive channels page, and click the **Delete** icon. When you delete an interactive channel, you delete all interaction points and events that are associated with it. Whether you can delete the interactive channel depends on the deployment status of the interactive channel.

To search for an interactive channel, use the **Search in Interactive channels** field.

About table mapping

Mapping tables is the process of making external customer or system tables accessible in IBM Campaign.

A table mapping is the metadata that is used to define a base, dimension, or general table. It contains information on the data source, the table name and location, the table fields, audience levels, and data. Table mappings can be stored for re-use in table catalogs.

Accessing the audience levels defined in Campaign in your interactive strategy

To access the audience levels that are defined in Campaign in your interactive strategy, you map the profile table to the interactive channel. Use the **Summary** tab to map the profile table for the interactive channel. You use the **Map profile tables for audience level** wizard to complete this task.

Before you begin this task, you must have this information for the **Map profile tables for audience level** wizard:

1. Name of the table you want to map. This table contains the audience identifier that is defined in the Campaign > partitions > partitionN > Interact > flowchart > datasource category
2. Whether to load the data into memory when a visitor interactive session starts.
3. Interact table name of the table as it appears in the interactive flowcharts.
4. Table details field name that is displayed in the interactive flowcharts.

You must map a profile table before you can map any dimension tables.

When the **Map profile tables for audience level** wizard validates the table mapping, it references the data source that is defined in the Campaign > partitions > partitionN > Interact > flowchart > datasource property. For your data source, the OwnerForTableDisplay property in Campaign > partitions > partitionN > dataSources must be updated to include the schema owner of the profile table that is used for the interactive flowchart test run. All interactive channels must reference the same data source. This data source is for test runs only.

To edit the profile table mapping, click the name of a table under **Mapped profile table** and complete the **Map profile tables for audience level** wizard.

1. On the **Summary** tab of an interactive channel, click the audience level that you want to map under **Mapped profile table**.

The **Map profile tables for audience level** wizard opens.

2. Complete the **Map profile tables for audience level** wizard.

Accessing a dimension table from Campaign in your interactive strategy

To access a dimension table from Campaign in your interactive strategy, you map the dimension table joined to the profile table to the interactive channel. Use the **Summary** tab of an interactive channel to map the dimension table. You use the **Map tables for audience level** wizard to complete this task.

You must map the profile tables for the interactive channel before you can map the dimension tables.

Before you begin this task, you must have this information for the **Map tables for audience level** wizard:

1. Name of the dimension table you want to map.
2. Name of the table to which you are mapping the dimension table.
3. Fields in the base table to which you are mapping the dimension table key fields.
4. Join type for the tables. Either auto-selected, inner join, or outer join.

The **Map tables for audience level** wizard uses the data source that is defined in the Campaign > partitions > partitionN > Interact > flowchart > datasource property.

All interactive channels must reference the same data source.

1. In the Interactive channel summary window, on the **Summary** tab, click the name of the profile table under **Mapped profile table**.

The **Map tables for audience level** wizard is displayed.

2. Click **Map a new dimension table**.
3. Complete the **Map tables for audience level** wizard.

Map tables for audience level wizard

Use the **Map tables for audience level** wizard to map profile and dimension tables from Campaign to your interactive channel.

Requirements

When you are working with the wizard and you:

- Validate mapping, Interact uses your test run Interact server. Your test run runtime server must be running for Check Syntax to function.
- Add or edit a dimension table, the schema must match the profile table schema.

Available tasks

Use the wizard to complete table mapping tasks:

Tasks	Flow
Map a new profile table	<ol style="list-style-type: none"> 1. Click Unmapped for the audience level that you want to map. 2. Complete the fields for the profile table. 3. Select Validate mapping to validate the mapping. 4. Select Complete this change to finish the mapping.
Map a new dimension table	<p>You can map dimension tables only after you define a profile table for the audience level.</p> <ol style="list-style-type: none"> 1. Click Map a new dimension table. 2. Complete the fields for the dimension table. 3. Select Complete this change to finish the mapping. <p>You do not validate this mapping.</p>
Edit a table mapping	<p>When you edit a profile table mapping and change the table or field names, Interact unmaps all dimension tables that are associated with the profile table.</p> <ol style="list-style-type: none"> 1. Select the table that you want to edit. 2. Modify the fields for the table. 3. If you modify a profile table, Select Validate mapping to validate the mapping. 4. Select Complete this change to save the mapping changes.
Unmap a table	<ol style="list-style-type: none"> 1. Select the table that you want to unmap. 2. Click Unmap. 3. Select Complete this change to save the changes.

Fields used when you select a profile table to map

This table lists and describes the fields that you use when you select a profile table to map:

Table 4. Select a table to map

Field	Description
Select a profile table to map	<p>This list is a list of all the tables in the data source that is defined by the Campaign > partitions > partitionN > Interact > flowchart > dataSource property.</p> <p>If you are mapping the profile table, you must select a table that contains the audience ID defined in the Campaign > partitions > partitionN > AudienceLevels category. Each audience ID column maps name for name.</p>

Table 4. Select a table to map (continued)

Field	Description
Load this data in to memory when a visit session starts	Select this check box to load the record that is associated with the Audience member into the runtime session when the session starts. If you select this feature for all dimension tables in the interactive channel, all database reads for the selected audience level occur at the start of a runtime session. The process of reading a database at the start of a runtime session so that all subsequent data requests during the runtime session are faster can improve overall runtime performance. You can reload data from tables by using the <code>setAudience</code> method. If you load all data in to memory, while it can improve performance, it also increases the memory requirements for the system.
Interact table name	The name of the table as it is displayed in Interactive flowcharts. You can change how the table name displays in interactive flowcharts to make it easier for your flowchart designers to select the correct tables. The name cannot be empty, must begin with a letter, and can contain only alphanumeric characters and underscores. The Interact table name must also be unique within the table mapping, per audience level, per interactive channel.
Table details	<p>The Table details field displays information for the field:</p> <ul style="list-style-type: none"> • The field name as it is displayed in the real data source. • The Interact field name as it is displayed in the interactive flowcharts. • The field Type. • Whether this field is a Audience key field. <p>If you are mapping a profile table, most of this table is disabled. The fields that match the audience ID fields have Audience key selected. You can define Default values for every field.</p> <p>If you are mapping a dimension table, the Audience Key column is enabled. Select the Audience key check box for the fields upon which you want to join the dimension table to the base table.</p>

Fields used when you map a dimension table to a base profile table

This table lists and describes the fields that you use when you select a table to map:

Table 5. Map dimension to base

Field	Description
The dimension table relates to the following base table	Select the table to which you want to join this dimension table.
Matching base table field	Select the fields from the base table to which the key fields in the dimension table map.
Join type	Select how you want to join the tables. Valid choices are Auto-selected , Inner join , and Outer join .

Interactive channel Summary tab

Use the **Summary** tab to view a summary of the settings for the interactive channel.

The **Summary** tab contains three main sections: the **Interactive channel summary**, **Associated flowcharts**, and **Associated strategies**.

The **Associated flowcharts** and **Associated strategies** sections show the flowcharts and strategies that are defined and associated with this interactive channel.

Summary tab sections and fields

This table lists and describes the sections and fields of the **Summary** tab:

Table 6. Description of the field for an interactive channel on the Summary tab

Field	Description
View the treatment rule inventory	A link that displays the Channel Treatment Rule Inventory report, which is filtered for this interactive channel.
View deployment history	A link that displays the Channel Deployment History report for this interactive channel. You can also view the interactive channel's deployment history in a different format on its deployment tab.
Edit summary	Displays the Interactive channel summary dialog box where you can modify most of the information on the interactive channel Summary tab.
Description	The description for the interactive channel. The more detailed the description, the better other design environment users understand the purpose of this particular interactive channel. You can change this value by clicking the Edit summary icon and modifying the description in the dialog that is displayed.
Security policy	The security policy applicable for this interactive channel. This value is specified when you create the interactive channel. You cannot change the security policy on an existing interactive channel.
Runtime server groups	A list of the runtime server groups available for this interactive channel. You can change this value by clicking the Edit summary icon and modifying the runtime server groups in the dialog that is displayed.
Production runtime server group	The runtime server group that you chose for your live, customer-facing touchpoint. You can change this value by clicking the Edit summary icon and modifying the production runtime server group in the dialog that is displayed.
Maximum # times to show any offer during a single visit	An integer that defines the maximum number of times to show a particular offer during a single visit. The runtime environment uses this number along with treatment rules and the learning engine when you choose offers to display. You can change this value by clicking the Edit summary icon and modifying the value in the dialog that is displayed.

Table 6. Description of the field for an interactive channel on the Summary tab (continued)

Field	Description
Learning mode	Whether the interactive channel uses the global learning model, uses the marketer's scores only for offer weighting, or uses the custom learning model that you specified in the New interactive channel or Edit interactive channel dialogs.
Mapped profile table	<p>Displays the Interact name and actual name for the profile table for each audience level that is defined in Campaign.</p> <p>If no profile tables are defined, this table is empty.</p> <p>The name of the table is a link to the Map tables for audience level wizard, where you can map profile and dimension tables for the interactive channel.</p> <p>The number of profile tables that you mapped is listed as the number of supported audience levels. You might have more audience levels that are defined in Campaign than you require for your touchpoint. You do not have to define profile tables for all audiences, only the audiences you use with your interaction on your touchpoint.</p>
Associated flowcharts	<p>A listing of all flowcharts that are associated with this interactive channel.</p> <p>Each flowchart that is listed here is a link that opens the flowchart where you can view or edit it as needed.</p>
Associated strategies	<p>A listing of all strategies that are associated with this interactive channel.</p> <p>Each strategy that is listed here is a link that opens the interactive strategy where you can view and edit the treatment rules. You can also mark or unmark the interactive strategy for deployment.</p>

Group your interaction points into zones

You use zones to divide your interaction points into similar areas in your touchpoint. You can use zones to make your treatment rules more specific. You can move interaction points between zones. An interaction point can be a member of only one zone at a time.

For example, if you divide your website into sections by product type such as calling plans and phones for a telecommunications company. You organize your interaction points into zones that are related to the product type. In your treatment rules, you assign different offers to the same segment, depending on which zone the customer is viewing. When the visitor is in the calling plans zone, the visitor sees offers relating to new calling plans with better rates only. When the visitor moves to the phones zone of the touchpoint, all the offers are targeted for new cell phones.

Adding zones for your interaction points to the interactive channel

When you define interaction points for your visitors, you can further specialize those interaction points by adding them to zones. Each zone can have its own set

of rules that determine how offers are presented to visitors. Use the **Add zone** icon on the **Interaction points** tab of the Interactive channel window to add a zone.

1. Click the **Add zone** icon on the **Interaction points** tab.

The **Add/edit Zone** dialog is displayed.

2. Enter a **Name** for the zone.
3. Enter a **Description** for the zone.

This description that you enter here is displayed on the **Interaction points** tab of the Interactive channel window after you save the zone.

4. Optional: Click the **Advanced features** link to display more settings that you can apply to the zone.

If you display the advanced features, you can determine the following settings for the zone you are adding or editing:

The **Learning mode** section specifies the rules by which learning is applied to the zone you are creating or editing. You can choose any of the following settings:

- **Inherit from interactive channel** is the default setting, and tells Interact to use the learning mode that is specified for the interactive channel.
- **Use marketer's scores only** indicates that Interact uses only the marketer's scores for offer weighting.
- **Use custom learning model** uses a custom learning model that you can specify from the drop-down by name. If no custom learning models are defined for this interactive channel, this option is dimmed and cannot be selected.

For rule groups in this zone, resolve non-uniform learning rules by handles a situation where there is a conflict between how offers are sorted in a mixed-learning scenario, such as when some offers are suggested by sources in which learning is enabled, and other offers are suggested from sources where learning is disabled. For example, because each zone and each treatment rule group can define its own learning rule, and the rule that is defined for a treatment rule group can be different from the rule that is defined for the zone, the choices here determine how Interact resolves that conflict.

There are several different levels in Interact at which learning can be enabled or disabled: globally, for each interactive channel, for each treatment rule group, and for each zone. The choices in the **For rule groups in this zone, resolve non-uniform learning rules by** section provide the following solutions to the conflict:

- **Intermixing - Use Learning Mode for this zone (Default)** indicates that the sequence of offers is selected based on the learning mode that is defined for this zone. This overrides the settings on individual rules.
- **Prioritizing non-learning offers** indicates that the sequence of offers selects non-learning offers first, followed by learning-based offers.
- **Prioritizing learning offers** indicates that the sequence of offers selects learning offers first, followed by non-learning-based offers.
- **Prioritizing non-learning offers: dedupe** provides the same results as the **Prioritizing Non-learning Offers** option, but with duplicate offers removed when the same offer is provided by learning and non-learning sources.
- **Prioritizing learning offers: dedupe** provides the same results as the **Prioritizing Learning Offers** option, but with duplicate offers removed when the same offer is provided by learning and non-learning sources.

% Random specifies the chance that the returned offer is randomly selected, without considering scores. You can also use `percentRandomSelection` in

Campaign | partitions | partition[n] | Interact | learning to globally configure the percent of the time the learning module presents a random offer. If you set % **Random** here, it overrides the global configuration.

5. Click **Save and return** to go back to the Interaction Points tab or **Save and add another** to continue adding interaction points.

To edit the name or description of a zone, click the name of the zone on the **Interaction points** tab.

To delete a zone, select the check box next to the zone on the Interaction Points tab and click the **Delete** icon. You cannot delete a zone while it is used in a treatment rule.

For example, suppose that you have a zone with four rule groups:

- Rule group Group1 has a learning module that is named LM1. LM1 contains offer1 with a score of 50%, and offer2 with a score 60%.
- Rule group Group2 has no learning module.
- Rule group Group3 is inheriting for the zone.
- Rule group Group4 contains offer3 with a score of 65%, and offer4 with a score of 45%. No learning model is assigned to this rule group. The **Use marketer score** option is selected for this rule group.

In this example, offers for each particular zone have a mix of offers presented after evaluating the score, using learning or no learning, depending on the configuration. The following list describes some scenarios:

- If you select **Intermixing - use learning mode for this zone (default)** for this zone, the sequence of offers to be selected are based on the highest score first, regardless of the built-in learning score. Using the rule groups above, the sequence would be Offer3 weighted at 65%, Offer2 weighted at 60%, Offer1 weighted at 50%, and Offer4 weighted at 40%.
- If you select **Prioritizing non-learning offers** for the zone, the sequence of offers is based on non-learning offers being selected first, so the sequence that uses the example rule groups would be offer3 non-learning, offer4 non-learning, offer1 with learning, and finally offer2.
- If you select **Prioritizing learning offers** for this zone, the sequence of offers to be selected are based on selecting the learning offers first, so the sequence that uses the example rule groups would be offer1 Learning, offer2 Learning, offer3 non-learning, and finally offer4.
- If you select **Prioritizing non-learning offers: dedupe** for the zone, the results would be the same as when you select **Prioritizing non-learning offers**; however, the results would remove duplicate offers.
- If you select **Prioritizing learning offers: dedupe** for the zone, the results would be the same as when you select **Prioritizing learning offers**; however, the results would remove duplicate offers.
- If you specify a value for the **Related to % Random** field, offers other than the high priority would be prioritized according to the specified percentage.

Create interaction points for the visitor to interact with your touchpoint

An interaction point is how you identify where in your touchpoint you request information. You organize all of your interaction points in zones. When you define

which offers go to which segments in your treatment rules, you can also define these rules by zone. Therefore, you can have different types of offers available for different sections of your touchpoint.

Every interaction point must contain some default string that the touchpoint can use if there are no offers available.

Interaction points and the Interact API

An interaction point is one of the three elements of the Interact configuration in the design environment that interacts directly with the Interact API. Whenever you use the `getOffers` or `postEvent` methods in the Interact API, you must reference an interaction point. The name of the interaction point that is used in the Interact API must match the name of the interaction point as configured in the design environment.

Adding visitor interaction points to your touchpoint interactive channel

Use this task to add a place for the visitor to interact with your touchpoint. Use the **Add interaction points** icon on the **Interaction points** tab of the Interactive channel window to add an interaction point.

You can edit an interaction point by clicking the name of the interaction point on the **Interaction points** tab.

You can move an interaction point to another zone after it is created by selecting the check box next to the interaction point and clicking the **Move to** icon.



You can delete an interaction point by selecting the check box next to the interaction point and clicking **Delete**.



1. Click **Add interaction points** on the **Interaction points** tab.
The **Add/edit interaction point** dialog is displayed.
2. Enter a **Name** for the interaction point.
3. Select a **Zone**.
4. Enter the **Default string to return**.
5. Enter a **Description** for the interaction point.
This description displays on the **Interaction points** tab.
6. Click **Save and return** to go back to the **Interaction points** tab or **Save and add another** to continue adding interaction points.

Interaction points tab reference

There are several icons on the **Interaction points** tab that you use to manage interaction points.

This table lists and describes the icons that are used to manage interaction points:

Icon Name	Description
Add zones 	Click to add a zone to this interactive channel.
Add interaction points 	Click to add an interaction point to this interactive channel.

Icon Name	Description
Move to 	Select interaction points then click this icon to move the selected interaction points to a new zone.
Delete 	Select interaction points or zones, then click this icon to delete them.

Define the events that are triggered by visitor actions

An event is an action, which is taken by a visitor, that triggers an action in the runtime environment. The action might place a visitor into a segment, present an offer, or log data. Within the Interact design environment, you can create an event as one of the elements of configuration that interacts directly with the Interact API.

Example events

For example, you might create any of the following events:

- End Session. Mark the end of a visitor's interactive session.
- Get Offer. Request a list of recommended offers to serve to a visitor.
- Get Profile. Request visitor profile data that is stored in the session, including includes temporal data and data read in from the profile table.
- Set Audience. Change a visitor's audience level within the interactive session.
- Set Debug. Override the current logging level for a visitor's interactive session.
- Start Session. Mark the start of a visitor's interactive session.

Event naming and the Interact API

When you are coding your touchpoint to work with the Interact API, you use the `postEvent` method to reference events. The name of the event that is used in the Interact API must match the name of the event as configured in the design environment. The name of the event must start with an alphabetic character. The following characters can be letters, decimal digits (half-width or full-width), or underscores. This name is not case-sensitive.

Monitor events

To monitor how often all of these events occur on your touchpoint, see “Channel Event Activity Summary report” on page 121.

Pre-defined actions

An event triggers one or more of the following pre-defined actions:

- **Trigger re-segmentation:** The runtime environment runs all the interactive flowcharts for the current audience level that is associated with the interactive channel again, by using the current data in the visitor's session.

When you design your interaction, unless you specify a specific flowchart, a resegmentation action runs all interactive flowcharts that are associated with this interactive channel with the current audience level again, and that any request for offers waits until all flowcharts are finished. Excessive resegmentation within a single visit can affect the performance of the touchpoint in a customer-visible way.

Place the customer in new segments after significant new data is added to the runtime session object, such as new data from requests from the Interact API (such as changing the audience) or customer actions (such as adding new items to a wish list or shopping cart).

- **Log offer contact:** The runtime environment flags the recommended offers for the database service to log the offers to contact history.

For web integrations, log the offer contact in the same call where you request offers to minimize the number of requests between the touchpoint and the runtime server.

If the touchpoint does not return the treatment codes for the offers that Interact presented to the visitor, the runtime environment logs the last list of recommended offers.

- **Log offer acceptance:** The runtime environment flags the selected offer for the database service to log to response history.
- **Log offer rejection:** The runtime environment flags the selected offer for the database service to log to response history.
- **Trigger user expression:** An *expression action* is an action that you can define by using Interact macros, including functions, variables, and operators, including EXTERNALCALLOUT. You can assign the return value of the expression to any profile attribute.

When you click the edit icon next to Trigger User Expression, the standard User Expression editing dialog is displayed, and you can use this dialog to specify the audience level, optional field name to which to assign the results, and the definition of the expression itself.

- **Trigger events:** You can use the Trigger Events action to enter an event name that you want to be triggered by this action. If you enter an event that is already defined, that event is triggered when this action is run. If the event name you enter does not exist, this action causes the creation of that event with the specified action.

Events, logging, and the Interact API

If you create an event with more than one log offer action, the Interact API completes the same action for the associated offer. For this reason, do not create an event that logs both offer acceptance and offer rejection since they contradict each other. However, creating a single event to log offer contact and acceptance or offer contact and rejection can be useful in your environment.

By default, the runtime environment can track two types of responses, offer acceptance and offer rejection. You can modify the response types that the Log Offer Acceptance and Log Offer Rejection events record by setting the accept and reject configuration properties.

The Interact API can also use events to trigger actions that you define by using event parameters in the API. These events include logging to a custom table, tracking multiple response types, and specifying a specific flowchart to run. You might have to create some events with no defined System Reaction, or several with the same System Reaction, such as Log Contact, for use with the reserved event parameters.

You might want to create several events with the Log Offer Acceptance action, one for every response type you want to log, or a single event with the Log Offer Acceptance action you use for every postEvent call you use to log separate response types.

For example, create an event with the Log Offer Acceptance action for each type of response. You define the following custom responses in the UA_UsrResponseType table [as Name (code)]: Explore (EXP), Consider (CON), and Commit (CMT). You then create three events and name them LogAccept_Explore, LogAccept_Consider, and LogAccept_Commit. All three events are the same (have the Log Offer Acceptance action), but the names are different so that the person who works with the Interact API can distinguish between them.

Or, you might create a single event with the Log Offer Acceptance action that you use for all custom response types. For example, name it LogCustomResponse.

When you are working with the Interact API, there is no functional difference between the events, but the naming conventions can make the code clearer. Also, if you give each custom response a separate name, the Channel Event Activity Summary report displays more accurate information.

You can use your own custom contact code to be used in postEvent calls. To achieve this, you need to add a new Contact Status Code in UA_ContactStatus and make use of that whenever a contact event is posted. You can even define the Custom Contact codes under RunTime configuration. The action added on UI for custom contact code will override the action of that in System table.

Example:






You have added a custom entry in Campaign System Table UA_ContactStatus for contact status code as "OPEN" and "1" in CountasContact column. On UI, under configuration settings Interact | services | contactHist | contactStatusCodes, if you add code as "OPEN" and action as "None", when "OPEN" contact status code is used in postEvent call, it will not be considered as true Contact. Thus, preference is given to what action you have set on UI than what action you have set in the UA_ContactStatus table.


For more information about reserved parameters and the postEvent method, see the *Interact Administrator's Guide*.

Events tab reference

There are several icons on the **Events** tab that you can use to manage events.

This table lists and describes the icons that are used to manage events:

Icon Name	Description
Add events 	Click to add an event to this interactive channel.
Add event patterns 	Click to define a new event pattern to this interactive channel.
Manage categories 	Click to open a dialog box in which you can create, delete, and edit categories in this interactive channel.
Move 	Select one or more events or event patterns, and then click this icon to move the selected items to a new category.
Copy 	Select one or more events or event patterns, and then click this icon to duplicate the selected items. Interact automatically adds a numeric suffix to the names of each copy.

Icon Name	Description
Delete 	Select events or event patterns, and then click this icon to delete them.

Adding an event and pre-defined action to your touchpoint

Use this task to add an event and the predefined action to take when the visitor triggers the event.

You can edit an event by clicking the name of the event on the **Events** tab.

You can move an event to another category by selecting the event and clicking the **Move** icon.

You can delete an event by selecting the event and clicking the **Delete** icon.

1. Click the **Add events** icon on the **Events** tab.
The **Add event** dialog appears.
2. On the **General** tab, provide a name and description for this event that helps you identify it.
The description appears on the events tab and is intended for your reference only.
3. Optional: Choose a category in which you want to organize this event.
Categories are for your organizational purposes only, and do not affect the operation or use of the event. You can move events to other categories after they are created.
4. Click the **Actions** tab to continue defining this event.
5. On the **Actions** tab, select the action that you want to associate with this event.
6. Click **Save and return** to return to the **Events** tab or **Save and add another** to continue adding events.

Use categories to group events

Categories are an organization tool for your events and event patterns. Categories have no effect on your Interact configuration, other than to make it easier for you to manage what can be hundreds of events or event patterns.

You create categories to organize your events and event patterns in whatever groups make sense for your organization. For example, you can create categories that are based on event purpose (such as "resegment" or "logContact") or where the event pattern is used in the touchpoint (such as "cellPhoneCatalogPage" or "newCallPlanScript").

You can move events and event patterns between categories. Each event or event pattern can be a member of one category only.

Creating a category to group events

Use the **Events** tab to add a category.

To edit the name or description of a category, select the category in the **Manage categories** dialog and click **Edit**.

To delete a category, select the category in the Manage Categories dialog and click **Delete**.

Note: If you delete a category that contains events or event patterns, all the events and event patterns in the category are also deleted. Use the **Delete** button with caution.

1. Click the **Manage categories** icon on the **Events** tab.
The **Manage categories** dialog is displayed.
2. Click **New** to open the **New category** dialog.
3. Enter a **Name** and **Description**.
4. Click **OK** to return to the **Manage categories** dialog.
5. Click **Close** to return to the **Events** tab or click **New** to add more categories.

Use event patterns to personalize offers to the visitor

An event pattern is a flexible way to personalize offers that are based on patterns of visitor activity. When the visitor's behavior matches the event pattern that you create, it triggers specific actions. Event patterns are sometimes referred to as behavior triggers.

Event patterns identify visitor activity and behavior patterns

Event pattern data is audience identifier specific and spans interactive sessions. Event pattern statuses are loaded at the beginning of each visitor interactive session and stored at the end of each interactive session.

Event pattern types and interactive flowcharts

When you define an event pattern, you associate it with a single Interactive Channel. After you define the event patterns that are available for an Interactive Channel, you can use the patterns on your interactive flowchart.

You can define process boxes in the flowchart so that when an event pattern is matched, the visitor is included in a predefined segment to which specific offers are then assigned.

Examples

Here are some examples of events you might use in event patterns that result in presenting relevant offers to your customers.

- A website visitor views a specified combination of pages, or visits certain pages the specified number of times.
- A website visitor downloads specified documents or views specified media.
- A call center representative enters a specified reason for the call or a specified service request that results from the call.

Event pattern types

You use event patterns to test whether one or more events occurred during an interaction. When the specified event pattern is met, one or more actions are triggered in response. Event patterns are optional.

Pattern types

The following types of event pattern are available.

- **Match all:** If all of the specified events occur, the pattern is true.
With this option, you can add one or more events to the **Selected events** list.

- **Counter:** If the specified incoming events occur a specified number of times, the pattern is true.
For example, you might require that the visitor generates a reject event 10 times, or that the visitor requests contact one time.
- **Weighted counter:** You assign a score to each event you specify, and the pattern is true if a specified total score is reached.
Unlike the Match All option, all of the specified events do not have to occur; the total score is what determines whether the pattern criteria are met.

Example

For example, suppose you configure the pattern as follows.

- You select firing conditions and assign the following scores.
 - Firing condition 1 has a score of 1.
 - Firing condition 2 has a score of 2.
- You specify a Weighted Counter value of 10.

The event pattern would be true in any of the following cases.

- Firing condition 1 occurs 10 times.
- Firing condition 1 occurs two times and Firing condition 2 occurs four times.
- Firing condition 2 occurs five times.

How Interact processes event pattern states and statuses

Event patterns respond to a visitor's interactive session with the runtime environment by updating their states and statuses and passing them to the runtime environment for processing.

Interact loads, tracks, and stores event pattern information:

- At the start of the session, Interact tries to load any previous event pattern states that are associated with the current visitor's audience identifier, if event pattern states exist.
- During the session, as an event is posted, Interact updates the states and statuses of any event patterns that use the event. If an event pattern is used during the session, such as during execution of an interactive flowchart, the status of the event pattern is retrieved and updated.
- At the end of the session, the statuses are either stored or discarded. If the audience identifier is found in the profile data source, the statuses of all the updated event patterns that are associated with the visitor's audience identifier are stored. Otherwise, the event pattern states are discarded.

Store states for unknown audience identifiers

The event pattern states for unknown users are discarded by default at the end of the session. To change the default, set one of these values to TRUE:

- Configuration property `interact | services | eventPattern | persistUnknownUserStates`
- Session parameter `UACISavePatternStates`

When the audience identifier changes in a session

If the audience identifier changes in the middle of a session, Interact tries to load the saved event pattern states for the new audience identifier.

In some situations, the audience identifier changes during the session from unknown to known. For example, a person enters a website, adds items to the cart, then logs in to place the order. In these cases, the event activities that belong to the initial audience identifier can be merged into the event activities that belong to the new audience identifier. To merge the statuses, one of these values must be set to TRUE:

- Configuration property `interact | services | eventPattern | persistUnknownUserStates`
- Session parameter `UACISavePatternStates`

Event pattern states and statuses are session independent

Event pattern states and statuses are stored by the visitor's audience identifier. Event activities from one user session are reflected in another session, when the audience identifier matches and both sessions are active when those events occur.

Reset criteria for event patterns

You can specify the reset criteria for event patterns which is used to reset a pattern after a visitor starts a session. When the event pattern is reset, the status is set to `False` and all counters are set to zero.

Use the Reset criteria tab in the Add event pattern window to specify the reset criteria. You can set only one criteria at a time.

The reset criteria is applicable only when the event pattern is active and the event pattern status is not set to `True`. If the status for the event pattern is set to `True`, the reset criteria does not apply. After the event pattern status is set to `True`, the event pattern remains in this state for 1 day or for the period specified in **Extend true state for additional (time)**. The event pattern status is then set to `False` again.

Setting the Reset criteria is optional. By default, the Reset criteria is set as **None**.

Upgrading: If you are upgrading from a version prior to v10.1, the reset criteria for all event patterns is set to **None** by default.

Note: Event pattern reset criteria does not work with Advanced Event Patterns.

Table 7. Reset criteria for event patterns

Reset criteria	Input	Description
None		No reset criteria is specified.
Inactivity	Specify time in Hours, Days, or Weeks.	Reset the event pattern if the visitor is inactive for the specified time.
Periodic	Specify the following: <ul style="list-style-type: none"> • Number of days • Time of the day • Starting date 	Reset every x number of days at the specified time of day, starting from the specified date.

Table 7. Reset criteria for event patterns (continued)

Reset criteria	Input	Description
When an event occurs	Select the event.	When the selected event occurs, the event pattern is reset. The events available for selection are events other than the ones that are selected for the event pattern definition on the Pattern tab. Multiphase events are not supported.

Creating an event pattern to identify visitor behavior patterns

You create event patterns to identify patterns of visitor activity and behavior, and to complete specific actions when those patterns are identified. Use the **Add event pattern** icon on the **Events** tab to add an event pattern.

After you create event patterns, they become available within the design environment, appearing in interactive flowcharts in **Select**, **Decision**, and **PopulateSeg** process boxes, and in the **Interact list** process box in batch flowcharts. In those flowchart processes, you can define your queries to run the action you define when the event patterns are identified and the visitor is presented with the appropriate offers.

1. Click the **Add event pattern** icon on the **Events** tab.
2. On the **General** page, give the pattern a name, description, and start and end dates, and specify whether it is enabled.

Note: Your event pattern name can only contain ASCII letters, numerals and underscores.

3. On the **Pattern** page, specify the pattern type and select one or more events that must occur to fulfill the event pattern and set its state to true.
offerAccepted, offerContacted, offerRejected, offerAcceptedInCategory, offerContactedInCategory, and offerRejectedInCategory are predefined events that are also available. If you add offerAccepted, offerContacted, or offerRejected, you are prompted to select an offer that triggers the macro. If you add offerAcceptedInCategory, offerContactedInCategory, or offerRejectedInCategory, you are prompted to set attribute values of the offers that triggered the macros. You can add each of these macros multiple times with different offers or offer attributes and values for each event pattern.
You can edit eventInCategory macros by double-clicking the macro in the **Selected events** list.

Note: The predefined events are not available for POST events.

Specify an extended time span during which the pattern retains its true state before it resets and begins evaluating events again.

4. On the **Actions** page, specify which actions you want to occur when the event pattern criteria are met.
5. Optional: On the **Reset criteria** page, specify the reset criteria for the event pattern.
6. Click **Save and return** to close the Event Pattern dialog, or click **Save and add another** to save the event pattern and create an event pattern.

Fields you use to configure event patterns

You use the **Events** tab to configure event patterns.

Some pattern types and fields are available only when advanced patterns are enabled by integrating Interact with Interact Advanced Patterns.

For more information, see the *IBM Interact Advanced Patterns and IBM Interact Integration Guide*.

This table lists and describes the fields on the **Add event pattern** dialog box.

Table 8. Fields in the **Add event pattern** dialog box

Fields	Description
General tab	
Name	Enter a descriptive name for the event pattern. This name appears in the Event patterns list on the Events tab.
Enable check box	Select this check box when the event pattern is ready to be used.
Category	Optionally, enter a category for this event pattern. The category has no effect on how the event pattern operates; it is used solely for your organizational purposes. This category appears in the Event patterns list on the Events tab.
Description	Optionally, enter a description for this event pattern. This description appears in the Event patterns list on the Events tab.
Start date and End date times	Optionally, specify the date range during which you want the event pattern to be valid. The date fields are used in the following ways: <ul style="list-style-type: none"> • If no dates are specified, the event pattern is valid while it is deployed. • If you specify only a start date, the event pattern is valid from that date and time until it is no longer deployed. • If you specify only an end date, the event pattern is valid from the time it is deployed until the end date and time. • If you specify both a start and end date, the event pattern is valid only during the specified range. The following applies to the advanced patterns. <ul style="list-style-type: none"> • If no end date is specified, January 30, 2099 is used as the end date. • If no start date is specified, December 26, 2000 is used as the start date.
Pattern tab	

Table 8. Fields in the **Add event pattern** dialog box (continued)

Fields	Description
Pattern type	<p>Select how the event pattern is evaluated. Options are Match all, Counter, and Weighted counter. For the Counter and Weighted counter pattern types, you set more fields:</p> <ul style="list-style-type: none"> • Counter For the Pattern fires when the occurrences of the select event are >= field, set the number of times the events must occur for the pattern to become true. • Weighted counter For the Pattern fires when TOTAL score = field, set the total score that the weighted event or events must reach for the pattern to become true. <p>Rolling time and time bound versions of each of the three basic patterns are available when advanced patterns are enabled.</p>
Available events and Selected events	Select from the list of events you defined in Interact design time. Click the arrow buttons to add the events as criteria or remove them from criteria.
Extend true state for additional: <i>time span</i>	Optionally, use this field to specify how long the pattern state remains true after its conditions are met. After the specified time span is over, the pattern status is set to false and the pattern begins evaluating events again.
Events must occur within <i>time span</i>	Specify the time span for which events are evaluated. This field applies only to the advanced patterns.
Actions tab	
Action	<p>Select one or more actions to complete. Optionally, use the Conditions feature to test values against your pre-defined event parameters.</p> <p>See “Define the events that are triggered by visitor actions” on page 35 for a description of the events in this list.</p>
Reset criteria tab	
Select a reset criteria for this event pattern	<p>Specify the reset criteria for event patterns which is used to reset a pattern after a visitor starts a session.</p> <p>For more information, see “Reset criteria for event patterns” on page 41.</p>

Use constraints to limit the number of times an offer is presented

Offer constraints are a way to limit the number of times an offer or a collection of offers can be presented over defined periods of time. For example, you might want to suppress an offer after a predefined number of impressions in one day or to distribute offers on a webpage among different product lines.

By using the Constraints tab in Interact, you can create, delete, enable, or disable an offer constraint.

Creating a constraint for an offer

Use this task to set a time and date range for presenting an offer. You can also set the number of times an offer is shown in a specified time and date range. Use the **Constraints** tab to add an offer constraint.

You can edit a constraint by clicking the name of the constraint on the **Constraints** tab.

You can delete an offer constraint by selecting the check box next to its name and clicking the **Delete** icon.

1. Click the **Add constraints** icon on the **Constraints** tab of an interactive channel.
The **Add/edit constraint...** dialog appears.

2. Enter a **Name** for the offer constraint.

3. Enter a **Description** for the constraint.

This description appears on the Constraints tab to identify this offer constraint.

4. Specify the offers to which to apply the constraint by selecting **in folder** or **in offer list**. Use the accompanying drop-down list to select the folder or offer list that you want.

You can specify that the offers be available during a specific range of dates and times, be available up to a maximum number of times within a specific period, or both.

5. Specify the range of dates during which the offers can be made available:
 - a. Click **Start serving offers after** and use the calendar tool that opens to specify the earliest date on which the offers can become available. Use the drop-down list next to the **Start serving offers after** field to select the earliest time that the offers can become available.
 - b. Click **Stop serving offers by** and use the calendar tool that opens to specify the last date on which the offers can become available. Use the drop-down list next to the **Stop serving offers by** field to select the time they stop being available.
6. Optional: Enter the maximum overall number of times you want the offers to be served in the **Impressions** field.
If you do not enter a value in this field, no maximum number of offers constraint is applied.
7. Optional: Complete the **Distribute evenly with** fields to specify the maximum number of impressions you want the offers to be displayed within a single time period.

- Enter the maximum number of times you want the offers to be displayed in the **at most <number> impressions** field (replacing *<number>* with the actual maximum number you require).
- Use the **per** drop-down list to specify the time period in which you want the maximum number of impressions to be served to visitors. For example, per hour, per day.

If you do not complete the **Distribute evenly with** fields, the Interact server makes the offers available as usual for this interaction channel.

8. Click **Enable** to make this offer constraint active within the parameters you defined.
9. Click **Save and return** to go back to the Constraints tab or **Save and add another** to continue adding offer constraints

Modifying a constraint to change when an offer is presented

You can modify the name, description, or the definition settings of a constraint.

1. Click the **Constraints** tab of an interactive channel to view the list of constraints.
2. Click the name of the constraint you want to edit.
The **Add/edit Constraints** dialog opens.
3. Modify the **Name**, **Description**, or definition settings of the constraint.
4. Click **Save and return** to go back to the **Constraints** tab or **Save and add another** to save your changes and add another constraint.

Enabling or disabling an offer constraint

Sometimes you want to run offers without any constraints or restrictions for limited duration. In this case, you can disable and enable constraints.

Offer constraints are defined with a range of time during which it is used. However, there might be times when you want to prevent the offer constraint from being:

- Used without redefining its operating range
- Considered at all

You can disable and enable offer constraints with the **Add/edit constraint** dialog box.

1. Click the name of the constraint you want to edit on the **Constraints** tab.
The **Add/edit constraint** dialog box appears.
2. To disable the offer constraint so that the selected offers are served without the restrictions that are defined here, click **Disable**.
3. To enable the offer constraint, click **Enable**.
4. Click **Save and return** to return to the **Constraints** tab, or click **Save and add another** to add another constraint.

Deleting a constraint that is no longer needed

You can delete an offer constraint if you do not need it.

Note: You cannot recover a constraint after you delete it.

1. Select the check box next to the constraints you want to delete.
2. Click **Delete**.
3. Confirm the deletion.

Use learning models to select offers

Interact has a built-in learning module that monitors the real-time behavior of your visitors to influence your interactive flowcharts and help select the offers to present. You can also configure the learning settings to assign attributes at the interactive channel level so that each interactive channel can have its own set of customized learning models. Using customized learning models is also referred to as "self learning."

Before you can use the Self Learning feature, you must enable built-in learning globally for your Interact environment. For information about enabling the learning module and more information about learning in general, see the *IBM Interact Administrator's Guide*.

By using the Self Learning page in Interact, you can create, delete, edit, enable, or disable a learning model for an interactive channel.

Adding a learning model to customize offers for a visitor

You can add learning models to monitor the actions of the visitors that visit your website. Based on the previous actions of the visitors, you can determine the best offers for them.

You can edit a learning model by clicking the name of the learning model on the **Self learning** tab.

You can delete a learning model by selecting the check box next to its name and clicking the **Delete** icon.

1. Click the **Add model** icon on the **Self learning** tab of an interactive channel.

The **Add/edit learning model** dialog box opens.

2. Enter a **Name** for the learning model.
3. Enter a **Description** for the learning model.

This description is displayed on the **Self learning** tab to identify this learning model.

4. Complete the definition for the learning model by adding visitor attributes to the **Predictive attributes of interest** list.

This list specifies which visitor attributes you want Interact to monitor to determine the best offers to present to visitors. For a detailed description of learning and learning attributes, see *Interact built-in learning overview* in the *IBM Interact Administrator's Guide*.

5. Click **Enable** to make this learning model active within the parameters you defined.
6. Click **Save and return** to go back to the **Self learning** tab or **Save and add another** to continue adding learning models.

Editing a learning model

You can edit learning model parameters, such as name, description, and visitor attributes.

1. Click the **Self learning** tab of an interactive channel to view the list of learning models.

2. Click the name of the learning model that you want to edit.

The **Add/edit learning model** dialog box is displayed.

3. Optional: Modify the **Name**, **Description**, or definition settings of the learning model.
4. Click **Save and return** to go back to the **Self learning** tab or **Save and add another** to save your changes and add another learning model.

Deleting a learning model

Delete learning models that you no longer use. You cannot recover a learning model after you delete it.

You cannot recover a learning model after you delete it.

You cannot delete a learning model that is in use.

1. Select the check box next to the learning model that you want to delete. You can select multiple learning models.

2. Click **Delete**.
3. Confirm the deletion.

Enabling and disabling a learning model

Instead of deleting a learning model, you can disable it so that it is not available in a learning channel. You can enable the learning model when you require it to be available in the learning channel again.

1. Click the name of the learning model that you want to enable or disable on the **Self learning** tab.

The **Add/edit learning model** dialog box opens.

2. Optional: Click **Disable** to disable the learning model so that it is no longer available in the interactive channel.
3. Optional: Click **Enable** to enable the learning model.
4. Click **Save and return** to return to the **Self learning** tab, or click **Save and add another** to create a customized learning model.

AutoBinning

Auto-binning can be used to create bins based on ranges or list of profile attribute values and then Interact learning system will automatically map the values to the created bin and use for offer assignments.

A new menu "Global Learning" is added under main menu Interact which would lead you to "Global Learning" page. You can use this page to create, edit or delete bin definitions.

Add a new bin definition

1. Go to Interact -> Global Learning
2. Click on Add on "All Bin Definitions" tab. This will take you to "New Bin Definition" page
3. Select an attribute from a dropdown that lists all attributes from all mapped profile tables in design time. Each attribute in the list is suffixed with its data type.

Note : If there are attributes in different profile table that have the same name and same data type then only one attribute is included in the attribute list. If there are two attributes which have the same name but different datatype then both will be displayed, however, only one bin definition will be allowed to be defined because bin mapping on Interact runtime is solely done by attribute name.

4. An empty row in Bin Definitions section will be displayed.
5. Specify Description optionally
6. In Bin Definitions section provide a name for the bin definition.
7. Select "Type" as "Range" or "List".
8. Select the appropriate Operator and provide values as per the selected type and operator.

Note : For “List” type bin you can provide comma separator values in “Value” field or you can click on the pencil icon next to “Value” field to add List values.

9. Click on “Add” button if you wish to add more bin definitions and provide values for each bin definition that you have added.

10. Click on Save to save the bin definition(s) and get back to the list page.

Edit/Delete/Add an existing bin definition

1. Go to Interact -> Global Learning

2. Click on the name link of existing attribute on list page

3. Click on edit on detail page

4. Make required changes to the bin definitions for existing bins or add a new bin definition

5. You can delete existing bin definition by clicking the cross mark under Actions.

6. Save Changes

Delete existing Attributes from “All Bin Definitions”

1. Go to Interact -> Global Learning

2. Select the Attribute(s) you wish to delete.

3. Click on “Delete” button on top right corner to delete the selected attributes and related bin definitions.

Use triggered messages to send offers to different channels

You can use triggered messages to deliver offers to a different channel than the one where the request was sent in Interact. These offers are triggered by predefined user events and event patterns.

In Interact, events are posted for an audience ID, which triggers a predefined notification rule. The rule results in a push of the selected offer to this audience ID in a different outbound channel. The inbound channel, which triggered this message does not receive the offers from Interact as the result of the triggered event post. However, the same offer may still be returned to the inbound channel as the result of `getOffers` or `getOffersForMultipleInteractionPoints` API calls.

There are two types of triggers or rule entry points that are used in the triggered messages process flow. If the entry point is an event pattern, the rule is processed when the condition is met. If the entry point is an event, the rule is processed when the event is posted.

Once a rule entry point is triggered, the eligibility conditions define rules for the particular audience ID. You can select an audience level eligibility and add conditions based on eligible segments, profile attributes, and session attributes.

From the **Triggered messages** tab, you can set offer criteria. You can choose between automatically selecting the next best offer and selecting the best offer from

a list of offers. If you choose **Automatically select the next best offer**, you can choose a zone for offer. If you choose all zones, only strategic rules that apply to all zones are used. If you chose a specific zone, only the strategic rules that match that zone are used. If you choose **Select the best offer from the list**, you must add offers for Interact to choose from when the offer is triggered.

After you select the offers for your triggered messages, you can set the channels for these offers. These channels are predefined in **Campaign | partitions | partition[n] | Interact | outboundChannels**. You can also choose to send offers to the **Customer preferred channel**. You can add a delay factor for the channel so that there is always delayed by this specified time from executive of the event or event pattern to the offer delivery.

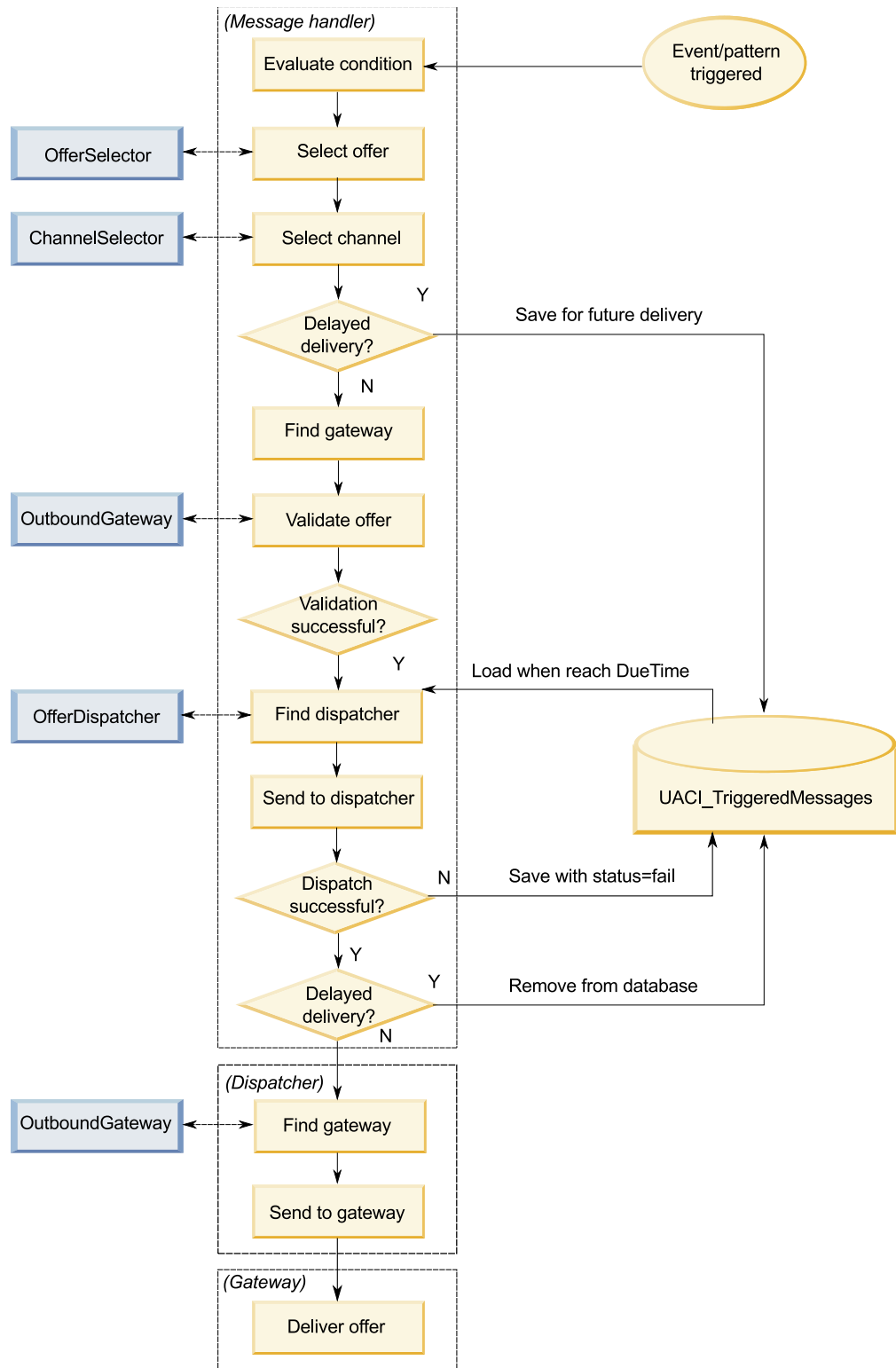
Triggered messages runtime workflow

The following triggered messages workflow occurs at Interact runtime.

1. When the event or event pattern is triggered, the message handler is invoked. The message handler is a type of an event action.
2. The message handler evaluates the message's eligibility condition. The result determines which offer is delivered and the candidate outbound gateways to send the offer.
 - a. If the offer is configured to be delivered later through the selected channel, it is persisted into UACI_TriggeredMessages table.
 - b. Otherwise, the offer is delivered immediately.
3. The message handler then determines the dispatcher based on the channel.
4. The offer information and the session data is passed to the dispatcher.
5. The dispatcher adds the offer into a queue for the selected gateway.
6. When the consumer side, which may or may not run in a different JVM if the dispatcher is a JMS queue, receives the offer, it involks the gateways to send the offer.
7. Periodically, a thread checks the database for delayed offers, loads them to be delivered, and sends the offers to the dispatchers corresponding to the channels that were determined in step 2.

If an error occurs in items 1 - 5 or 7, the offer is persisted into the database with the status marked as FAIL. If no errors occur, the offer is considered to be delivered successfully.

If an error occurs in step 6, the handling depends on the implementation of the consumer and/or the gateway. However, if the consumer also runs in the same application server, an error is logged.



Creating a triggered message to send offers to different channels

Use these steps to create a triggered message to send offers through channels that are different from the inbound channel.

1. From the **Triggered messages** tab in your interactive channel, click **Add triggered message** to create a triggered message.
2. Click the **Trigger** icon in the flowchart to define triggers for your offer delivery. You can choose between two trigger types; event pattern and event. If you choose an event pattern trigger, the rule is processed when the event pattern condition is met. If you choose an event trigger, the rule is processed when the event is posted. For each trigger type, you must choose a trigger from the predefined list.
3. Next, click the **Eligibility** icon to set eligibility conditions for your triggered messages. An eligibility condition determines what action is taken after the condition is met. The actions that are taken include which offer selection method is used and which channel is used for offer delivery. Each eligibility rule is evaluated to true or false. If you enter no eligibility conditions for a branch, the eligibility is always true.

Choose an audience level for your eligibility condition.

Click **Add** to add a condition. You can choose from eligible segments, profile attributes, and session attributes as your condition type. Eligible segments let you include any segments in your eligibility condition that are associated with this interactive channel and audience level, if specified. Profile attributes let you include any profile data in your eligibility condition. If an audience level is specified, all fields in the mapped base profile table are available. Otherwise, all fields in all mapped base profile tables are available. Session attributes let you enter any session parameter to pass into Interact engine through `startSession` method. Then, choose a subject, operator, value, and an and/or condition.

Note: When your condition type is string and the value is a string literal, you must use double quotation marks ("") around the text you enter for **Value**. If the value is a numeric or a variable, it should not be surrounded by double quotation marks. For example, if your **Condition type** is profile attributes and your **Subject** is COUNTRY, you could use USA for the **Value**.

Note: Interact does not currently support `TABLE.DIMENSION_FIELD >/=< SCALAR` syntax. Interact supports IN and NOT IN operators for dimension table fields. This syntax is not supported because the values in a dimension table field are usually a collection, and it would be misleading to automatically compare a collection of potentially different values to a single value.

Note: You can unmap profile table from your interactive channel even if profile attributes are used in the triggered message eligibility rule.

Click **Apply** when you are done.

You can click the plus sign (+) above the **Eligibility** icon to add multiple eligibility conditions for different audience levels.

4. Click the **Offer** icon to determine the settings for the offers that are sent to your customers. You can select **Automatically select the next best offer** or **Select the best offer from the list**.

If you choose **Automatically select the next best offer**, you can choose a zone for an offer. Any zone applies to all zones as well as any specific zone assigned on the **Summary** tab. If you choose any zones, only strategic rules that apply to all zones are used. If you chose a specific zone, only the strategic rules that match that zone are used. Click **Apply** when you are done choosing your zone.


If you choose **Select the best offer from the list**, click **Add** to create a list of offers for this triggered messages branch. For each offer, choose an offer name from the predefined offer list and set a marketer score for that offer. Click **Apply** when you are done creating your offer list.

5. Click the **Channel** icon to set the channels for your offer delivery. Then, click **Add** to create a channel. Select a channel name from the predefined list. Channels are defined in **Campaign | partitions | partition[n] | Interact | outboundChannels**. You can also choose **Customer preferred channel** to send your offer through the channel that your customer has indicated as their favored channel. To use **Customer preferred channel**, you must add a column to your profile database table for with the preferred channel information for your customers. If you use **Customer preferred channel** for your channel, you must create a **profileChannelAttribute** parameter.
You can add a fixed time delay for the offer delivery. If set, the delivery is always delayed by the determined time from the point of run time execution of this triggered message. If more than one channel is selected, the order of the channels in the list is the order that the channels are considered during execution.
Click **Apply** when you are done creating your channels.
6. Click **Save** after you entered your triggered messages branches.

Use with smart segments to refine offers

Interact uses smart segments in treatment rules to assign offers to visitors. Unlike strategic segments, you can create smart segments in Campaign sessions only. To create smart segments, you must use interactive flowcharts.

After you create the smart segments, you can organize them just as you organize strategic segments.

When you work with segments on the Segments page of Campaign, you can distinguish smart segments by the following icon: .

Create a Campaign session for interactive flowcharts

Interactive flowcharts are only available in Campaign sessions. You must create at least one session for your interactive flowcharts. Use the same security policy for the session as for the interactive channel that is associated with the flowcharts in the session.

Sessions can contain a combination of batch and interactive flowcharts. If your session contains both types of flowcharts, and you click the **Run** icon and select **Run All** from the Session Summary page, only the batch flowcharts run.

You cannot run interactive flowcharts from the design environment, you can perform only test runs.

Define an interactive flowchart to segment your visitors

Interactive flowcharts provide the segmentation logic for your interaction. When a visitor's runtime session is created, the runtime environment takes all available profile information for the visitor and runs it through all interactive flowcharts that are associated with the interactive channel. This filtering places the visitor into zero or more smart segments. The runtime environment then uses these segments to present offers as defined by the treatment rules.

You can rerun the profile information through all of the flowcharts by using an event with the Trigger Re-segmentation action.

You can create interactive flowcharts inside of Campaign sessions only.

See Chapter 3, “Interactive flowcharts,” on page 83 for details about creating interactive flowcharts.

Define real-time interactive offers for visitors

Based on offer templates you define in Campaign, you can set up real-time interactive offers that Interact presents to visitors.

Important: Interact does not currently support offer lists.

Offer template requirements for Interact

When you define offer templates to use when you create interactive offers, be aware of these requirements:

- You must enable the Interaction Point (IP) ID and Interaction Point Name offer attributes for all offers that are used by Interact. These attributes must exist, and are automatically populated during run time, overwriting any default IP ID or IP Name attributes you defined. The IP ID is the internal ID and the IP Name the name for the interaction point that is associated with the offer. This data is required for reporting.
- If you do not enable **Allow offers created from this template to be used in real-time interactions** when you define the offer template, you can still use the offers that are defined from this template with treatment rules. Offer suppression is available for use with the offers. However, Interact is unable to include those offers in reports.
- If your offer template contains the offer effective date and offer expiration date, you can define the dates relative to the **Flowchart run date**. For example, you can define the Offer Effective date to be the Flowchart run date. The offer can then expire some number of days after the effective date. For interactive flowcharts, the **Flowchart run date** is the time at which the runtime environment recommends the offer to the touchpoint for presentation.

Offers and naming conventions

As you map offers in Campaign to offers on your touchpoint, keep in mind the information that is available to use as part of your naming conventions. For example, for easy reference you might want to save all the banner ads in files that have the same name as the offer code.

Offers and treatment rules

When you change offers used in treatment rules, including retiring offers, you must redeploy all the interactive channels that are associated with the server group. The changes take effect when the interactive channels on the server group are redeployed.

Offers and the Interact API

As you create your offers, the Interact API can reference the following information from the offer:

- Custom offer attributes
- Offer code

- Offer description
- Offer effective date
- Offer expiration date
- Offer name
- Offer treatment code

When you create a `postEvent` call that logs offer acceptance or rejection, you must include the offer treatment code. However, if you enable cross-session response tracking, you can match on the treatment code, offer code, or a custom code particular to your environment. For more details about cross-session response tracking, see the *Interact Administrator's Guide*.

You can use `nameValuePair` class of the Interact API to define or retrieve data from custom offer attributes.

Creating offer templates for Interact

Use offer templates to create real-time offers that contain consistent information an audience segment. You create the offer templates in Campaign and use them in Interact.

1. Follow the instructions in the *Campaign Administrator's Guide* with the following exceptions.
2. In Step 1 of 3: Metadata, select the **Allow offers created from this template to be used in real-time interactions** check box.
3. In Step 3 of 3: Default Values, define default values for **Interaction Point ID** and **Interaction Point Name**.

You can enter any integer for the **Interaction Point ID** default value, and any string for **Interaction Point Name**. The values are automatically populated with the correct data by the runtime environment; however, the design environment requires a default value.

Use real-time offer suppression to fine-tune visitor offers

Offer suppression is another way to fine-tune the offers that Interact presents to visitors. Define offer suppression rules when you want to prevent an otherwise eligible offer from being seen by a visitor again because they: accepted or rejected the offer; or are presented with the offer more than a specified number of times.

For example, you might present an offer for a discounted price on tablet computers to a visitor who rejects the offer. If you concluded that the visitor is no longer interested in tablet computers, you could suppress that offer for that visitor for the next 30 days. If you also determined that a user who rejects tablet computers also has no interest in smart phones, you could suppress related offers for the same time period.

You can also provide a time period after which the offer should once again be eligible for that visitor. A time limit for the suppression ensures that, after a certain amount of time has passed, the offer will again be eligible to be seen by the visitor.

Interact applies offer suppression in real-time, after offer personalization for the visitor is complete. Each eligible offer is checked against the offer suppression list before being presented, and any offers that match are omitted from the eligible list for that visitor.

You can define offer suppression rules for any offer based on an offer template where **Allow offers created from this template to be used in real-time interactions** is selected.

Rules for suppressing offers in real time

Configuring real-time offer suppression in IBM Interact involves defining some combination of how to handle the offer if the visitor has accepted it before, rejected it before, has been presented with the offer more than a specific number of times, or is related to an offer that is already being suppressed.

When Interact evaluates an offer for presentation to a visitor, offer personalization is performed as usual, and then each eligible offer is compared to the offer suppression list to see whether it matches. If the offer matches, it is not presented to the visitor, and instead another matching offer is presented instead.

The following table describes the methods by which Interact can suppress an offer:

Table 9. Offer suppression rules

Rule	Description
Offer acceptance	<p>An offer acceptance is an offer that has received any response that is recorded as an acceptance response. By default, a visitor response can trigger an "accept" action for an offer, but you can specify other response types as acceptance actions.</p> <p>When you are defining an offer for real-time interaction, suppressing the offer that is based on acceptance is defined in the On Offer Acceptance section.</p> <p>The complete list of response types available for rule suppression is defined in the UA_UsrResponseType table in the IBM Campaign system tables. See the <i>IBM Campaign Administrator's Guide</i> for details.</p>
Offer rejection	<p>An offer rejection is an offer that has received any response that is recorded as a rejection response. By default, a visitor response can trigger an "reject" action for an offer, but you can specify other response types as rejection actions.</p> <p>When you are defining an offer for real-time interaction, suppressing the offer that is based on rejection is defined in the On Offer Rejection section.</p> <p>The complete list of response types available for rule suppression is defined in the UA_UsrResponseType table in the IBM Campaign system tables. See the <i>IBM Campaign Administrator's Guide</i> for details.</p>

Table 9. Offer suppression rules (continued)

Rule	Description
Offer fatigue	<p>When an offer has been presented to a visitor a specific number of times, the offer is suppressed to prevent offer fatigue, where an offer is seen so many times it is no longer noticed.</p> <p>When you are defining an offer for real-time interaction, suppressing the offer that is based on the number of times it has been presented is defined in the On Offer Presentation section.</p>
Related offer suppression	<p>For any offer suppression (On Offer Acceptance, On Offer Rejection, or On Offer Presentation), you have the option of also suppressing other offers that are related to the current offer. An offer is related if the offer attribute (as defined on the offer template) has a matching value to the offer that is being suppressed.</p> <p>For example, you might be suppressing an offer that has been accepted by visitors where the attribute "Average response revenue" is less than \$100. By suppressing other offers that are based on this attribute having the same value, you can suppress other low-value offers to the same visitor.</p> <p>If an offer is related to other offers that have been accepted, rejected, or presented too many times, the offer is no longer presented.</p> <p>Be aware of the following practices concerning attribute matching:</p> <ul style="list-style-type: none"> • If an offer rule defines both an attribute name and an attribute value, then offers with the same attribute whose value matches the configured value are suppressed for the configured duration. • If an offer rule has only an attribute name, then all offers with the same attribute whose value matches the value of the offer being posted against are suppressed for the configured duration. <p>If an offer is not associated with an Interactive Channel, its offer suppression rules will not be deployed with that Interactive Channel. For the Related offer suppression to work between Interactive Channels, the offer for which the suppression rule is defined must be present in a treatment rule for all the Interactive Channels that the suppression rule should be deployed to.</p>

For each of the rules described above, you can optionally apply a time limit to the offer suppression so that the offer is suppressed for a specified number of days. If you do not supply a time limit, the offer is permanently suppressed for that visitor.

Working with treatment rules

Treatment rules are the main guidelines that are used by Interact to present offers. The treatment rules are where you assign offers to smart segments by zone. You can also add a marketing score to each rule to add weight to the offer within the learning engine.

There are several optional features you can use to further influence or override treatment rules. For more information about Interact offer serving, see the *Interact Administrator's Guide*.

Treatment rules are organized by smart segment. You assign any number of offers to each segment. After assigning offers to a segment, you can define a zone where that offer is applicable. You can assign the same offer to the same segment multiple times and assign them to different zones.

If you delete a smart segment or retire an offer, Campaign disables any treatment rule that contains the segment or offer.

The smart segments are mapped to cells within a campaign. You can edit the cell codes that are associated with each smart segment from the interaction strategy tab.

You must select offers that are created from an offer template with **Allow offers created from this template to be used in real-time interactions.** enabled only. If you do not, inaccurate report data is generated.

Treatment rules are defined on the interaction strategy tab of a campaign. You can copy interaction strategies from one campaign to another using the Copy Interaction Strategy icon at the top of the tab.

Offer eligibility

Treatment rules are the first level of methods Interact uses to determine which offers are eligible for a visitor. Interact has several optional features that you can implement to enrich your offer-to-visitor assignments.

The following list displays the optional features in Interact that you can use to enrich your offer-to-visitor assignments:

- Offer suppression
- Global offers
- Individual offer assignments
- Score overrides
- Learning

Before you create your treatment rules, confirm with your Interact administrator the offer eligibility features that are available to you. For example, if you are using a score override table to override the marketing score, it might not be necessary to change the marketing scores from the default for all of your treatment rules.

For more information about offer eligibility features, see the *Interact Administrator's Guide*.

Marketing score

Every treatment rule contains a marketing score that is represented by the slider. The default score is 50. The higher a score, the more likely it is that Interact selects the offer to recommend. Depending on how you configure your treatment rules across multiple campaigns, you can have multiple offers that are assigned to the same smart segments.

Interact uses the marketing score to help determine which offer displays if multiple offers are available for a single request. For example, if a request for offers must choose between offer A with the marketing score of 30 and offer B with the marketing score of 80, Interact presents offer B.

If two or more of the highest-scoring offers have the same score, Interact breaks the tie among the offers by making random selection from the matching offers. This helps to ensure that a single visitor interacting in the same zone multiple times is more likely to see different offers on each interaction. You can change this behavior, if wanted, by modifying the `Interact | offerServing | offerTieBreakMethod` configuration property. See the "Interact Runtime Configuration Properties" appendix of the *Interact Administrator's Guide* for details.

If you assign the same offer to the same segment with different scores, for example, two different campaigns might create treatment rules for the same interactive channel, Interact uses the higher score.

You can also define the marketing score by using advanced options for the treatment rule. You can build an expression by using IBM macros, offer attributes, session variables, dimension tables, and any value in a customer's profile to define the marketing score.

You can override any changes to the marketing score made on the interaction strategy tab by providing data in a score override table. Using a score override table, you can easily import scores that are generated in IBM PredictiveInsight, Contact Optimization, or some other modeling software. In the Score Override table, you can define scores greater than 100.

If you enable built-in learning, the marketing score is used in the learning algorithms.

For details about working with the score override table, see the *Interact Administrator's Guide*.

Treatment rule advanced options

You can enhance your treatment rules with advanced options. You can add an expression to either determine whether the treatment rule is applicable or to override the marketing score.

Treatment rules for offers outside of interactive flowcharts

You write expressions for offer eligibility directly inside treatment rules to control how you target offers from outside of interactive flowcharts. Some rules might be easier to manage at this level rather than at the segmentation level.

For example, you might write the expression `offer.dynamic.ownProductX='yes'`, that is, if the offer attribute `ownProductX` is yes, use this treatment rule. In this example, you might include a specific offer or you might have a different score for the offer for people who already own product X. You can build specific treatment rules, for example, assigning specific offers that are based on offer attributes or the day of the week.

Treatment rules to adjust marketing scores

You can also write expressions to define or adjust the marketing score.

For example, `profileTable.dimensionTable.scoreAdj * MarketerScore`, which multiplies the value of the `scoreAdj` column to the current marketing score defined by the slider for the treatment rule.

Working with the Interaction Strategy tab

The interaction strategy tab is the place in your campaign where you assign offers for the real-time interactions. When you create the interaction strategy tab, you assign it to an interactive channel.

You can create as many campaigns that contain interaction strategy tabs as required for your organization. For example, if you have a campaign for new checking accounts and another for auto loans, both can reference the same interactive channel for the call center. You cannot copy or move interaction strategy tabs.

Note: You can have one interaction strategy tab per interactive channel per campaign. If you have three interactive channels, you can have no more than three interaction strategy tabs in a single campaign, and each of these tabs must be assigned to a different interactive channel.

The interaction strategy tab contains two major sections, the deployment area and the treatment rules area. The deployment area shows the deployment status of the treatment rules. The treatment rules are where you assign offers to segments.

You can use **Quick search** to search for Zones, Segments and Offer Trees on the Interactive Strategy Page. You can also use the **Advanced filter** functionality to search for Zones.

Campaigns with interaction strategy tabs

The summary tab of campaigns displays the segments and offers associated with the campaign. Offers added to the campaign by treatment rules display on the campaign summary tab only if three conditions are met. First, you must deploy the interaction strategy. Second, you must configure the contact and response history module to transfer data from the runtime environment to the design environment. Third, the data transfer from the runtime environment to the design environment must be complete. For example, you configure the contact and response history module to run every two hours. You then add an interaction strategy tab to the campaign. The offers do not is displayed on the campaign Summary tab. You then deploy the interaction strategy tab. The offers are still not displayed on the campaign Summary tab. Two hours later after the contact and response history module finishes the next data transfer, the offers is displayed on the campaign Summary tab.

Smart segments do not display on the campaign Summary tab.

Creating an interaction strategy tab

You can create an interaction strategy tab while creating a campaign or while viewing the **Summary** tab of an existing campaign.

You must create an interactive channel before creating interaction strategy tabs.

1. You can add an interaction strategy tab to a campaign in one of two ways:
 - When creating a campaign, click **Save and add interaction strategy**.
 - When viewing the **Summary** tab of an existing campaign, click the **Add interaction strategy** icon.

The new interaction strategy page is displayed.

2. Enter a **Name** and **Description** for the interaction strategy tab.
3. Select the **Interactive channel** for the interaction strategy tab.
4. Click **Save and create treatment rules**. Clicking **Save and create treatment rules** places you in the interactive strategy in edit mode, where you can make and save changes. See “Adding or modifying a treatment rule” on page 64 for information about adding and modifying treatment rules.
5. Click **Save and exit** when you are finished creating treatment rules, or click **Cancel** to exit interactive strategy edit mode and return to the view-only interaction strategy tab.

You can edit the name and description of the interaction strategy tab later by clicking the **Edit properties** icon. You cannot change the interactive channel with which the interactive strategy is associated.

You can modify an interaction strategy tab later by clicking the **Edit strategy** icon.

You can delete an interaction strategy by clicking the **Delete interaction strategy** icon. Whether you can delete the interaction strategy depends on the deployment status of the interactive channel that is associated with this interaction strategy tab.

Viewing the interaction strategy tab

Whenever a campaign has one or more interaction strategy tabs that are associated with it, you can view each tab to see the current, detailed settings and deployment status of the interaction strategy, and you can also mark the interaction strategy for deployment without entering edit mode. This section describes the information that you can see while in view-only mode.

Interactive channel information

The **For the interactive channel** field displays the interactive channel with which this interaction strategy tab is associated. Click the name of the interactive channel to go directly to the Summary tab of the associated interactive channel.

Quick search information

Quick search functionality is enabled for zones, segments and offers tree on the Interactive Strategy tab. Additionally, advanced filter functionality is enabled for the zones.

Deployment information

There are two fields on the interaction strategy tab that provide you with deployment information:

- Deployment status. The **Deployment status** button indicates the current status of the interaction strategy tab, such as Not Yet Deployed, Deployed, the last deployment date, last undeployment date, and so on.
- Deployment action. Click the deployment action button to specify an action to take with this interaction strategy, depending on its current state. The choices include:
 - **Mark for deployment.** If the status is "Not Yet Deployed," you can click this button to mark the interaction strategy for deployment.
 - **Mark for undeployment.** If the status is "Deployed," you can click this button to mark the interaction strategy for undeployment.
 - **Cancel deployment request.** If you have clicked **Mark for deployment**, you can undo that request by clicking this button.
 - **Cancel undeployment request.** If you have clicked **Mark for undeployment**, you can undo that request by clicking this button.

Viewing the treatment rules

The interaction strategy tab contains a complete list of the treatment rules available for the strategy. You can use this list to view treatment rules in the following ways:

Table 10. Interaction strategy view options. Interaction strategy view options




Viewing option	Description
View by menu	Allows you to view the list of treatment rules grouped by segment (along with the zones, offers, and other options for that segment), or grouped by zone (along with the segments, offers, and other options for that zone).
Cell Self-Learning Settings icon ()	Click this icon to see a read-only view of the self-learning settings for that segment. This icon is available in view-only mode only when you are viewing by segment.
View Interactive Cell Performance report icon ()	Click this icon to see the Interactive Cell Performance by Offer report for that segment.
Filtering columns to omit specific values	By default, the table shows all values for the specific segments or zones. If a column heading is accompanied by the filter icon (), you can click the icon to select only the specific items of that type you want to display. See "Filtering tables in IBM products" on page 115 for more information about using column filters.

Table 10. Interaction strategy view options (continued). Interaction strategy view options

Viewing option	Description
View-only treatment rule settings	For all other treatment rule information, including Enabled , Marketers score , Advanced options , and Offer attributes , you can view the information (or click the icons to view additional information) just as you can when you are creating treatment rules, with the restriction that all information is view-only and cannot be changed.

To modify any information on the interaction strategy tab, click the **Edit strategy** icon to enter edit mode.

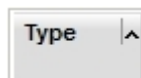
Related tasks:

“Sorting tables in IBM products”

Sorting tables in IBM products:

When you are viewing a table of information in IBM products, features might be available that allow you to customize the table view to sort the information in ascending or descending order, based on one column value or based on combinations of column values. This section describes how to identify and use sorting options, when they are available in a table.

The steps described here apply only to tables where sorting by column heading is supported. To identify a table where this feature is supported, move your mouse pointer onto a column heading. If a sort control is displayed, as shown in the following example, the table supports sorting by column heading:



The control to the right of the column heading indicates the sort order for this column, which is described in the table in the following procedure.

1. To determine the sort order of a table using a single column, click one of the following controls in the column heading:

Sort icon	Description
	Sorts the table by using the selected column in ascending order.
	Sorts the table by using the selected column in descending order.
	Cancels the sorting of the table by using this column.

2. Optionally, move the mouse over one or more additional columns, and click the ascending or descending icon to sort by additional column values ("2" indicating secondary sort, "3" indicating a tertiary sort, and so on). Each level of sorting you add is applied to the data in the table in the order in which you

assign it. For example, if you selected Date as the primary sort column and Time as the secondary sort column, all rows in the table would be sorted by date, and within identical sort date values, each row would be sorted by time.

3. To clear a column from affecting the table sort order, click the sort icon on the column until the "x" is displayed, then click the "x".


Adding or modifying a treatment rule

Use **Add rules** on an interaction strategy tab to add or modify a treatment rule.

You must create smart segments and offers before you create treatment rules.

You must also be viewing an interactive strategy tab in edit mode. To enter edit mode, click the **Edit strategy** icon on the interactive strategy tab.

Note: You cannot edit a strategy if it is marked for deployment.

1. On an interaction strategy tab, click the **Add rules** () icon.
The **Add rules** panel is displayed.



Note:

As you drag an object from the **Add rules** panel onto the table that defines the treatment rule, the color of the object you are dragging changes from red to green. Green indicates that you can drop the segment at the specific location on the list; red indicates that you cannot drop the segment at that location. See the descriptions for each object for an explanation of where you can drop objects on the treatment rule.

2. Add a segment to a rule by selecting a segment from the **Available segments** tab of the **Add rules** panel and dragging it to the rules table. If you drag multiple segments to the rules table, multiple rules are created for you automatically.

You can drop segments only onto the **Eligible segments** column. The order of the rules does not matter.

After you add a segment to the rule, you can click the following icons next to the segment name:

- Use the **Self-Learning Settings** icon () to determine the learning model that applies to this segment in the treatment rule. By default, the learning model is inherited from each zone, but you can use this dialog to specify that the marketing scores or a custom learning model can be applied instead. See "Use learning models to select offers" on page 46 for details.
You can also view and change the Self-Learning settings by clicking the name of a segment and selecting **Override self-learning for this segment** from the menu that is displayed.
 - If the **View report** icon () is visible, you can view the Interactive Cell Performance by Offer report for this strategy.
3. To add zones to the treatment rule, click the **Available zones** tab in the **Add rules** panel.
The **Available zones** tab that contains zones to which you can assign the offers in specific segments.
 4. Add a zone to a rule by selecting one or more zones from the **Available zones** tab of the **Add rules** panel and dragging it to the rules table.

If you select multiple zones, each zone you drop into the table creates a unique treatment rule.

You can drop offers into the **Eligible zones** column for a particular segment, or onto the segment itself to accomplish the same action. The order of the zones does not matter.

You can modify the zones in a segment at any point by clicking the name of the zone in the **Eligible zones** column and selecting the check box next to each zone you want to include, or by selecting **All zones** to modify the selected zone to encompass all zones. When you modify an **All Zones** entry to select individual zones, individual treatment rules are created automatically for the specific zones you selected.

5. To add offers to the treatment rule, click the **Available offers** tab in the **Add rules** panel.

The **Available offers** tab that contains offers that you can recommend as part of this treatment rule is displayed.


6. Add an offer to a rule by selecting an offer from the **Available offers** tab of the **Add rules** panel and dragging it to the rules table.

You can also select multiple offers and drag them to the rules table.


You can drop offers into the **Recommended offers** column for a particular zone, or onto the zone itself to accomplish the same action. The order of the rules does not matter; however, dragging to an offer already in the list inserts the rule below that offer.

You can add multiple offers to a treatment rule, and Interact duplicates the treatment rule for each offer automatically.

7. To modify the marketing score for a specific treatment rule, adjust the slider in the Marketers Score column. To modify the marketing score for multiple treatment rules at once, select the check box next to each treatment rule you want to modify, then choose **Edit selected rules > Advanced options**.
8. To add an advanced option to define rule eligibility or override the marketing

score, click the advanced options icon (), located to the right of the score slider, in a treatment rule, or select multiple zones whose advanced options you want to modify, then choose **Edit selected rules > Advanced options**. Use the slider to assign a marketing score to treatment rule. Click the radio buttons next to **Consider this rule eligible if the following expression is true** or **Use the following expression as the marketing score** to see the options for defining advanced rule eligibility options. For information about defining advanced rules, see “Adding advanced options to a treatment rule” on page 66.

9. To specify parameterized offers for a treatment rule, click the **Parameterized**

offer attributes icon () in the **Offer attributes** column, or select the check box next to one or more treatment rules and choose **Edit selected rules > Parameterized offers**. Use the dialog box that is displayed to specify the parameterized offer attribute names and values as described in “To add parameterized offer attributes to a treatment rule” on page 68.

10. When you are done editing the interaction strategy tab, click **Save and exit** to return to view-only mode, or click **Save** to save your changes and continue editing.

You can discard your changes and return to view-only mode by clicking **Cancel** at any time.

You receive a warning if you add the same offer to the same segment for the same zone, other than All Zones, to prevent duplication. You can choose to ignore this warning.


You can view segments and offers either in the tree view or list view. The tree view displays the segments or offers in the folder structure you create on the respective segment or offer page. The list view displays the segments or offers in alphabetical order by name. The **Source flowchart** and **Last run** columns are empty for all smart segments. You can also search for segments and offers by name, description, or code. The search for segments can display smart segments only.

You can view the Interactive Cell Performance by Offer report for a segment by clicking the **View** link under Performance Statistics. If you select offers that do not have **All offers created from this template to be used in real-time interactions** enabled, no data is collected for reporting.

Adding advanced options to a treatment rule

Use the **Edit interaction strategy** tab icon on an interaction strategy tab to add advanced options to a treatment rule.

You can write an expression to define treatment rule eligibility or to override the marketing score.

1. If you are not already editing an interaction strategy tab, click the tab and click the **Edit interaction strategy** tab icon to enter edit mode. When you are in view-only mode, you can view, but not change, advanced options following the steps below.
2. Select one or more treatment rules for which you want to add advanced options, then complete one of the following steps:
 - a. Click the advanced options icon (), located to the right of the score slider, in a treatment rule to add advanced options.

Note:

The **Enabled**, **Marketers score**, **Advanced options**, and **Offer attributes** (Parameterized Offer Attributes) columns and icons are not visible when the **Add rules** panel is visible. To see these columns when you are editing a

rule, click the **Close** icon ().

- b. Select the name of one or more eligible zones, then click **Edit selected rules > Advanced options**.

The Advanced Options panel is displayed. By default, **Do not use advanced options** is selected, indicating that the Marketing Score values should be used. However, you can override that setting by following the steps here.

3. Select **Consider this rule eligible if the following expression is true** to create an eligibility rule or **Use the following expression as the marketing score** to override the marketing score.

Select **Do not use advanced options** to disable the advanced options. This does not delete any expressions.

4. Write your **Expression**.

All available functions, variables, and operators are listed to assist you building your expression.

You can click **Check syntax** to determine whether your expression is valid.

Note: **Check syntax** uses your test run Interact runtime server for validation. Your test run runtime server must be running for check syntax to function.

5. Click **OK** when you are finished editing the advanced options to close the dialog and save your changes.

Treatment rule advanced option expressions:

You can write either a Boolean expression to filter treatment rules, or an expression to calculate an override for the marketer's score. However, you have a limited number of expression building blocks.

Important: Custom macros, derived fields, and user variables are not available for treatment rule advanced options.

The following building blocks are available to you.

- IBM macros that are supported by Interact

For a list of the IBM macros that are supported by Interact, see the *IBM Macros User's Guide*.

- Offer attributes
- Session variables
- Dimension tables
- Profile data
- Marketers score

If you define a Boolean expression for a marketing score, true becomes 1 and false becomes 0. If you define a numeric expression for a Boolean expression, 0 is false and all other values are true.

Note: Your performance may be impacted if you have an expression that uses EXTERNALCALLOUT in advanced options of your treatment rules. For example, if there are 100 eligible offers (each with an advanced option with an EXTERNALCALLOUT) that Interact has to prioritize down to one best offer, then Interact has to evaluate each option and fire potential 100 external callouts to fulfill that one getOffers request.

Here are several examples of expressions for both rule filtering and score calculation using the various building blocks available to you.

Consider this rule eligible if the following expression is true

```
profileTable.accountType != 'Gold' ||  
    profileTable.dimensionTable.accountBalance > 5000  
Offer.Static.EffectiveDateFlag = 0  
Offer.Dynamic.OfferColor = 'Blue'  
EXTERNALCALLOUT('GetPrimeRate') <= 6.9
```

In this example, the GetPrimeRate external callout is a Java program which goes to a website and collects the current prime interest rate.

Use the following expression as the marketing score

```
AVG(profileTable.dimensionTable.accountBalance)  
MarketerScore + STDEV(profileTable.dimensionTable.accountBalance)
```

In the following example, the marketer's score takes into account the customer's lifecycle (which represents the marketer's overall likelihood to be responsive to offers and the company's desire to market to this customer), the predetermined fact that the company wants to market certain classes of products to this specific individual, and the overall value that accepting the offer would add to the customer's account in the eyes of the company.

Calculated Marketer's Score =
 [sLifeCycle] *
 [wClassA] *
 [(wShortTermVal * vShortTerm) + (wLongTermVal * vLongTerm)]

Customer Attributes:

wShortTermVal = global weighting towards short term value = 1
wLongTermVal = global weighting towards long term value = 0.7
wClassA = customer weighting towards product class A = 1.2
sLifeCycle = customer life cycle score = 1.5
 1 - Onboarding
 1.5 - Settled
 0.2 - At Risk
 0 - Leaving

Offer Attributes:

vShortTerm = offer short term value gain = 250
vLongTerm = offer long term value gain = 150

To add parameterized offer attributes to a treatment rule

For any treatment rule or set of treatment rules, you can parameterize the values of some offer attributes at run time based on the profile data. Using a dialog available from the strategy tab, you can create mappings that parameterize offer attributes with constants or expressions. After the strategy is deployed successfully, the mappings you created are used in the runtime environment to override the offer attribute values of the returned offers.


Make sure that you have defined offers with attributes that you can parameterize from the strategy tab, and that you have assigned one or more offers to the treatment rules you are defining.

When offers are requested, the Interact runtime processes the requests as usual, but before those offers are about to be returned, the run time determines whether any attributes of those offers can be parameterized based on the strategy treatment rules that apply. For parameterized offers, the run time retrieves the appropriate attribute mappings, evaluates them, and returns the results as the return values.


Note: If the run time determines that an offer attribute is parameterized based on both the treatment rule setting and a table-driven feature (such as the Interact Process Box on the batch flowchart), the order in which they are evaluated are white list first, then strategy treatment rules, then offerBySQL query results, and then, if the preceding criteria are not available, the default offers.

You can create, view, and edit parameterized offer attribute settings by using one of two methods on the strategy tab.

1. If you are not already editing an interaction strategy tab, click the tab and click the **Edit Interaction Strategy** tab icon to enter edit mode. When you are in view-only mode, you can view, but not change, offer attribute parameterization settings by following the steps that are described here.
2. Select one or more treatment rules for which you want to add offer attribute parameterization settings, then complete one of the following steps:

- a. Click the offer attribute parameterization icon (), located to the right of the score slider and advanced options icon, in a treatment rule.

Note:

The **Enabled**, **Marketers score**, **Advanced options**, and **Offer attributes** (Parameterized Offer Attributes) columns and icons are not visible when the **Add rules** panel is visible. To see these columns when you are editing a rule, click the **Close** icon ().

- b. If you are viewing the strategy tab in edit mode, select the name of one or more eligible zones, or one or more eligible segments, then click **Edit Selected Rules > Parameterized Offers**.

The Parameterized Offer Attributes panel is displayed, showing each attribute in the **Attribute Name** column, and the current value to be used for that attribute in the **Attribute Value** column. By default, the default values for the attributes are displayed. However, you can override those values by following the steps here.

3. In the **Attribute Value** column, click the value currently displayed.
4. Use the dialog that is displayed to enter a literal constant for that offer attribute or to create an expression by using the provided expression builder.

All available functions, variables, and operators are listed to assist you building your expression.

You can click **Check Syntax** to determine whether your expression is valid.

Note: **Check Syntax** uses your test run Interact runtime server for validation. Your test run runtime server must be running for check syntax to function.


5. Click **OK** when you are finished editing the advanced options to close the dialog and save your changes.

Adding or modifying treatment rules with the rule wizard

Use the **Rule wizard** on an interaction strategy tab to add or modify treatment rules. You can add multiple treatment rules at once using this method.

You must create smart segments and offers before you create treatment rules.

You must also be viewing an interactive strategy tab in edit mode. To enter edit mode, click the **Edit strategy** icon on the interactive strategy tab.

1. On an interaction strategy tab, click the **Rule wizard**  .
2. Select offers to be included in the rules you generate through the **Rule wizard**. You can search for offers or browse through the list of available offers. Click **Next** after you selected offers to include.
3. Select segments to be included in the rules you generate. You can search for segments or browse through the list of available segments. Click **Next** after you selected segments to include.
4. Associate zones with each selected segment to be included in the rules you generate. By default **All zones** is selected. You can assign different zones to any single or group of selected segments. You should select in the segments list the wanted items in the segments list and then associate the wanted zones. Click **Next** after you associated zones to each selected segment.

5. Under **Edit rule advanced options**, you can adjust the marketing score. You can also enable and add rule expressions. Click **Check syntax** to validate any expression before proceeding. Then, click **Next**. Changes are applied to all created and modified rules.
6. Modify parameterized attributes that are common to your selected offers. Click each value to edit the offer attribute. Click **Check syntax** to validate any expression before proceeding. Then, click **Next**. Changes are applied to all created and modified rules.
7. Set the wizard behavior for the rule generation process. You can choose to update the existing rules with your changes. You can also change the wizard result view and show only the rules that are created or updated by the **Rule wizard**.
8. Click **Done** to apply your rules.

You can view segments and offers either in the tree view or list view. The tree view displays the segments or offers in the folder structure you create on the respective segment or offer page. The list view displays the segments or offers in alphabetical order by name. The **Source flowchart** and **Last run** columns are empty for all smart segments. You can also search for segments and offers by name, description, or code. The search for segments can display smart segments only.

You can view the Interactive Cell Performance by Offer report for a segment by clicking the **View** link under Performance Statistics. If you select offers that do not have **Allow offers created from this template to be used in real-time interactions** enabled, no data is collected for reporting.

Enabling and disabling treatment rules

You can enable and disable treatment rules without deleting them. You cannot enable or disable rules until the interaction strategy tab finishes loading.

You can view the menus by clicking the segment or offer.

Note:

The **Enabled**, **Marketers score**, **Advanced options**, and **Offer attributes** (Parameterized Offer Attributes) columns and icons are not visible when the **Add rules** panel is visible. To see these columns when you are editing a rule, click the

Close icon ().

1. Open the interaction strategy tab that contains the treatment rules that you want to modify.
2. Click the **Edit strategy** icon to enter edit mode.
3. Modify the treatment rules by using any of the following methods.

Action	Procedure
Enable a single rule	Click the Enable rule icon until the check mark is green (and not dimmed).
Enable all rules that contain a particular offer	Click an offer and select Enable all rules involving this offer .
Enable all rules that contain a particular segment (cell)	Click a segment and select Enable all rules for this segment .

Action	Procedure
Disable a single rule	Click the Enable rule icon until you see a gray (dimmed) check mark.
Disable all rules that contain a particular offer	Click an offer and select Disable all rules involving this offer .
Disable all rules that contain a particular segment (cell)	Click a segment and select Disable all rules for this segment .

4. When you are finished enabling or disabling treatment rules, click **Save** to save your changes and remain in edit mode, or **Save and exit** to save your changes and return to view-only mode.

Deleting treatment rules

You can delete treatment rules you no longer need. You can open the menus by clicking the segment or offer. Deleting all the rules for a segment also removes the segment from the treatment rules table.

1. Open the interaction strategy tab that contains the treatment rules that you want to modify.
2. Click the **Edit strategy** icon to enter edit mode.
3. Delete the treatment rules by using the following methods.

Action	Procedure
Delete a single rule	Click an offer and select Edit selected rules > Delete rules .
Delete all rules that involve an offer	Click an offer and select Delete all Rules Involving this Offer .
Delete all rules for a segment (cell)	Click a segment and select Delete all Rules for this Segment .

4. When you are finished deleting treatment rules, click **Save** to save your changes and remain in edit mode, or **Save and exit** to save your changes and return to view-only mode.

Deploy interaction strategy tabs

After you configure the interaction strategy tab, the next step is to mark the strategy tab for deployment. When you mark an interaction strategy tab for deployment, a notification is displayed on the interactive channel that is associated with this interaction strategy tab that it can be deployed to a runtime server group for testing or production.

When an interaction strategy tab is marked for deployment, you cannot edit the strategy tab. If you need to make more changes before the interaction strategy tab is deployed, you can cancel the deployment request. This removes the strategy tab from the list of items that are pending deployment, at which point you can modify it as needed.

When an interaction strategy tab is no longer needed, you can mark it to undeploy. This adds the retirement request to the deployment queue. The next time that all changes are deployed, the interaction strategy tab and all its treatment rules are removed from the runtime server.

Marking an interaction strategy tab for deployment

After you create and modify an interactive strategy as needed for an interactive channel, you can mark it for deployment.

An interaction strategy must be created for an interactive channel.

1. View the summary page for the interaction channel that is associated with the interaction strategy you want to mark for deployment.
2. In the **Associated strategies** section on the **Summary** tab, click the interactive strategy that you want to mark for deployment.

The interactive strategy tab is displayed.

3. Click the **Mark for deployment** button.

The interaction strategy is marked for deployment. The interaction strategy is added to the list of items that are waiting to be deployed on the interactive channel summary page.

Note:

You cannot edit an interaction strategy that is marked for deployment.

The next time that you deploy the interactive channel, the changes to this interaction strategy tab are included.

If you have reports installed and click **View deployment history** at the top of the interactive channel **Summary** tab, you can view the Interactive Channel Deployment History report to see the results of the deployments.

Canceling a deployment request

Use an interaction strategy tab to cancel a deployment request.

1. View the interaction strategy tab for which you want to cancel deployment.
2. Click **Cancel deployment request**.

The interaction strategy tab is no longer marked for deployment. The interaction strategy tab is removed from the list of items that are waiting to be deployed on the interactive channel summary tab. You can now edit the interaction strategy tab.

If you click **View deployment history**, you can view the Interactive Channel Deployment History report if you have reports installed.

Marking an interaction strategy tab for undeployment

If you no longer require the smart segments that are created by an interaction strategy tab, you can undeploy the strategy tab. This removes all references of the strategy tab from the runtime server. This option is available only if you previously deployed the interaction strategy tab.

1. View the interaction strategy tab that you want to mark for undeployment.
2. Click **Mark for undeployment**.

The interaction strategy tab is marked for undeployment. The data removal request is added to the list of items that are waiting to be deployed on the interactive channel summary tab. You cannot edit an interaction strategy tab that is marked for undeployment.

The next time that you deploy the interactive channel, all references to this interaction strategy tab are removed from the runtime servers.

If you click **View deployment history**, you can view the Interactive Channel Deployment History report if you have reports installed.

Exporting an interactive channel

In Interact, you can export a previous interactive channel deployment version. When you export a deployment version, you can send this export to IBM technical support to troubleshoot any problems with your deployment.

You can export an interactive channel deployment version from the **Deployment History** section of the **Deployment** tab in your Interactive Channel. When you export an interactive channel, it is saved as ExportIC.exp by default.

Any objects that are disabled are not exported as part of the export package.







The interactive channel is exported in the following structure.

- Dependent objects
 - Campaigns
 - Offers
- Global data
 - Custom macros
 - Audience levels
 - Offer attribute def map
 - Learning configuration
 - CH RH tables map
 - Event patterns
- Interactive channels
 - Interactive flowcharts
 - Strategies
 - Inherited global events reference
 - Profiles
 - Offers by SQL
 - Learning module
 - Interact flowcharts
 - zones
 - Deployment information
 - Constraints
 - Offers by table
 - Server groups
- Other exported objects
 - Offer references
 - Campaign references
 - Offers by SQL default cells
 - Segments
 - Default offers default cells
 - Detect configuration
 - Target cells

Interaction strategy reference

Use the table in this section to understand the icons on the interaction strategy tab.

The icons, left to right, are described in the following table.

Icon Name	Description
Edit strategy 	Click to add new treatment rules to this interaction strategy.
Edit properties 	Click to edit the name and description of the interaction strategy. You cannot change the interactive channel.
Delete interaction strategy 	Click this icon to delete this interaction strategy tab.
Add flowchart 	Click this icon to add a batch flowchart to this campaign. Remember: To add interactive flowcharts, you must create them in a session.
Add interaction strategy 	Click this icon to add an interaction strategy to this campaign.
Copy interaction strategy to 	Click this icon (in view-only mode) to create a copy of this interaction strategy. When you click this icon, a dialog is displayed where you can specify the destination for the copy.

(Optional) Assign target and control cells

Since the interaction strategy tab is part of a campaign, you can also take advantage of the target cell spreadsheet. The target cell spreadsheet (TCS) is a spreadsheet-type feature for each campaign that displays all cells within that campaign, and their details, including assigned offers.

The TCS functions a little differently with interaction strategies than with batch flowcharts. You can use both the top-down and bottom-up approaches. Cells that are generated by treatment rules in the interaction strategy tab become bottom cells in the TCS. You can use the top-down approach the same as with batch flowcharts. However, currently, the offer to the cell assignment from the interaction strategy tab do not display in TCS. Also, you cannot assign an offer to a cell on the TCS for use in treatment rules; you must use the interaction strategy tab to assign offers to cells for real-time interactions.

You do not need to approve cells that are used in interaction strategies in a Marketing Operations TCS.

Control cells also work differently for real-time interactions. For example, on a website, you must always present an "offer," otherwise the page layout might be broken. The offer for a control cell might be a simple branding image instead of a traditional offer. The reports available if you have reports installed do not report on control cells for real-time interactions.

For more information about the target cell spreadsheet, see the *Campaign User's Guide*.

Overriding cell codes

When you create a treatment rule, Campaign maps the segments to cells. If necessary, you can override the cell name or cell code.

1. Click the segment for which you want to edit the cell code.

2. Select **Override this cell name or code**.

The **Override cell name and code** dialog is displayed.

3. Edit the **Target cell name**.

4. Change the cell code as follows:

- Generate a new cell code by using the Campaign cell code generator by selecting **Use an auto-generated or hand entered code created just for this rule** and clicking **Auto-generate**.
- Enter a cell code by selecting **Use an auto-generated or hand entered code created just for this rule** and entering a new **Target cell code**.
- Select a cell code that is created in the Target Control Spreadsheet (TCS) with the top-down method by selecting **Select or type a pre-created target cell code** and selecting the code from the list.

The list filters by what you enter. For example, if you enter ABC, the list displays the cell codes that start with "ABC" only.

5. Click **Save and return** to close the **Override cell name and code** dialog box, or click **Save and edit next** to edit the cell name and code of the next segment.

Deploy the Interact configuration

When you configured the Interact configuration, you had to mark the interaction strategy tab and all interactive flowcharts for deployment. After all configuration for your Interact implementation is complete in the design environment, you are ready to deploy the configuration to a runtime server.

See Chapter 5, "Understanding deployment to runtime servers," on page 107 for details about deploying interactive channels.

Run simulations to test your API scenarios

You can run simulations in design time to easily test the events, event patterns, and strategies you defined for your interactive channel to make sure you receive the results you are expecting in runtime.

From the **Simulator** tab in your interactive channel, you can create scenarios to test different API combinations from within Interact design time.

You can create, run, save, and copy basic and advanced scenarios.

Basic scenarios simulate `startSession` and `getOffer` APIs. For basic scenarios, you can define a name, description, audience level, audience ID, zone, and number of offers for your scenario. After you run the simulation, the offers that were returned from the `getOffer` API are displayed on the **Simulation results** tab. You can view the offer name, description, offer code, treadement code, score, and offer attributes.

Advanced scenarios can test `startSession`, `getOffers`, `postEvent`, `getProfile`, and `endSession` APIs. You can set a run sequence and add multiple `getOffers` and `postEvent` APIs in a scenario. From the **Simulation results** tab, you can view the run results for the APIs you added to your scenario.

The log for the last run is displayed on the **Log** tab.

Simulations use the test runtime server group specified in **Campaign | partitions | partition[n] | Interact | simulator**. Therefore, an interactive channel to be simulated should deploy to a server group set in this configuration property.

You can only simulate Java APIs.


Create a basic scenario to run simulations

Create a basic scenario to test your `startSession` and `getOffer` APIs in design time to make sure they return the expected results.

1. From the **Simulator** tab in your interactive channel, click **Create a basic scenario** in the **Scenario palette**.
2. Enter a name for your basic scenario.
3. Enter a description.
4. Select an audience level from the drop-down list.
5. Select an audience ID.

You can either enter an audience ID manually or search for an audience ID.

- a. To use the search option to search your profile table for the audience ID,

click . By default, only the first 10 records and 20 columns of a table are displayed.

The simulator uses the server and profile database defined in **Campaign | partitions | partition[n] | Interact | serverGroups | [serverGroup set for Simulator] | prodUserDataSource** property to load profile records and perform audience ID searches. This `prodUserDataSource` should be configured the same as **Interact | general | serverGroups | prodUseDataSource**, so the audience ID that is set during scenario definition exists when the simulation runs. The profile table mapped in the **Interactive Channel Summary** tab from design time database should be a subset of the profile table in runtime database.

- b. Click **Add condition** to specify search criteria. If you add more than one condition, your conditions are treated as AND conditions in your search results.
- c. Click **Find** to populate the results for your search criteria.
- d. From the **Select display column** tab, you can choose specific columns to see in your search results by selecting **Show all**, **Show selected**, or **Show unselected** from the drop-down list. Use **Search attributes** to search within your filtered list. When you select or deselect an attribute, the search results table is updated immediately.
- e. Highlight the record that matches your criteria and click **Select**. This audience ID is added to your scenario.

If no record is found that matches your search criteria, you can create a temporary record with the scenario definition to match the criteria. This scenario definition is not in your database. Interact creates a temporary record that matches your search conditions. The audience ID textbox displays as **Temporary Record**. The **Temporary Record** is always created with anonymous audience ID, regardless what you specified in the search conditions. The scenario can be saved with **Temporary Record** conditions, reloaded, and run with saved the **Temporary Record**, but this **Temporary Record** is not created in the profile table. It is only saved with the scenario definition as

name-value-pairs. If you select a profile record that exists in the profile table, the **Temporary Record** is removed from scenario definition.

6. Select a **Zone** from the drop-down list. Since all interact points in a zone behave the same, Interact picks the first IP in the selected zone and sets it as the IP parameter in the `getOffers` API. Only zones that have IPs defined are displayed in the drop-down list.
7. Enter the **Number of offers** for the scenario to return. If you do not enter the number of offers, Interact returns all offers assigned in the strategy.
8. Click **Save** to add this scenario to your saved scenarios. From **Saved scenarios** you can also edit, copy, or delete previously saved scenarios.
9. Click **Run** to test this scenario.

The simulation runs on a different thread. You can still browse or edit simulation scenarios, but cannot start another run until your previous run is complete.

Note: You cannot run an unsaved scenario. If you create or edit a scenario, you must save it before you can run the scenario with your updates. If you try to run an unsaved scenario, your last saved scenario runs instead.

10. Click **Abort** to abort the simulation run, if needed.

When the run completes you can view the returned offers from the `getOffers` method on the **Simulation results** tab. You can view the offer name, description, offer code, treatment code, and score. You can view additional attribute by clicking the icon in the **View attribute** column. By default, the results are displayed by highest score.

Under the **Log** tab, you can also view the log results for your scenario run. Only the log entries for the last scenario run is displayed. The logs displayed on this tab are the as same as those logged in `interact.log`, but this tab filters the logs by the session ID and the start timestamp of your simulation run. The level of logging is determined by `interact_log4j.properties`.

Create an advanced scenario to run simulations


Create an advanced scenario to test multiple API methods in design time to make sure they return the expected results.

In advanced scenarios, you can test `startSession`, `getOffers`, `postEvent`, `getProfile`, and `endSession` APIs.

1. From the **Simulator** tab in your interactive channel, click **Create an advanced scenario** in the **Scenario palette**.
2. On the **General** tab, add a name and description for the scenario.
3. On the **Scenario definition** tab, enter a session ID for the advanced scenario. The session ID is shared for all APIs. If you do not define a session ID, one is created in runtime and used in the API batch execution.
4. Click **Add API** to select a `startSession`, `getOffers`, `postEvent`, `getProfile`, or `endSession` method to your scenario.
5. Add a `startSession` method.
 - a. Select an audience level from the drop-down list.
 - b. Select an audience ID.

You can either enter an audience ID manually or search for an audience ID.

To use the search option to search your profile table for the audience ID,

click . Click **Add condition** to specify search criteria. If you add more than one condition, your conditions are treated as AND conditions in your search results. Click **Find** to populate the results for your search criteria. From the **Select display column** tab, you can choose specific columns to see in your search results. When you select or deselect an attribute, the search results table is updated immediately. Highlight the record that matches your criteria and click **Select**. This audience ID is added to your scenario.

The simulator uses the server and profile database defined in **Campaign | partitions | partition[n] | Interact | serverGroups | [serverGroup set for Simulator] | prodUserDataSource** property to load profile records and perform audience ID searches. This `prodUserDataSource` should be configured the same as **Interact | general | serverGroups | prodUseDataSource**, so the audience ID that is set during scenario definition exists when the simulation runs. The profile table mapped in the **Interactive Channel Summary** tab from design time database should be a subset of the profile table in runtime database.

- c. Select the check box to rely on an existing session or to turn the debug flag on if you want to enable either of these options for the `startSession` method.
 - d. Add parameters for the API. Enter a name and value for the parameter. You can also select predefined parameters from the **Name** drop-down list. Choose a type from the drop-down list. Click the check mark to add this parameter.
6. Add a `getOffers` method. Select a **Zone** from the drop-down list and add the **Number of offers**. If you do not add **Number of offers**, by default all offers assigned in strategy are returned.
 7. Add a `postEvent` method. Add an event name and parameters for this method. You can also select predefined parameters from the **Name** drop-down list.
 8. Add a `getProfile` method. You do not need to configure this API.
 9. Add a `endSession` method. You do not need to configure this API.
 10. You can arrange the order of the APIs using the up and down arrows. You can add `getOffers` and `postEvent` more than once in a scenario and arrange them accordingly. You can also delete an API if you decide you do not want to include it in the scenario simulation.
 11. Click **Save** to add this scenario to your saved scenarios. From **Saved scenarios** you can also edit, copy, or delete previously saved scenarios.
 12. Click **Run** to test this scenario.

The simulation runs on a different thread. You can still browse or edit simulation scenarios, but cannot start another run until your previous run is complete.

Note: You cannot run an unsaved scenario. If you create or edit a scenario, you must save it before you can run the scenario with your updates. If you try to run an unsaved scenario, your last saved scenario runs instead.

13. Click **Abort** to abort the simulation run, if needed.

When the run completes you can view the results on the **Simulation results** tab. The results are shown in the same order as your APIs on the **Scenario definition** tab.

Under the **Log** tab, you can also view the log results for your scenario run. Only the log entries for the last scenario run is displayed. The logs displayed on this tab are the as same as those logged in `interact.log`, but this tab filters the logs by the session ID and the start timestamp of your simulation run. The level of logging is determined by `interact_log4j.properties`.

COVERAGE SCENARIO

Create Coverage Scenarios to test run a simulation for customers and know if they have enough offer coverage for each group of their customer base, or for certain groups/segments.

About this task

Procedure

1. From the **Simulator** tab in your interactive channel, click **Create a coverage scenario** in the **Scenario palette**.

2. Enter a name for the coverage scenario.

3. Enter a description.

4. Select an Audience level from the drop-down list.

5. Click Select button on the Zones field.

All the Zones defined in the Interactive channel will be displayed.

User may select a single zone, multiple zones or all the zones.

Click Save button.

6. Click Filter button on the Audience ID filters field.

Here user can specify a filtering condition in order to select Audience IDs by clicking the

'Add condition to filter audiences' link.

Once the filtering condition is defined click the 'Find' button.

This will list the AudienceID which satisfy the condition.

Click Select audiences button to select the audiences.

7. If no filter is defined the simulator will select all the audience IDs from the profile data.

8. In the field 'DB table name for storing results' user may define the table name to store the simulation results.

If no table name mentioned in the field. The application will form a default table name in format such as `UACI_SimResults_<scenarioID>`.

This table will be created in the Design time database.

9. There are two checkboxes 'Warn to export previous run results' and 'Using existing event Pattern states and offer suppression rules'

a. 'Warn to export previous run results'

If this option is selected. A reminder message will be shown to the user to export the previous run results, in case the user re-runs the scenario.

If this is unchecked no reminder message will be shown to the user.

b. 'Using existing event Pattern states and offer suppression rules'

If this options is selected. Interact will consider the event pattern and offer suppression

states for those audience IDs. This means that the existing event pattern or offer suppression rules will be applied to the simulation results.

If the option is unchecked Interact will ignore the existing event pattern states or offer suppression rules while displaying the simulation results.

10. Click Save button to save the scenario.

Note: The user must save the unsaved changes before running the scenario.

If the user tries to run the scenario without saving, the last saved scenario would run.

11. Click Run button to run the Scenario.

Results

Once user inputs the required fields i.e. Name, Audience Levels, Zones, and user clicks on Save button, Coverage scenario is created and two more tabs like "Simulation results" as second tab and "Run history" as third tab appears in the Coverage scenario.

By default both the tabs "Simulation results" and "Run history" are blank.

"Simulation results" Tab:

This tab is populated for following fields only after 'Simulator Coverage Scenario' is executed successfully by clicking on the Run button. For the failed run, this tab will be empty.

This tab will be always displayed for a coverage scenario. If no run result, user clicks it, it will say "No simulation result available". Once a run is completed and there are results in specified result tables, clicking the tab will make the simulation results, with two sections:

Section 1: 'Run Summary', which displays

Overall status of this run in 'Run Status' field, Total time for the run in seconds in Duration (sec) field.

How many audiences being processed in 'Audiences processed' field and total number of offers are presented in 'Offer count' field.

Section 2: It displays a table with columns of

- Segment: Segment to which the AudienceID belongs
- Zone : Zone to which offer is assigned.
- Offer : Name of the offer which is presented to the audience.
- Audiences served offer : Number of audiences being served offers

This table will help user to know how their coverages are for their customer base.

For a simulation coverage scenario taking long time to run, user may have to check results after a while. They can check the run status in Run History tab.

"Run history" Tab:

This tab is populated with following columns only after 'Simulator Coverage Scenario' is RUN.

It has following columns:

Run ID: The application will generate a unique RUNID for every run of Simulator Coverage Analysis scenario. This will be displayed on screen after the run is completed.

Start time: It store the run start time of the Coverage Scenario run. By default it displays the start time in the 'MMM DD, YYYY hh:mm:ss' format.

Run duration (sec) : This column display the time taken by the Simulator Coverage Scenario takes to run.

Status: This column, display the status of the Simulator Coverage Scenario run.

There are three different status as below:

- Succeeded : If the Coverage Scenario run is completed successfully.
- Failed : If the Coverage Scenario run is failed to complete successfully.
- Running : If the Coverage Scenario run is still in progress.
- Exported to CSV : If the run result of the Simulator Coverage Scenario is exported into CSV file, then the status of the Coverage Scenario is set to Exported to CSV. By default user can export only the latest run result of scenario.

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Number of audiences processed: This column displays the number of audience IDs processed in each run of the Simulator Coverage Scenario. This column will be populated only when the status is "Succeeded" or "Exported to CSV", It will be blank if the run is failed.

Summary: This column displays the summary for the status of each Simulator Coverage Scenario.

If Run is in progress then the Summary is displayed as 'Running'.

If Run is Succeeded then the Summary is displayed as 'Running simulation succeeded'

If Run is Failed then the Summary is displayed as 'Server error running simulation'.

If run result of the Simulator Coverage Scenario is exported into CSV file the it gives the location where this file is exported.

Actions: This column displays the icon with actions within it. These icons are as below:

- Delete history records : This is available for every Simulator coverage scenario Run. By clicking on this icon the corresponding history record can be deleted.
- Abort : This icon is available only for the Simulator Coverage Scenario in Running state. When user clicks on this icon, the running of the Simulator Coverage Scenario is stopped.

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Download CSV: This icon appears only when the run result of the Simulator Coverage Scenario is exported into CSV. When it is clicked, the system retrieve CVS file saved on the DT server and download it to user's browser.

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Export to CSV : When user clicks on this link, latest run of the Simulator Coverage Scenario is exported to csv and the status of this run is changed to 'Exported to CSV'.

Only latest results are saved in result tables, Interact system will pick up records from result tables and export them to an CSV file. The file name is in format of <ResultTableName>_<RunID>.csv.

The status for that run is changed to Exporting to CSV while DT server is processing (A message like "Exporting CSV is in processing" will be displayed). User can also see status in Run History tab. Once the CSV file is generated, the run history's status changes to "Exported to CSV". The CSV file will be saved in system temp folder(/tmp/Interact_ExportedCSV/) of DT web server. The file name with full path will be saved in Summary field of the run history record.

For a coverage analysis, which could results in millions records, exporting could take long time. User can check run status for when it is done. For small set of data and if user session is still alive, the CSV file will be downloaded to user's browser as well.

All above columns except 'Actions' column can be sorted in ascending or descending order by clicking on it.

All 'Coverage Scenario' run history are displayed in pagination. By default 10 run results are displayed on one page.

If user clicks on 'All', it displays all the 'Coverage Scenario' run history on one page.

Delete all history : When user clicks on this link, run histories for complete 'Coverage Scenario' from all the pages gets deleted.

Chapter 3. Interactive flowcharts

Interactive flowcharts are similar to Campaign batch flowcharts when used to create strategic segments.

You use batch flowcharts in Campaign to complete a sequence of actions on your data for executing your campaigns. Batch flowcharts are made up of processes, which you configure to perform the actual data manipulation that is required for your campaign. When you use batch flowcharts in sessions, you create persistent data constructs, such as strategic segments, that are available globally to all campaigns. A strategic segment is a list of IDs created in a session and made available to all campaigns. A strategic segment is no different from other segments (such as those created by the Segment process) except that it is available globally, for use in any campaign.

Interactive flowcharts fulfill a similar purpose to assign visitors to your touchpoints into segments. Each interactive flowchart is made up of processes, which you configure to assign visitors to segments. Interactive flowcharts also create segments that are available globally to any interaction strategy for a corresponding interactive channel in any campaign. However, segments that are created by interactive flowcharts are different from those created in batch flowcharts. Segments that are created by batch flowcharts are a list of IDs. Segments that are created by interactive flowcharts, called smart segments, are the definition of which customers must be in the segment.

Interactive flowcharts are meant to function in real time, working with one visitor at a time. After deploying the interactive flowchart to a runtime server, an instance of each flowchart exists for every active visitor to your touchpoint. Each visitor runs through the interactive flowcharts to be assigned to smart segments in real time. You can configure interactive flowcharts to reference data in your production data source and data that is collected in real time from the touchpoint.

Interactive flowcharts can have one audience level per flowchart. However, you can have many interactive flowcharts per audience level.

As you design your interactive flowcharts, you must remember that interactive flowchart performance is different from batch flowchart performance. These flowcharts are run in real time. If it takes too long for the perfect advertisement to load on your website, your customer might go to a different site. When designing flowcharts, you must work in tandem with your touchpoint administrator, balancing your segmentation requirements with your touchpoint performance requirements. Some design considerations that you should discuss with your touchpoint administrator include the number of interactive flowcharts to run per audience level and the number of times you require a database lookup.

Since interactive flowcharts run on the runtime server and not within the design environment, you cannot run an interactive flowchart in Campaign. However, you can perform a test run of an interactive flowchart within Campaign.

Building interactive flowcharts

Typical interactive flowcharts start with an Interaction process, go through data manipulation processes, and end in at least one PopulateSeg process. The data manipulation processes, Decision, Select, and Sample, can be used to create detailed segments. The Decision and Sample processes can be used to create branching logic, while the Select process can be used to enrich the data that is considered in making decisions and segmentation. The Snapshot process can be used to persist profile data, session data, or real-time calculated data to a database.

All interactive flowcharts must start with an Interaction process. The Interaction process also defines the number of audience records that are processed during a test run of the flowchart.

The Decision process can be used to divide the input into different cells by creating branches that are based on condition expressions.

After separating the input into flowchart cells, use the PopulateSeg process to designate the members of the cells as members of smart segments.

You can use the Select process to access advanced queries to augment the visitor selection. The Select process gives you access to user variables, derived fields, custom macros, and web callouts. You can also include data from dimension tables available in your data source.

The Sample process gives you a limited selection of the sample configurations available in a batch flowchart. As with batch flowcharts, use the Sample process to create one or more cells for different treatments, control groups, or a subset of data for modeling.

Use the Snapshot process to write data to a table in your data source. For example, if you use a Select process to access real-time data by web callouts and custom macros, use the Snapshot process to add that data to your customer profile.

Creating interactive flowcharts

Use the **Summary** tab of a session to add an interactive flowchart.

Important: When you create interactive flowcharts, remember you must define the audience level for the flowchart. You cannot change the audience level of the flowchart after you create it.

1. Open the **Summary** tab of the session to which you want to add an interactive flowchart.
2. Click the **Add flowchart** icon.
The Flowchart properties page is displayed.
3. Enter a name and description for the flowchart.
4. Select the **Standard batch flowchart** flowchart type.
When you select **Standard batch flowchart**, configuration settings for interactive flowcharts are displayed.
5. Select the interactive channel for this interactive flowchart.
6. Select the **Audience level** for this interactive flowchart.
7. Click **Save and edit flowchart**.

The Edit standard batch flowchart page displays the process palette and a blank flowchart workspace.

You can now edit the interactive flowchart.

Interactive flowcharts and data sources

Similar to batch flowcharts, use interactive flowcharts to define the segments that the audience members belong in, based on characteristics of the data that is associated with the segments. However, the data that you use in an interactive flowchart is different from the data that you use in batch flowcharts.

Batch flowcharts use data available in databases. Interactive flowcharts also use persisted profile data from a database, but they can also use real-time session data. The real-time session data can include anything that you can extract from your touchpoint. You can include how long a caller has been on hold, track the website from which the visitor came from, determine the weather at the visitor's location, and so on. The persisted profile data comes from database tables, similar to batch flowcharts. The data can include all the traditional data that you have about your visitors: name, account number, address, and so on.

The test run profile table

During design-time, you have access only to persisted profile data. Campaign is not connected to a touchpoint and therefore cannot collect real-time session data. To create interactive flowcharts that reference real-time session data and to complete test runs of interactive flowcharts, you must have sample real-time session data in a test run profile table.

At minimum, the test run profile table must contain a list of IDs appropriate for the audience level of the flowchart. For example, if the audience level of a flowchart is Household, the table that is referenced by the Interaction process must contain at least a list of household IDs. You have a test run profile table for each audience level. These tables are mapped for each interactive channel.

The test run profile table also includes a column for each piece of real-time session data that you use in the segmentation logic. For example, if the touchpoint designer collects the name of the web page that a visitor came from, and stores it with the name `linkFrom`, there is a column that is called `linkFrom` in the test run profile table.

The test run profile table might also include other data. If you are referencing all your persisted profile data in dimension tables, however, you do not have to include copies of the persisted profile data in the profile table.

The person who designs interactive flowcharts, the person who designs and codes the integration with the touchpoint, and the Interact administrator must all work together to design the test run profile table. The touchpoint designer must provide a list of the real-time session data available. The flowchart designer must provide a list of required data for segmentation, and a list of recommended sample data to test the segmentation logic. The Interact administrator must provide a list of all the optimizations and configuration settings that might affect flowchart design. For example, if you are trying to improve performance by limiting the number of times you access the database, together you must determine which data is in the profile table and which data is in dimension tables.

Dimension tables

You can map dimension tables for interactive flowcharts. However, you must map the tables in the Interactive Channel, and not within the Campaign table mapping that is available in Campaign Settings.

Dimension tables must have a column that maps to the profile table. You can map a dimension table to another dimension table. A dimension table that is mapped to another dimension table must have a column that maps to the other dimension table. A chain of dimension tables must eventually map to the profile table. For example, dimension table A must share a column with dimension table B, dimension table B must share a column with dimension table C, and dimension table C must share a column with the profile table.

You can have many dimension tables, however, they all must exist in the same data source. All dimension tables must be mapped in the interactive channel before you start to work in an interactive flowchart. You cannot map tables to retrieve data within an interactive flowchart. (You can map a general table for use with a Snapshot process.)

While you can have many dimension tables, work with your touch point administrator to confirm you are meeting performance requirements.

Configuring interactive flowcharts

In general, interactive flowcharts are configured the same way as batch flowcharts. While you need consider the different concepts behind interactive flowcharts compared to batch flowcharts, you add and edit processes in an interactive flowchart in the same way as you do in a batch flowchart.

Unless an exception is mentioned here, for details about general flowchart creation, such as adding processes, renaming processes, and so on, see the *Campaign User's Guide*.

- Remember that you cannot change audience level in an interactive flowchart.
- Whether you can delete an interactive flowchart depends on its deployment status.
- If you access the Table Mappings dialog, clicking **Load** loads only general tables. You must complete all table mapping for an interactive flowchart in the interactive channel that is associated with the flowchart.
- Stored table catalogs are not used in interactive flowcharts.

Queries and Interact

Several processes in Interactive flowcharts and advanced options in treatment rules can be used to create queries to select data from your data source. These are, in general, the same queries as Campaign.

You can use any of the following methods to create a query in interactive flowcharts or treatment rule advanced options.

- Point & Click
- Text Builder
- Macros

For details about these methods, see the *Campaign User's Guide*.

- Event pattern matching, which provides access to the state of every event pattern that is defined for the interactive channel (including out of date range

event patterns). You can including event patterns in your query to combine other segmentation logic with behavioral logic, or you can use the pattern state alone to define a behavioral segment.

The potential values for an event pattern state are provided as an integer with one of the following values:

Table 11. Event pattern states

Event pattern state	Description
1	Pattern condition has been met (the pattern is true)
0	Pattern condition has not been met (the pattern is false)
-1	Pattern is expired (outside of the valid date range)
-2	Pattern is not enabled (the Enabled check box is not selected in the event pattern definition dialog)

Interactive flowcharts and treatment rule advanced options do not support raw SQL.

The following sections describe any differences in the options available in interactive flowcharts and advanced options in treatment rules.

Data types and stored objects

Like Campaign, Interact supports several data types for stored objects. User variables, derived fields, and macros can all use Number, String, and Date data types. Date constants are interpreted by using the date format settings of Campaign.

Interact also supports the Vector data type. Vectors are similar to arrays, except that the number of elements is variable. All operators available to Interact can have a Vector for at least one of its arguments.

Given the following:

- $X \text{ [operation] } Y = Z$ where X , Y , and Z are vectors
- S_x , S_y , S_z are the size of each vector
- D_x , D_y , D_z are the data types for each vector, and X and Y must contain the same data types.

Then the following is true:

- $S_z = S_x * S_y$
- $D_x = D_y = D_z$

Take the following two examples.

The following table shows how Interact evaluates the expressions $IF((X+Y)==10)$ and $IF(NOT((X+Y)==10))$ where $X=\{1,2,3\}$ and $Y=\{9,10,11\}$.

X	Y	X+Y	(X+Y)==10?	NOT((X+Y)==10)?
1	9	10	True	False
1	10	11	False	True
1	11	12	False	True

X	Y	X+Y	(X+Y)==10?	NOT((X+Y)==10)?
2	9	11	False	True
2	10	12	False	True
2	11	13	False	True
3	9	12	False	True
3	10	13	False	True
3	11	14	False	True

Since the equation must evaluate to either true or false, and at least one of the operations evaluates to true, the result of both the expressions `IF((X+Y)==10)` and `IF(NOT((X+Y)==10))` is true.

Derived fields, user variables, macros, and Interact

While you can create expressions in interactive flowcharts and advanced options for treatment rules, all of the building blocks are not available in both query builders. The table in this section describes the query building block, whether it is available in interactive flowcharts or advanced options, and any special notes.

Unless otherwise described in the following table, see the *Campaign User's Guide* for more details about building queries.

Object	Available in interactive flowchart	Available in advanced options	Notes
Derived fields	Yes	No	You can use derived fields, persistent derived fields, stored derived fields, and user variables in interactive flowcharts with the Decision, Select, and Snapshot processes. Derived fields can contain constants, user variables, other derived fields, and macros. If you are creating a derived field in an interactive flowchart that you want to be available as a name-value pair in the Interact API, you must preface the name with the prefix defined in the <code>SessionVar</code> configuration property, for example, <code>SessionVar.DerivedFieldName</code> .
User variables	Yes	No	User variables can contain only numerics or strings. Interactive flowcharts do not support the <code>None</code> data type. <code>Current Value</code> is not supported for user variables.

Object	Available in interactive flowchart	Available in advanced options	Notes
IBM Macros	Yes	Yes	<p>A select list of IBM macros are available for use in interactive flowcharts and advanced options for treatment rules. The design environment lists the available IBM macros in the query builder. For details about using macros, see the <i>IBM Macros User's Guide</i>.</p> <p>Note: NUMBER, IS, and IN behave differently in interactive flowcharts and advanced options than Campaign.</p> <p>Note: Your performance may be impacted if you have an expression that uses EXTERNALCALLOUT in advanced options of your treatment rules. For example, if there are 100 eligible offers (each with an advanced option with an EXTERNALCALLOUT) that Interact has to prioritize down to one best offer, then Interact has to evaluate each option and fire potential 100 external callouts to fulfill that one getOffers request.</p>
Custom Macros	Yes	No	Raw SQL selecting ID list or Raw SQL selecting ID list + value custom macro types are not supported in interactive flowcharts.

Using EXTERNALCALLOUT

EXTERNALCALLOUT is a function available to you when working with custom macros in Decision, Select, and Snapshot processes in interactive flowcharts. EXTERNALCALLOUT can be used to make a synchronous call to an external service, for example, to request the credit score for a particular audience level.

To use external callouts, you must write the external service in Java by using the IAffiniumExternalCallout interface. For more details about the IAffiniumExternalCallout, see the *Interact Administrator's Guide*.

Interaction process

All interactive flowcharts must start with the Interaction process. You can use the interaction process to start an interactive flowchart, and to define the size of the test profile sample that Interact uses when performing a test run of interactive flowcharts.

Decision process

The Decision process is the workhorse of the interactive flowchart. The Decision process divides the cells that are passed into the process into new cells that are based on configurable criteria. Each new cell creates a branch, like a decision tree.

An interactive flowchart can contain as many Decision processes as necessary. For example, the first Decision process in an interactive flowchart might create the cells

HighValue, MediumValue, and LowValue. You can then have three more Decision processes, one for each of the first segments to divided them into more refined segments, for example FrequentShopper, Shopper, and RareShopper.


When an interactive flowchart runs on the runtime server, only one customer at a time goes through the flowchart. If a branch is empty, the runtime environment does not process that branch nor its child branches.

The Decision process can take input only from a process that creates cells, such as an Interaction, Decision, Sample, or Select process.

Configuring the Decision process is a two-step process. First, you must select the input cells, second, you must configure the branches.

Configuring the Decision process

Configuring the Decision process is a two-step process: first, you must select the input cells, and second, you must configure the branches.

1. Open an interactive flowchart for editing (click **Edit**  in the flowchart toolbar).
2. Drag the Decision process from the palette to your flowchart.
3. Provide input to the Decision process by connecting it to one or more data manipulation processes.
Data manipulation processes include Interaction, Decision, Sample, or Select.
4. Double-click the Decision process.
The **Decision process configuration** dialog box opens and displays the **Decision** tab.
5. Select a source cell from the **Input** drop-down list.
6. If you want the created segments to be mutually exclusive, select the **Mutually exclusive branches** check box.
If you want a branch to contain all the remaining customer IDs, you must select **Mutually exclusive branches**.
7. Configure the branches.
8. Optional: Click the **General** tab to assign a name and notes to the process.
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.

Configuring Decision process branches

Configure a branch in a Decision process to use an interactive flowchart. The Decision process creates branches by dividing the cells that are passed into the process into new cells that are based on configurable criteria.

1. Complete one of the following actions on the **Decision** tab of a Decision process:
 - Select a branch and click **Edit** to edit the branch condition.
 - Click **Add branch...** to create a branch.
 - Select a branch and click **Remove** to delete a branch.
2. In either the **Edit branch** or **New branch** dialog boxes, enter a branch name.

3. If you do not want to create a query, or to select all remaining customers, choose **Select all remaining records**.

Choosing **Select all remaining records** is useful if this Decision process is after several data manipulation processes and the Customer IDs have already been filtered by previous processes.

Note: To select all remaining customers, you must select **Mutually exclusive branches** on the **Decision process configuration** dialog box. If you do not select **Mutually exclusive branches**, this branch selects all customer IDs connected to the Decision process.

Select Customer IDs with is selected by default, and the query builder is active.

4. Select a table from the **Select based on** drop-down list.
5. Create a condition for the branch by using queries.
6. Click **OK**.

The dialog box closes and you return to the **Decision** tab of the Decision process. You can continue to configure branches or finish configuring the Decision process.


PopulateSeg process

The PopulateSeg process performs a similar function as the CreateSeg process in batch flowcharts; the PopulateSeg process takes the input cells and makes them smart segments. The segments that you create with the PopulateSeg process are the smart segments that you use in treatment rules. The PopulateSeg process is a terminal node of interactive flowcharts.

Remember only smart segments can be used in interaction strategies. You cannot use strategic segments in interaction strategies.

Creating smart segments

You must create smart segments for interaction strategies. You cannot use strategic segments in interaction strategies.

1. Open an interactive flowchart for editing (click **Edit**  in the flowchart toolbar).
2. Drag the PopulateSeg process from the palette to your flowchart.
3. Provide input to the PopulateSeg process by connecting it to one or more data manipulation processes.

Data manipulation processes include Decision, Sample, or Select.

4. Double-click the PopulateSeg process.

The **PopulateSeg process configuration** dialog box opens and displays the **Result segments** tab.

5. Select one or more source cells from the **Input** drop-down list.
6. In the **Result segments** section, select an **Input cell** and select a **Segment name**.

If you want to create a segment, select **New segment** and complete the **New smart segment** dialog. Enter a **Name** and **Description** and select the segment folder under which you want to create the segment. You can organize your smart segments the same as you organize strategic segments.

Note: Special characters should not be used in smart segment names.

- Optional: Click the **General** tab to assign a name and notes to the process.
The name is displayed on the process in the flowchart. The notes are displayed when you point to the process in the flowchart.
- Click **OK**.

The process is configured and appears enabled in the flowchart.

Sample process in interactive flowcharts

The Sample process in interactive flowcharts fills the same purpose of Sample processes in batch flowcharts: to create one or more cells for different treatments, control groups, or a subset of data for modeling. However, the interactive flowchart Sample process contains only a subset of the features in the Sample process in batch flowcharts. The Sample Size Calculator and Maximum Cell Size are removed. Interactive flowchart Sample processes also have a new method for selecting the sample, the Deterministic Hash Function.

In a batch flowchart, the Sample process randomly selects some number of customers to be in a sample cell. However, in an interactive flowchart during run time, the Sample process works with a single customer at a time. When you define the % for a sample, you are defining the probability that a visitor becomes a member of that cell.

When defining sample cells, you must create at least two. Define a % for one sample, and select **All Remaining** for the other. If you do not do this, you will have undefined results. For example, if you create one 30% sample only, the remaining 70% of visitors are not assigned to any cell.


You must connect the Sample process to a PopulateSeg process to complete creating a smart segment that you use for sampling.

The Deterministic Hash Function assigns visitors to samples randomly. However, if the same visitor passes through the interactive flowchart more than once, the visitor is placed in the same cell. If you want to ensure that visitors are eligible to be sampled differently after they have been placed in the same cell repeatedly, you can configure a time period for the Deterministic Hash Function. (Adjust the Date of first reset and Number of days between resets.)


If you are creating a flowchart that copies the functionality of another flowchart, you can ensure that the Sample process uses the same Deterministic Hash Function as the original interactive flowchart by using the Hash Seed field. To place visitors in the same sample group, use the same number of cells, Hash Seed, Date of First Reset, and reset period in both Sample processes. Interact uses the value of the Hash Input seed and the reset date to determine which cell the visitor is placed in.

Configuring the Sample process



Use an interactive flowchart in the Edit mode to configure a Sample process.

- Open an interactive flowchart for editing (click **Edit**  in the flowchart toolbar).



- Drag the Sample process  from the palette to your flowchart.
- Provide input to the Sample process by connecting it to a data manipulation process.

Data manipulation processes include Decision, Sample, or Select. You can connect the Sample process to an Interaction process also.

4. Double-click the Sample process.
5. Select a source cell from the **Input** drop-down list.
All output cells from any process that is connected to the Sample process are listed in the drop-down list.
6. Determine the number of samples that you want to create for each of your input cells, and enter that number in the **# of Samples/Output cells** field.
By default, three samples are created for each input cell, with default names Sample1, Sample2, and Sample3.
7. Select each sample under the **Output name** column and complete the following actions:
 - a. Double-click the output name text box and type to modify the sample name.
You can use any combination of letters, numbers, and spaces. Do not use any periods (.) or slashes (/ or \).
 - b. Enter the probability that a visitor is assigned to the sample in the **Size** field, or select the **All remaining** check box.
The % must be less than 100.00.
8. Optional: Change the **Hash seed** under the **Deterministic hash function**.
You must change the Hash Seed only if you want this Sample process to assign visitors to cells the same way as another Sample process. The hash seed must be an alphanumeric value.
9. Optional: Enter the **Date of first reset** under the **Deterministic hash function**.
 Click the ellipsis button  to select a date from the calendar.
10. Optional: Enter the number of days between resets.
11. Optional: Click the **General** tab to assign a name and notes to the process.
The name is displayed on the process in the flowchart. The notes are displayed when you mouse over the process in a flowchart.
12. Click **OK**.

The process is configured and appears enabled in the flowchart.

You must connect the Sample process to a PopulateSeg process to complete creating a smart segment that you use for sampling.

Select process in interactive flowcharts


The Select process in interactive flowcharts fills the same purpose of Select processes in batch flowcharts to specify the customer data that you want to use in your interactive flowchart. The interactive flowchart Select process contains a subset of the batch flowchart Select process; it contains only the Source and General tabs.

You can use the Select process to select data from your data source to augment the profile table you referenced in the Interaction process. You also have access to user variables, derived fields, and macros. Remember interactive flowcharts are limited to one audience level. However, you can use the Select process to reference data in a dimension table at a different audience level. For example, you might reference a


table with household transaction data in an interactive flowchart with the customer audience level to sort by information in the household data.

Configuring the Select process

Use an interactive flowchart in the Edit mode to configure the Select process.

1. Open an interactive flowchart for editing (click **Edit**  in the flowchart toolbar).



2. Drag the Select process  from the palette to your flowchart.
3. Provide input to the Select process by connecting it to a data manipulation process.
Data manipulation processes include Decision, Interaction, Sample, or Select.
4. Double-click the Select process.
5. Select a source cell from the **Input** drop-down list.
All output cells from any process that is connected to the Select process are listed in the drop-down list.
6. Determine whether you want to select all rows from the data source or whether you want to filter the rows that are based on specified criteria. Select one of the following options.
 - a. **Select <Customers> IDs** to include all the rows of data from the data source in the Input drop-down list.
 - b. **Select <Customers> IDs with** to create a query to select only certain IDs based on criteria you define.
7. If you use the **Select <Customers> IDs with** option to select only certain IDs based on specified criteria, create a query.
8. Optional: Click the **General** tab to add a name and notes to the process or to configure the **Output cell name** or **Cell code**.
The name is displayed on the process in the flowchart. The notes are displayed when you mouse over the process in a flowchart.
9. Click **OK**.

The process is configured and appears enabled in the flowchart.

Snapshot process in interactive flowcharts

The Snapshot process in interactive flowcharts fills the same purpose of Snapshot processes in batch flowcharts to capture a list of IDs and associated data, and export them to a table. The interactive flowchart Snapshot process contains a subset of the batch flowchart Snapshot process. You can save to a table only. However, you also cannot order or skip duplicate entries in the table because interactive flowcharts handle only one record at a time, these features are not necessary.

Snapshot and data formats


When saving to an existing table from the Snapshot process, Interact saves data as described in the following table.

From	to Text (String)	to Number (Double)	to Date (Date)
Text (String)	Original Value	Double	SimpleDateFormat as defined in defaultDateFormat configuration property
Number (Double)	String	Original Value	Throws exception
Date (Date)	SimpleDateFormat as defined in defaultDateFormat configuration property	Throws Exception	Original Value

When writing to a table that does not already exist, the Interact runtime environment dynamically creates a table by using default data types. You can override these default data types by creating a table of alternate data types. For more information, see the *Interact Administrator's Guide*.

Configuring the Snapshot process


You can use an interactive flowchart to configure the Snapshot process.

1. Open an interactive flowchart for editing (click **Edit**  in the flowchart toolbar).



2. Drag the Snapshot process from the palette to your flowchart.
3. Provide input to the Snapshot process by connecting it to a data manipulation process.
Data manipulation processes include Decision, Interaction, Sample, or Select.
4. Double-click the Snapshot process.
5. Select a source cell from the **Input** drop-down list.
All output cells from any process that is connected to the Snapshot process are listed in the drop-down list.
6. Select a table from the **Export to** list.

If a table does not exist, select **New napped table** and follow the instructions for creating a table in the *IBM Campaign Administrator's Guide*.

7. Select an option to specify how updates to the output table are handled:
 - a. **Append to existing data** - Append the new information to the end of the table. This is the recommended method for database tables.
 - b. **Replace all records** - Remove any existing data from the table, and replace it with the new information.
 - c. **Update records** - All fields that are specified for snapshot are updated with the values from the current run of the process.
8. Specify the fields that are written out by the Snapshot process.
 - a. The fields in the table are displayed in the **Candidate fields** list under the **Field name** column. You can automatically find matching fields by clicking the Match  button. Fields with exact matches for the table field names are automatically added to the **Fields to snapshot** list. If there are multiple matching fields, the first match is taken.

- b. You can manually select the fields to include.
 - a. Select the fields that you want to include in your output from the **Candidate fields** list.
You can select multiple fields at one time by using **Ctrl+Click** or a contiguous range of fields by using **Shift+Click**.
 - b. Move selected fields to the **Fields to Snapshot** list by clicking **Add >>**.
 - c. You can manually modify the pairings by clicking **<< Remove** or **Add >>**.
 - d. If wanted, 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.
9. Optional: Click the **General** tab to add a name and notes to the process or to configure the **Process name**.
The name is displayed on the process in the flowchart. The notes are displayed when you point to the process in a flowchart.
 10. Click **OK**.

The process is configured and appears enabled in the flowchart.

Understanding interactive flowchart test runs

Interactive flowchart test runs check the segmentation logic of an interactive flowchart. Interactive flowcharts are intended to run on a runtime server with one visitor at a time. However, you can test them in Campaign to ensure that the interactive flowchart creates and assigns visitors to the segments you expect. For a complete test of your interactive flowcharts and how it interacts with your touchpoint, you must deploy the interactive flowchart to a test runtime server.

The method of testing interactive flowcharts is the same as testing batch flowcharts, that is, complete a test run. While the results might seem similar (each segment is assigned some number of members), the way the flowchart assigns the members is different. When you complete a test run of an interactive flowchart, the design environment uses a runtime environment. The runtime environment treats each row in your profile table as a visitor, running each visitor one at a time through the flowchart.

The runtime environment references the customer data that is supplied in tables that are referenced in interactive flowcharts and all real-time data available from event parameters, external callouts, and so on. During a test run, the design environment does not have access to actual real-time data. The design environment uses the data available in your test run table. You must work with your Interact administrator to add sample data into the test run profile that can properly test your interactive flowcharts. For example, if you define segmentation logic that separates audience members that are based on the first digit of their postal code, make sure that you have one entry in your test run profile for each possible first digit.

By default, the Interaction process limits the number of input records in your profile table that is used in a test run, but you can adjust the number of records that are used as needed. The design environment selects the first number of records in audience ID order. For example, if you limit your test run to five records, the design environment uses the first five records in your test run profile table, which is sorted by audience ID.

Note: Interactive flowcharts are not optimized to run with thousands of records. If you start a test run to process a high number of records, the test run might take several minutes to complete.


You can view the results from the last test run only. The design environment deletes all data from the previous test run when starting a new test run. If there are over 1000 entries in your test run, or to view test run data after closing the test run window, the test run data is stored in the following tables in the database that is defined by the `testRunDataSource`.

- `TestAttr_n`. Contains the audience IDs for the Test Run.
- `TestCount_n`. Contains the data for the Test Run Cell Counts report, that is, the number of members in each cell.
- `TestError_n`. Contains the data for the Test Run Errors report, that is, any errors, if they occurred, in the test run.
- `TestSeg_n`. Contains the data for the Test Run Segment Data report, that is, the audience ID and the assigned segment.

The suffix `_n` indicates the flowchart ID. You can determine the flowchart ID by examining the `UA_Flowchart` table in the Campaign system tables.

Configuring the test run size

You can configure the test run size of an interaction process.

1. Open an interactive flowchart for editing (click **Edit**  in the flowchart toolbar), and double-click the Interaction process.


The **Interaction process configuration** dialog box appears displaying the **Input** tab.


2. Select **Limit input records to** and enter the number of records.
3. Click **OK**.

Performing a test run

Use an interactive flowchart in the Edit mode to perform a test run.

Interactive flowcharts test runs function differently than batch flowchart test runs. You cannot pause and restart or stop an interactive flowchart test run.

1. Open an interactive flowchart for editing (click **Edit**  in the flowchart toolbar).

2. Click **Run**  in the flowchart toolbar, and select **Test run flowchart**.

The design environment uses the runtime environment defined in the `serverGroup` configuration property with all the data in the test run data source to test the interactive flowchart.

A test run status dialog opens.

3. When the test run completes, click **View results** to view the results.

The test run results consist of four tables:

- **Test run segment data.** Displays the audience ID and the assigned segment.
- **Test run attribute data.** Displays all the data in the profile table for each audience ID.
- **Test run cell counts.** Displays the number of members in each cell.
- **Test run errors.** Displays any errors, if they occurred, in the test run.

Similar to batch flowcharts, the test run also populates the number of members in each cell output by the process. Since processes without successors do not output cells to another process, the numbers are not populated. For example, create a simple flowchart, Interaction > Decision > PopulateSeg. After a test run, the Interaction process displays the number of members in its output cell below the blue checkmark indicating the process ran successfully. This number should be the same as the **Test run size**. The Decision process displays the number of members in each cell. If the Decision process creates three cells, there will be three numbers, separated by semicolons (;), for example 29;11;10. Because the PopulateSeg process does not output cells to another process, it does not display any members.

Deploy interactive flowcharts

When you configure the interactive flowchart, you must mark the flowchart for deployment. When you mark an interactive flowchart for deployment, a notification is displayed on the interactive channel that is associated with this interactive flowchart that it can be deployed to a runtime server group for testing or the production runtime server group.

When an interactive flowchart is marked for deployment, you cannot edit the flowchart. If you have to make more changes before the interactive flowchart is deployed, you can cancel the deployment request. This removes the flowchart from the list of items that are pending deployment.

When an interactive flowchart is no longer needed, you can mark it for undeployment. This adds the retirement request to the deployment queue. The next time that all changes are deployed, the interactive flowchart is removed from the Interact server. Treatment rules that contain the smart segments that are created by the flowchart you removed still exist, however, since there is no interactive flowchart to assign a visitor to that segment, no visitor is assigned to the segments created by the flowchart that you removed.

Deploying an interactive flowchart

You can deploy an interactive flowchart while you are viewing the flowchart.

Make sure that the flowchart is not in edit mode.

1. View the interactive flowchart that you want to mark for deployment.

You must view the flowchart. You cannot mark a flowchart for deployment in edit mode.

Interactive flowcharts are available only in sessions.

2. Click **Mark for deployment**.

The interactive flowchart is marked for deployment. The interactive flowchart is added to the list of items that are waiting to be deployed on the interactive channel summary tab. You cannot edit an interactive flowchart that is marked for deployment.

The next time that you deploy the interactive channel, the changes to this interactive flowchart are included.

Canceling a deployment request

By canceling a deployment request, you can remove an interactive flowchart from the list of items that are waiting to be deployed. You can then edit the flowchart.

1. View the interactive flowchart for which you want to cancel deployment.

You must view the flowchart. You cannot cancel a flowchart's deployment in edit mode.

Interactive flowcharts are available in sessions only.

2. Click **Cancel deployment request**.

The interactive flowchart is no longer marked for deployment. The interactive flowchart is removed from the list of items that are waiting to be deployed on the interactive channel summary tab. You can now edit the interactive flowchart.

Undeploying an interactive flowchart

If you no longer require the smart segments that are created by an interactive flowchart, you can undeploy the flowchart. This removes all references of the flowchart from the runtime server.

- You have an interactive flowchart that is deployed.
- The interactive flowchart is not in edit mode.

1. View the interactive flowchart that you want to mark for undeployment.

You must view the flowchart. You cannot mark a flowchart for undeployment in edit mode.

Interactive flowcharts are available in sessions only.

2. Click **Mark for undeployment**.

The interactive flowchart is marked for undeployment. The data removal request is added to the list of items that are waiting to be deployed on the interactive channel summary tab. You cannot edit an interactive flowchart that is marked for undeployment.

The next time that you deploy the interactive channel, all references to this interactive flowchart are removed from the runtime servers.

Chapter 4. Interact List process in batch flowcharts

When Interact is installed, the Interact List process is available in batch flowcharts. Similar to the Call List and Offer List processes, the Interact List process allows you to specify which offers are served to which visitors to your interactive site. This provides you with the ability to target offers to entire audience levels, target specific individual audience members, or suppress offers from specific audience members by using table-driven features.

You use batch flowcharts in IBM Campaign to complete a sequence of actions on your data for executing your campaigns. Batch flowcharts are made up of processes, which you configure to perform the actual data manipulation that is required for your campaign. IBM Interact provides integration with Campaign batch flowcharts to help determine the list of offers that might be served to a specific audience or type of audience.

Interact List process box

The Interact List process box is a batch flowchart process that is available only when IBM Interact is installed on your Campaign server.

Use the Interact List process box on a batch flowchart to determine the offers that are served to customers by the Interact runtime server, including the following choices:

- Offer suppression at an individual level (a "black list")
- Offer assignment at an individual level (a "white list," or score override)
- Offer assignment at an audience level (global, or default, offers)
- Offer assignment by custom SQL query

The runtime server has access to the output from this process when you deploy the interactive campaign. A batch flowchart might contain multiple instances of the Interact List process box. When you are using Interact List process box in a batch flowchart, and using multiple server groups with different production data sources that are pointing to different production database, you have to export the tables to all the production database that is configured in all the server groups. However, if the Interact list process box exports or creates the table to only one production database of one server group, then the deployment of interactive channel fails on other server group in which the table was not exported or created.

When you are working with the Interact List process, you must be familiar with the following concepts:


- Chapter 4, "Interact List process in batch flowcharts"

Tasks that you can complete from this page:

- "Configuring the Interact List process" on page 102

Configuring the Interact List process

Use a batch flowchart to add an Interact List process to the flowchart workspace.

1. Open a batch flowchart for editing (click **Edit**  in the flowchart toolbar).

2. Drag the Interact List process  from the palette to your flowchart.

The Interact List process is available on a batch flowchart if IBM Interact is installed on your Campaign server.

3. Provide input to the Interact List process by connecting it to one or more data manipulation processes, such as Sample or Select.
4. Double-click the Interact List process in the flowchart.
The process configuration dialog is displayed.
5. On the **Fulfillment** tab, specify the fulfillment details of your list output.

- a. Use the **OfferList type** drop-down list to specify the type of offer filter you are configuring this process to use:

- **Black list (offer suppression)** - indicates offers to suppress from being served to a specific audience. This allows you to prevent offers from appearing for specific visitors, based on the segment of the audience into which the visitor falls.
- **White list (score override)** - indicates that Interact must always serve an offer to a particular audience regardless of whether the marketing score would otherwise cause Interact to make the offer available.
- **Global Offers (default offers)** - defines offers that can be offered (similar to White list) for an entire audience type; that is, a default offer that every visitor in a specified audience can see, regardless of the segment of which they might otherwise be a part.
- **Offer Filters (offers by SQL)** - Allows you to provide an SQL query to determine which offers are served to the specified visitors. This option allows you, for example, to serve up an offer that is based on a specific visitor preference.


If you select this OfferList type, the input for this process is determined by your SQL query and the **Input/Audience** drop-down list is dimmed and cannot be selected.

The **OfferList type** you specify here determines the behavior of the Interact List process, and the options available to you in this configuration dialog, as noted below:

- b. From the **Interactive channel** drop-down list, choose the interactive channel that specifies the interaction points, events, and other settings that can apply to the Interact List process you are defining.

This drop-down list automatically lists the interactive channels that you already defined within the Interact design time environment.

- c. (**White list** or **Black list** only) From the **Select** drop-down list, specify the input cells (to use as the data source for the contact list. To use more than

one cell (such as multiple input segments), click the ellipsis  button next to the **Select** field. Then, use the **Select cells to use** dialog box that is displayed, and select the input cells to use.


If you select multiple input cells in this step, all of the input cells you select must have the same audience level.

Note: If the contact process is not connected to a process that provides output cells, there are no cells to select from in the **Select** drop-down list. To correct this, close the process configuration dialog and connect the Interact List process to an output process, then begin the configuration process again. Only active and deployed cell code should be used in Interact List.

- d. (**Global offer** only) Use the **Audience level** drop-down list to specify the audience type for which you want this Interact List process to apply.
- e. Use the **Target data sourcedrop**-down list to indicate the data source to which you want to write the output from this process.
- f. Enter the database table to which you want to write the output from this process in the **Table name** field.

The table that you specify is created automatically when the process runs if it does not exist.

- g. To specify the fields that are written to the specified OfferList table each

time this process runs, click the ellipsis  button next to the **Table name** field.

The **Personalization options** dialog is displayed. The predefined set of fields that is written to the table is displayed in the **Fields to output** list.

- Select the fields that you want to include in your output from the **Candidate fields** list.

You can use IBM Campaign generated fields by expanding the **IBM Campaign generated fields** list, or use derived fields by clicking the **Derived fields** button.

- To pair a candidate field to a field already listed in the **Fields to output** list, select the candidate field, then select a field in the **Candidate fields** list, then click **Add >>**.
- To add a candidate field to the **Fields to log** list without pairing it with an existing field, click the blank line after the last entry in the **Candidate fields** list, then click **Add >>**.
- Remove fields from the **Fields to output** list by selecting them and clicking **<< Remove**.
- If wanted, reorder the fields in the **Fields to output** list by selecting a field and clicking **Up1** or **Down1** to move it up or down in the list.
- If wanted, click the **Derived fields** button to create a variable for providing output to the table.

- h. Select an option to specify how updates to the output table are handled:

- **Append to existing data** - Each run of this process adds its output data to the table you specified in the **Table name** field
- **Replace all records** - Each run of this process removes any data from the table before you write the new output data.

6. To assign one or more offers or offer lists to each target cell defined in this process, click the **Treatment** tab.

The **Assign offers to cells** interface is displayed.

How you configure the output on the Treatment tab depends on the **OfferList type** you selected on the Fulfillment tab.

- a. **Black lists (offer suppression)** - For each target cell displayed in the table, click the **Offer** column to select from a drop-down list of available offers, or click **Assign offers....** Use the Assign Offers dialog to select one or more offers that you want to suppress for the input cells (visitors) specified on the Fulfillment tab of this process.

- b. **White lists (score override)** - For each target cell displayed in the table, click the **Offer** column to select from a drop-down list of available offers, or click **Assign offers....** Use the Assign Offers dialog to select one or more offers that you want to serve for the input cells (visitors) specified on the Fulfillment tab of this process, even if the marketing score would not otherwise serve that offer to the visitor.
- c. **Global offers (default offers)** - For each target cell displayed in the table, click the **Offer** column to select the wanted offers from a drop-down list, or click **Assign offers....** Use the Assign Offers dialog to select the offers that you want to serve to all visitors of the audience type that is selected on the Fulfillment tab for this process, regardless of the segment into which they fall.
- d. **Offer filter (filter by SQL)** - Click the Offer by SQL button to create an SQL expression that allows the Interact runtime server to select the offers that you want to serve to a set of visitors. Use the Create Offer by SQL dialog that is displayed in the following ways:
 - Select an existing SQL template name from the **SQL** drop-down list, or enter a new name in this field for the template if you are defining a new template.
 - Provide the contents of the SQL query in the **SQL template** field.
 - Click **Check syntax** to determine whether your expression is valid. **Check syntax** uses your test run Interact runtime server for validation. Your test run runtime server must be running for check syntax to function.

Note: If you use the SQL Server, **Check syntax** does not show errors in your expression even when your expression is invalid. If your expression is invalid, the flowchart test run fails even if it passed when you used **Check syntax**.

For more information about using the Create Offer by SQL dialog, see *Creating queries using SQL* in the *IBM Campaign User's Guide*.

7. Optional: Click the **General** tab to assign a name or notes to the process. The name is displayed on the process in the flowchart. The notes are displayed when you point to the process in the flowchart.
8. Click **OK** to complete the Interact List process configuration.

The process is configured and appears enabled in the flowchart. You can test the process to verify that it returns the results you expect.

Searching for flowcharts and flowchart-related objects

Use **Search flowcharts** to find a flowchart or a flowchart-related object by entering one or more characters as search criteria.

Flowchart-related objects include flowchart and process box names, configuration details, descriptions, owners, user variables, user database tables, segments, associated offers, and any other objects that are stored in the campaign session files (.ses). When you do a search, all flowcharts in all campaigns in the current partition are searched. Searching is not case-sensitive. For example, a search for "Customer" can find user databases, process boxes, and assigned offers that contain the word "customer."

1. Click **Search flowcharts** from any available location:
 - On the **All campaigns** or **All sessions** page
 - From any flowchart tab in View mode

2. When the **Search flowcharts** dialog opens, enter your search criteria.
If you click the **Search** button without entering any criteria, the search results include all flowcharts.
3. Use the Search results area to examine the results and optionally navigate to a flowchart. For example, you can click the name of a flowchart to open that flowchart in View mode.
If you want to see a list of all of the process boxes that contain the search criteria, expand a cell in the **Matching process boxes** column or use the **Expand all** / **Collapse all** icons in the Search results toolbar.
4. Search results are retained, even if you close the dialog. Therefore, you can navigate to various flowcharts while still being able to access the existing search results. The results remain until you click **Clear results** in the dialog box or perform another search.

Chapter 5. Understanding deployment to runtime servers

Deployment is how you transfer all the configuration that you define in the design environment to the runtime server groups. Deployment is grouped by interactive channel. When you deploy an interactive channel, you are sending all the data that is associated with an interactive channel to the selected runtime server group. This is why, when you are creating interactive channels, you must define the production runtime servers and the non-production (testing) runtime servers.

Important: You must have the `InteractAdminRole` role to deploy an Interactive channel.

The first deployment contains the following data:

- All interactive flowcharts that are associated with the interactive channel that are marked for deployment.
This includes the smart segments.
- All interaction strategies that are associated with the interactive channel that are marked for deployment.
This includes the treatment rules, which also include offers.
- All events, zones, and interaction points that are defined in the interactive channel.
- Other required data not specific to interactive channels including audience level definitions, built-in learning configuration, offer attribute definitions, custom macro definitions, contact and response history mapping information, and campaign start and end dates.

On all subsequent deployments of the interactive channel, Interact sends the following to the selected runtime server.

- All data that is associated with the interactive channel including interaction points and events.
- All edited interactive flowcharts and interaction strategies that are associated with the interactive channel that are marked for deployment.
- The last deployed version of all interactive flowcharts and interaction strategies that are contained in previous deployments which are not marked for undeployment.
- All other required data not specific to interactive channels.

If an interactive flowchart or interaction strategy is marked for undeployment, Interact disables all data and references to the undeployed flowcharts and strategies from the runtime server.

Note: After you deploy an interactive channel to a Interact runtime server, the runtime server is now associated with that particular design environment, including the Campaign partition. If you attempt to reuse the same runtime server by associating it with a new design environment, deployment fails. This scenario might occur if you have a staging Campaign installation and a production Campaign installation.

Deployment is a four-step process.

1. Configure and mark all interactive flowcharts that are associated with an interactive channel for deployment.
2. Configure and mark all strategy tabs that are associated with an interactive channel for deployment.
3. Configure the events and interaction points tab of the interactive channel.
4. Deploy the data from the interactive channel deployment tab.

When you mark an interactive flowchart or interaction strategy for deployment or undeployment, it remains marked and locked against editing until you deploy to a production server. The following table shows the marked for deployment status of an interaction strategy as you take actions in the design environment.

Step	Marked status	Action in design environment
1	Marked for deployment and locked for edit.	Mark an interaction strategy for deployment.
2	Marked for deployment and locked for edit	Deploy elsewhere to a staging server group. Testing on the staging server shows that your treatment rules need changes.
3	Available for edit	Cancel the deployment request for the interaction strategy to make your changes.
4	Marked for deployment and locked for edit	After you make your changes to the interaction strategy, mark it for deployment again.
5	Marked for deployment and locked for edit	Deploy elsewhere to a staging server group again. Testing with your revised treatment rules is successful and you determine the interactive channel is ready for production.
6	Available for edit	Deploy to the production server group.

When to deploy

You must deploy your interactive channel when you change any of the following data.

- Interactive flowcharts
- Interactive channels
- Interaction strategies
- Audience level definitions
- Built-in learning configuration
- Offer attribute definitions
- Custom macro definitions
- Contact and response history mapping information
- Campaign start and end dates
- Retiring offers

If you change any of the other required data not specific to interactive channels, you must redeploy all the interactive channels that are associated with the server group for the changes to take effect.

Understanding runtime servers

Runtime servers are the workhorses of your Interact implementation. The runtime servers listen and respond to requests from the touchpoint through the Interact API. When your touchpoint requests an offer, it is the runtime server that responds with the offer.

Interact works with server groups. A server group contains one or more runtime servers. If you have multiple runtime servers, you can configure them to work with a load balancer for better performance. Your touchpoint must be configured to communicate with these runtime servers.

You can have multiple server groups. You might have one group for your call center and one for your website. You might also have one group that is for testing and one that is working with a live, customer-facing touchpoint. Each interactive channel can have one production server group only.

After you finish designing and configuring your interaction in the design environment and completed the Interact API code work with your touchpoint, you are ready to send, or deploy, the interaction data to the runtime server. After you deploy the interaction data to the runtime server, you can start testing how the touchpoint works with Interact.

Deployment and delete

To ensure that you do not accidentally remove data that is required for a Interact runtime server to run correctly, deploying an interaction configuration locks Interact objects so you cannot delete them. After you deploy an interaction configuration, you cannot delete any interaction strategy tab, interactive flowchart, or interactive channel that is associated with the interaction configuration until you remove the object from all server groups.

If you mark an interaction strategy or an interactive flowchart to be removed, and then deploy the interactive channel to all server groups which contained the interaction strategy or interactive flowchart, you can delete the interaction strategy or interactive flowchart.

If you remove an interactive channel from all server groups to which you deployed the interactive channel, you can delete any of the interaction strategies, interactive flowcharts, or interactive channels.

For example, you have interactive channel A which contains interactive flowchart A and interaction strategy A. You deploy interactive channel A to the server group Test and the server group Production. You realize that interactive flowchart A is inadequate, so you make interactive flowchart B. You mark interactive flowchart A to be removed, and mark interactive flowchart B for deployment. You deploy the flowchart to server group Test. You cannot delete interactive flowchart A because it is still deployed to server group Production. After you deploy to server group Production, you can delete interactive flowchart A. Over time, you realize you must restructure your interaction configuration. You create interactive channel B, interaction strategy B, and interactive flowchart C. You deploy this interaction configuration to server group Test and server group Production. You also remove interactive channel A, interaction strategy A, and interactive flowchart B from server group Production. You cannot delete any objects because all objects are deployed somewhere. After you remove interactive channel A, interaction strategy

A, and interactive flowchart B from server group Test, you can delete interactive channel A, interaction strategy A, and interactive flowchart B.

Deleting an interactive channel

After you deploy an interaction configuration, you cannot delete an interactive channel that is associated with the interaction configuration until you remove the object from all server groups to ensure that you do not accidentally remove required data from the runtime server.

Therefore, before you can delete an interactive channel, you must undeploy any associated objects.

1. Click the associated strategy on the interactive channel summary tab. Mark the associated interaction strategy for undeployment.
2. Click the associated flowchart on the interactive channel summary tab. Mark the associated Interact flowchart for undeployment.
3. Click **View deployment history** on the interactive channel summary tab. If all pending changes are marked with an **X**, click **Redeploy**. Continue to the next step when the redeploy is successful.
4. Highlight the server group, click **Undeploy**. **Undeploy** is only enabled if the previous steps were completed successfully. Continue to the next step when the undeploy is successful.
5. Delete the associated interactive channel.
6. Delete the associated flowchart.
7. From the **All interactive channels** list, highlight the interactive channel and delete it.

Deployment versioning

IBM Interact retains information about every deployment and assigns a version number to it, along with any description or name you provide, for several reasons. First, to ensure that the deployment record is maintained for future reference, so that you can track when the deployment occurred, which user deployed the data, whether the deployment was successful or not, and so on. Second, Interact preserves the state of the deployment to ensure that it is available in the future for redeployment or for loading back into the design time to use as the basis for further modifications.

Information about each version

When you deploy an interactive channel or settings, you are required to name the version you are deploying, such as SalesPortal_1, SalesPortal_2, and so on. A sequential version number is also assigned automatically. You can also optionally provide a description of the deployment. All of this information, along with more status information such as the type of deployment and its status, are all available in the Deployment History section of the interactive channel deployment tab.

At any point, you can select a deployment version in the Deployment History section and either redeploy it as-is (which allows you to revert to an earlier deployment if necessary), or to reload elements from that deployment to the design time environment as a starting point for further modifications.

Note: Redeploying a version (rolling back to a deployment version) must be used with care. For example, campaign objects or offers that existed at the time of the

original deployment might no longer exist, or might no longer be valid. Test the behavior of the previous version of the deployment before using it in a production environment.

Versioning actions

In addition to viewing the historical information about each deployment, there are two actions you can take on past deployment versions:

Table 12. Version actions on the deployment tab

Action	Description
Redeployment	Allows you to deploy the specific version of a past deployment to the specified server group, following the same steps and providing the same information as for deploying a pending interactive channel.
Reloading individual flowcharts and strategies to the design time environment	Lets you reload the specified flowcharts and interactive strategies to the design time, so you can use them as the basis for more changes. You can select individual flowcharts or strategies to reload, or reload the entire interactive channel.

Deploying to a runtime server group

This procedure deploys to a runtime development, test, or production server group for the Interactive Channel.

Before deploying to a live, customer-facing production runtime server group, you must confirm that all interactive offers, interactive flowcharts, interaction strategy tabs, interaction points, zones, and events are tested and approved.

Also, after you create a stable deployment, do not make any changes to the Interactive channel, interactive flowcharts, and interaction strategies that are associated with this deployment to ensure that you send the same configuration when you deploy to the next group of servers (such as the production servers).

If you have any new or modified flowcharts or sessions, you have to navigate to those flowcharts or sessions and manually mark them for deployment before deploying the rest of the channel. If you do not, your modifications will not be included in this deployment.

1. Navigate to the **Deployment** tab of the interactive channel that you want to deploy.
The **Deployment** tab is displayed.
2. Click **Deploy interactive channel changes**.
The **Deploy interactive channel changes** dialog is displayed.
3. Use the **Select a server group where changes will be deployed** drop-down list to specify the development, test, or production server group on which you want to deploy.
4. Enter a version name for this deployment version, such as `Portal_CustomerCheck_6` or another value that is meaningful to you in the deployment history and other reports.

5. Optional: Enter a description for this deployment that is meaningful to you in the deployment history and other reports to help track the decisions and purpose behind this deployment.
6. Optional: Select or clear the **Also deploy current global settings** check box. This check box is selected by default, and deploys global settings that include learning configuration settings, offer attribute definitions, audience level mappings, and custom macros. Because deploying these settings might affect other interactive channels that are already deployed in the same server group, you might want to clear this check box to leave existing settings in server group as they already are configured.
7. Confirm that you verified the prerequisites by selecting the check boxes. The **Deploy the changes** button does not become active until you confirm all the prerequisites.
8. Click **Deploy the changes**.
9. Enter the user name and password for the Interact user on the runtime server and click **Log in to server**.
If you complete multiple deployments during the same IBM Marketing Software user session, the login data for the runtime server is cached, so you do not have to enter it again.
Also, be aware that the credentials you enter here must be defined within IBM Marketing Platform, even if Windows Integrated Login is enabled for your installation. Windows Integrated Login credentials are not used to authorize deployments.

The data is deployed to the selected runtime server group. You can view the results in the **Deployment history** section of the **Deployment** tab and with the Channel Deployment History report.

Undeploying

Use the following steps to undeploy a deployment.

If you are bringing an interactive channel or touchpoint offline, you can undeploy a deployment.

When you undeploy, Interact disables the data from the previous deployment from the selected runtime server.

Note: In most cases, avoid undeploying from a production server because undeploying effectively turns off the rules for the interactive channel. Instead, correct the data and deploy your changes, or use the **Redeploy** feature in the **Deployment history** section to replace the deployed settings with a prior version.

1. Navigate to the **Deployment** tab of the interactive channel you want to undeploy.
2. In the **Active deployments** section, select a deployment to a specific server group and click **Undeploy**.

Clicking **Undeploy** starts the process to remove the interaction configuration from the runtime server group. If the deployment was to a production server group, there are safeguards to confirm that you are ready to send the changes to a production server because this is a customer-facing system. A red warning icon on this button indicates that there are changes that have not been deployed to the production server group.

3. Optional: Provide an explanation of the reasons for undeploying in the **Deployment description** field.
4. Confirm that you verified the consequences by selecting the check box.
The **Undeploy the interactive channel** button does not become active until you confirm the consequences.
5. Click **Undeploy the interactive channel**.
6. Enter the user name and password for a valid Interact user on the Interact runtime and click **Log in to server**.
If you complete multiple deployments during the same Campaign user session, the login data for the Interact run time is cached, so you do not have to enter it again.

The data is disabled on the selected Interact runtime server group. You can view the results in the Deployment History section of the deployment tab, or in the Interactive channel deployment history report. Undeploy does not remove data that is used in reports. Also, once an offer has been deployed, all the contents may be audited in the future, and hence you will not be able to change it any more.

If you undeploy all interactive channels and their associated data from an Interact runtime server, it does not disassociate the runtime server from the design environment.

Viewing the Deployment tab

Each interactive channel includes a tab where you can see detailed information about any active deployments of this interactive channel, view any pending changes to the deployment status of the interactive channel, and see the history of past deployments. You can also use the Deployment tab to deploy, redeploy, and undeploy interactive channel settings. This section describes what you can view on the Deployment tab.

Active deployments

This section contains information about which deployments are active in each server group you defined. For example, you might have one version of the interactive channel that is deployed to your test server group, while another, fully tested version of the interactive channel is deployed on your production servers group.

Pending changes

These are the components that are marked for deployment but are not deployed yet. The title of the **Pending changes** section indicates how many objects are changed by the pending deployments.

This section only lists pending flowcharts and strategies, and does not include entries for interaction points or other settings pending deployment. You can deploy here, or deploy the global settings only. This table includes the following information:

Type Indicates the type of change that this entry in the table represents, such as flowchart, interactive strategy, and so on.

Change waiting for deployment

A link to the interactive flowchart or interaction strategy that contains the change.

Source of change

A link to the session or campaign that contains the change.

Change type

Whether the change is new (Addition/Update) or a retraction (Undeployment).

Date requested

The date and time the change was marked for deployment.

Wait time

The time that passed since the change was marked for deployment. This value does not refresh automatically, but is updated when you reload the page or click the **Refresh** button.

Requester

The user name of the Interact user who marked the change for deployment.

If the item is disabled, the item was in the previous deployment but is not marked for deployment. For example, your original deployment contained interactive flowcharts A and B, and interaction strategies C and D. You can change interaction strategy C and mark it for deployment. The **Change aiting for deployment** list displays A, B, C, and D, but only C is black. A, B, and D are disabled. You change interactive flowchart B, but do not mark it for deployment. If you deploy now, Interact deploys the original A, B, and D, and the new version of C. Interact does not use the new version of flowchart B because it was not marked for deployment.

Deployment history

All of the deployment history that is captured in Interact can be viewed here and sorted by any of the column types shown. You can also filter the information that is shown here by server group and by status. For example, you might use the column filter to show only the interactive channels that are deployed to your production server group.

The **Deployment history** section contains the following information:

Version name

The name that you assigned to this version of the deployment, in the **Deploy interactive channel changes** or **Deploy global settings only** dialogs.

Version number

The number assigned to this version of the deployment.

Operation

The type of deployment, such as deploying the interactive channel with all global settings, deploying only the global settings, and so on.

Global settings

Whether global settings were included in the deployment or not (a check mark indicates that they were). Note that you cannot sort on the **Global settings** status.

Deployment description

The description that you entered into the deployment dialog at the time of deployment.

Date The date and time of the deployment.

Server Group

The name of the server group to which the deployment was sent.

User

The name of the user account that requested the deployment.

Status

Whether the deployment was successful or failed. Deployments with a status of "Failed" cannot be redeployed or reloaded to the design time.

Interactive channel name

The name of the interactive channel at the time it was deployed. If you have renamed the interactive channel since the deployment, this name is not updated.

There are also page controls that determine the maximum number of rows to show per page of this list (5, 10, 20, and so on), and links to go to the start of the list, previous and next pages of the list, and the end of the list.

Related tasks:

"Filtering tables in IBM products"

"Sorting tables in IBM products" on page 63

Filtering tables in IBM products



When you are viewing a table of information in IBM products, features might be available that allow you to include or omit specific information (filter) the table view, based on one column value or based on combinations of column values. This section describes how to identify and use filtering options, when they are available in a table.

The steps described here apply only to tables where filtering by column heading is supported. To identify a table where this feature is supported, look for the following icon in any column heading:



When this icon is gray, it indicates that filtering is available but not currently in use for this column. The following table describes the different states of this icon:

Table 13. Column filter status icons

Filter icon	Description
	When this icon is displayed next to a column heading, it indicates that no filter that uses that column or its values is active on the table. Click the icon to begin filtering.
	When this icon is displayed next to a column heading, it indicates that a filter that uses that column or its values is active on the table. Click the icon to view, modify, or remove the filter.

1. To filter a table by using a single column, click the filter icon in the column heading. When you click the icon, the filter dialog is displayed with all of the values on which you can filter the table. By default, all of the values are selected, indicating that no information that is based on this filter criterion is omitted from the table .

2. Use this dialog box to select the values that you want to display in this table, and clear the check box next to the values you want to omit from the display. For example, if you were filtering the **Status** column, you might select the **Failed** check box, and clear the remaining check boxes, to display only items with a status of "Failed" in the table.
3. To select all of the values to show in the table at one time, select the **Filter By** check box at the top of the dialog.
4. To clear all of the values available to display in the table, clear the **Filter By** check box.

This is useful if you want to display only a small number from a long list of possible values; you can clear all of the check boxes at once, then select only those you want to display.
5. To accept the changes you made and see the table that is filtered as specified, click **Filter**.
6. To remove the column's filter from the table completely, click **Remove Filter**. This has the same effect as selecting all of the check boxes.

When you filter on more than one column, the filters are combined. For example, if you were to filter out some server groups and also filter out some status values, the results would be combined to show only the server groups that you chose to display that have the specified status values.

Chapter 6. Interact reporting

Interact is integrated with IBM Marketing Software reporting to deliver comprehensive Cognos reports in Interact.

The IBM Marketing Software reports provide reporting schemas and related maintenance tools that are required to integrate Interact with the supported version of IBM Cognos BI, and to run and maintain the Cognos reports available in Interact.

Interact reports data

Interact reporting requires three sets of data to report on: the data from your design environment, data from your production runtime environment, and data from the learning module. For example, the Channel Offer Performance Summary report requires data from the Campaign data source for data about offers, and data from the contact and response history from the production runtime server.

The runtime environment stores all contact and response history in staging tables to avoid impeding the performance of the production environment. Interact provides a contact and response history module which copies data from the runtime server to the design environment for your reports to have the correct data. If you do not configure this utility, the reports cannot have the correct data.

Several reports require specific data about offers. To ensure that the reports contain the correct data, you must use offers that are created with an offer template with **Allow offers created from this template to be used in real-time interactions** enabled.

Interact Reports and Reporting Schemas

The Interact Report Package reports are supported by IBM reporting schemas. You can customize the schemas to specify time periods, configure audience levels, and create extra performance reporting schemas.

You can customize the reporting schemas in the Interact Report Package in the following ways:

- Specify calendar time periods for performance reports
- Configure the audience level for performance reports
- Create extra performance reporting schemas for extra audience levels

The following table maps the individual IBM Cognos BI reports provided in the Interact Reports Package to the IBM reporting schemas that support them.

	Interactive View schema	Interact Performance View schema	Interactive Channel / Campaign Deployment History	Interact Runtime View schema	Interact Learning View schema
Campaign - Interactive Channel Deployment History	X		X		
Campaign - Interactive Cell Performance Over Time	X	X		X	
Campaign - Interactive Cell Performance by Offer	X	X		X	
Campaign - Interactive Offer Performance Over Time	X	X		X	
Campaign - Interactive Offer Performance by Cell	X	X		X	
Campaign - Interactive Offer Learning Details	X				X
Interactive Cell Lift Analysis	X	X		X	X
Interactive Channel - Channel Deployment History	X		X		
Interactive Channel - Channel Event Activity Summary report	X			X	
Interactive Channel - Channel Interaction Point Performance Summary	X	X		X	
Interactive Channel - Channel Treatment Rule Inventory	X				
Interactive Segment Lift Analysis	X	X		X	

	Interactive View schema	Interact Performance View schema	Interactive Channel / Campaign Deployment History	Interact Runtime View schema	Interact Learning View schema
Interaction Point Performance	X	X		X	

Viewing Interact reports

Interact integration with reports can be used to run Cognos reports from within Campaign. Some reports contain links to other reports to provide more information.

As the Interact reports exist within Campaign, see the *Campaign User's Guide* for generic instructions on viewing reports.

You can customize all the example reports available with the Interact Reports Package, for example, add more audience levels. For details about how to customize Interact example reports, see the *Marketing Platform Administrator's Guide*.

Viewing reports from the interactive channel Analysis tab

You can use the **Analytics** area of an interactive channel to view several Interact reports.

The following reports are available from the interactive channel **Analytics** tab:

- Channel Deployment History
- Channel Event Activity Summary
- Channel Interaction Point Performance Summary
- Channel Interactive Segment Lift Analysis
- Channel Learning Model Performance Over Time
- Interactive Channel Treatment Rule Inventory

1. Select a **Report type** from the **Analysis** tab.

If no additional configuration is needed, the report is displayed.

2. If there are configuration options after the report is displayed, select filters for the report, then click **Refresh**. For example, select the interaction point or an end date and time to view for the Channel Interaction Point Performance Summary report. On other reports, you might select date ranges, or specific channel data to use for filtering.

3. If you are required to enter configuration options before the report is generated, as might be the case with the Channel Learning Model Performance Over Time report, select the required report filters and options, then click the **Next** or **Finish** buttons at the bottom of the report.

The selected report is displayed.

Viewing Interact reports from Campaign analytics

You can go to **Analytics > Campaign analytics** to view several Interact reports.

The following reports are available from **Campaign analytics**:

- Channel Deployment History
 - Channel Learning Model Performance Over Time
 - Event pattern
 - Interactive Cell Lift Analysis
 - Interactive Cell Performance by Offer
 - Interactive Cell Performance Over Time
 - Interactive Offer Learning Details
 - Interactive Offer Performance by Cell
 - Interactive Offer Performance Over Time
1. Select a **Report type** from **Campaign analytics**.
If no additional configuration is needed, the report is displayed.
 2. If there are configuration options after the report is displayed, select filters for the report, then click **Refresh**. For example, select the cell to view for the Interactive Cell Performance by Offer report.
 3. If you are required to enter configuration options before the report is generated, as might be the case with the Channel Learning Model Performance Over Time report, select the required report filters and options, then click the **Next** or **Finish** buttons at the bottom of the report.

The selected report is displayed.

Viewing Interact reports from Analytics home

You can use the **Interact reports** folder from **Campaign analytics** area to view several Interact reports.

The following reports are available from the **Interact reports** folder of the **Campaign analytics** area:

- Channel Deployment History
- Channel Learning Model Performance Over Time
- Event Pattern
- Interactive Cell Lift Analysis
- Interactive Cell Performance by Offer
- Interactive Cell Performance Over Time
- Interactive Offer Learning Details
- Interactive Offer Performance by Cell
- Interactive Offer Performance Over Time

In addition, the Zone Performance Report by Offer report is available when you click the Zone Performance folder in the Interact Reports folder of the Campaign Analytics area:

1. Select **Analytics > Campaign analytics**
2. Select the **Interact reports** folder. Optionally, click the **Interactive Entity Reports** folder to view the zone performance reports list.
3. Select the report that you want to view.
The **Report parameters** window is displayed.
4. Select the campaign for which you want to view data, then click **Generate the report**.
If no additional configuration is needed, the report is displayed.

5. If there are configuration options after the report is displayed, select filters for the report, then click **Refresh**
For example, select the cell to view for the Interactive Cell Performance by Offer report.
6. If you are required to enter configuration options before the report is generated, as might be the case with the Channel Learning Model Performance Over Time report, select the required report filters and options, then click the **Next** or **Finish** buttons at the bottom of the report.

The selected report is displayed.

Interaction Point Performance report portlet

The only Interact specific report available in the Dashboard is the Interaction Point Performance report portlet. This portlet shows the number of offers accepted per interaction point over a seven-day period. By analyzing this report, you can determine the peak marketing locations on your interactive channel to help design future campaigns.

This dashboard report is defined to point to the interactive channel with the ID of 1. To change the ID of the interactive channel this report points to, see the *Marketing Platform Administrator's Guide*.

Channel Deployment History report (interactive channel)

The Channel Deployment History report is an audit log for tracing changes to all runtime servers, and is available from the interactive channel **Analysis** tab. You can filter this report by runtime servers, campaigns, or the user who performed the deployment.

The campaign, interaction strategy, session, and flowchart names are links to the campaign, interaction strategy, session, and interactive flowchart. To return to the report, use the back button of your browser.

This report is also available from the campaign **Analysis** tab and the Interact Reports folder in Analytics Home.

Channel Event Activity Summary report

The Channel Event Activity Summary report can be used to track the activity of deployed events for an interactive channel.

You can filter the report by all categories, a particular category, all events, or a single event. You can compare how often an event occurred over the last twenty-four hours, or the last seven days. The report also points out the peak hour or day and the slowest hour or day for an event. You can use the peak data to help determine the best ways to optimize your processing resources, or plan your marketing strategies around expected traffic. By knowing when the slowest times are, you can plan your deployments to occur when they will be the least disruptive. If you are using Custom Contact and Responses and if Action for Codes is None, then Total Occurrences will increase for Interaction Events.

About the Channel Interaction Point Performance Summary report

The Channel Interaction Point Performance Summary report measures the performance of each interaction point in the interactive channel across all offers and segments. By analyzing this report, you can determine the peak marketing locations on your interactive channel to help design future campaigns.

You can filter this report by all interaction points or a single interaction point. The report displays the number of offers displayed, accepted, and rejected for that interaction point.

Channel Treatment Rule Inventory report

The Channel Treatment Rule Inventory report is a list of all the treatment rules that are associated with an interactive channel. You can filter this list by a combination of target cells, zones, and campaigns. You can use this report as a diagnostic tool when investigating the marketing behavior around a specific cell, zone, or campaign.

The campaign and interaction strategy names are links to the campaign or interaction strategy. The offer name is a link to the Interactive Offer Performance Over Time report, which is filtered by that offer. To return to the Channel Treatment Rule Inventory report, use your browser's back button.

Interactive Segment Lift Analysis report

Lift analysis reports show the performance improvement that is created by using Interact built-in learning. The Interactive Segment Lift Analysis report shows the acceptance rate of offers by smart segment, comparing offers presented randomly and offers presented by Interact built-in learning. This report shows these values over time, so you can see trends for the better, or worse, and use that information to refine your marketing strategies.

This report is populated only if you use Interact built-in learning.

About the Channel Deployment History report (campaign)

The Channel Deployment History report displays the deployment data for all interaction strategies and the interactive channels that are associated with a campaign. Use the **Analysis** tab of the Campaign to view this report.

The campaign, interaction strategy, session, and flowchart names are links to the campaign, interaction strategy, session, and interactive flowchart. To return to the report, use the Back button of your browser.

This report is available from **Analysis** of the interactive channel.

Interactive Offer Learning Details report

The Interactive Offer Learning Details report displays all the learning attributes that you are tracking with the built-in learning module.

Each chart in the report shows the likelihood of a visitor to respond to the specified offer if they have a specific value for an attribute of interest. You can use this report to analyze what the learning module is learning and use that to modify what attributes you track or your offer-to-segment assignments.

You must select an offer to display data in the Interactive Offer Learning Details report. By default, no data displays.

This report is not available if you are using external learning.

Interactive Cell Performance reports

The Interactive Cell Performance reports have two variations: Over Time and by Offer. These reports measure the performance of target cells in their inbound marketing scenarios for a campaign. When you filter by target cell, you are filtering by the cell that is assigned to the smart segment in your treatment rule. You can sort these reports by all cells or a specific target cell. These reports display the number of offers that are presented, accepted, and rejected by a target cell over time or by offer. These reports cover all target cells that are associated with the treatment rules in an interaction strategy within a campaign.

If you display these reports by clicking a link on the Interaction Strategy tab, the report is automatically filtered by target cell. When you display these reports by using a link under the **Analytics > Campaign Analytics** menu, the report covers all target cells, but can be filtered for specific cells after it is displayed.

Interactive Offer Performance reports

The Interactive Offer Performance reports have two variations: Over Time and by Offer. These reports measure the performance of offers in their inbound marketing scenarios for a campaign. You can sort these reports by all offers or a specific offer.

These reports display the number of times that an offer was presented, accepted, and rejected over time or by target cell (segment). These reports cover all offers that are associated with the treatment rules in a campaign.

Interactive Cell Lift Analysis report

Lift analysis reports show the performance improvement that is created by using Interact built-in learning. The Interactive Cell Lift Analysis report shows the acceptance rate of offers by cell, comparing offers that are presented by random and offers that are presented by Interact built-in learning.

This report shows these values over time, so you can see trends for the better, or worse, and use that information to refine your marketing strategies. This report is populated only if you use Interact built-in learning.

Channel Learning Model Performance Over Time report

The Channel Learning Model Performance report compares the performance of two channel learning models over a certain time period to help you determine the effectiveness of each learning model in specific time periods.

If you select this report from the Analysis tab of an interactive channel, the report is automatically generated for the current interactive channel. If you generate the report by selecting **Analytics > Campaign analytics > Interact reports**, you can select the interactive channel to which you want the report to apply. You can filter this report for a specific date range, and you can filter the report for specific click-through/accept properties, and no response/reject properties as wanted.

Zone Performance Report by Offer

The Zone Performance Report by Offer is an interactive cell performance report that is filtered by interaction point. You can use this report to see how offers are performing by zone.

You can view the Zone Performance Report by Offer by selecting **Analytics > Campaign analytics**, then clicking **Interact reports**, and then **Zone performance reports**. When you open the report, you can use the **Zone** drop-down list to specify the zone for which you want to view the performance charts. After the report is generated, you can select different Interaction Points and resubmit the report to update the performance data.

Event Pattern report

The Event Pattern report shows you event pattern activity across interactive channels and their categories.

You can use this report to analyze how personalized offers were presented to visitors through event patterns. You can also analyze how many event patterns are triggered to visitors in the interactive channels you report on.

To run an Event Patter report, you can select which interactive channels you want to analyze. Then, you can select categories in those interactive channels to also appear in your report.

This report is available from the **Interact reports** folder of the **Campaign analytics** area.

Filtering by interaction point

Filter the Channel Interaction Point Performance Summary report by interaction point to view data only for the interaction point that is required.

To filter a report by interaction point, select the interaction point by which you want to filter data from the **Interaction point** list. To select all interaction points, select **Interaction point**.

The report automatically reloads, displaying only the data you selected.

Filtering by event or category

You can filter the Channel Event Activity Summary report by event and category.

To filter a report by category, select the category by which you want to filter data from the **Select category** list. To select all categories, select **Category**.

To filter a report by event, select the event by which you want to filter data from the **Select event** list. To select all events, select **Event name**. If you have selected a category, when the report reloads, the Select Event list displays the events in the selected category only.

The report automatically reloads, displaying only the data you selected.

Filtering by offer

You can filter the following reports by offer: Interactive Offer Learning Details, Interactive Offer Performance by Cell, and Interactive Offer Performance Over Time.

To filter a report by offer, select the offer by which you want to filter data from the **Offer** list. To select all offers, select **Offer ID**.

The report automatically reloads, displaying only the data you selected.

Filtering by target cell

You can filter the following reports by target cell: Interactive Cell Performance by Offer, and Interactive Cell Performance Over Time

When you filter by target cell, you are filtering by the cell that is assigned to the smart segment in your treatment rule.

To filter a report by target cell, select the target cell by which you want to filter data from the **Target cell** list. To select all cells, select **Cell ID**.

The report automatically reloads, displaying only the data you selected.

Filtering by time

You can filter the following reports by time: Interactive Cell Performance Over Time, Interactive Offer Performance Over Time, Channel Event Activity Summary, and Channel Interaction Point Performance Summary

To filter a report by date, select end date for the last 7-day range and click **Refresh**. You can enter a date or select one from the calendar list.

To filter a report by time, select end time for the last 24-hour range and click **Refresh**. The default is 12:00 AM. This displays yesterday's data. If you clear the check box, the report uses the current time on the Cognos report server.

If there is no data for a particular date or time, the graph does not display any data. In line graphs, if there is no data, the trend goes across dates that contain data only. For example, you have the following data points: 6/1 (100), 6/2 (no data), and 6/3 (50). The line goes from 100 on 6/1 to 50 on 6/3. The line may pass through ~75 on 6/2 but that is not an actual data point. Also, if there is only one data point, no line displays, as there is nothing to connect.

Filtering the Channel Deployment History report

To filter the Channel Deployment History report, select the criteria by which you want to filter data and click **Refresh**. You can select multiple criteria per list by using **CTRL+click**. To select all criteria, click **Select all**. Selecting **Deselect all** indicates no filter, which shows the same data as **Select all**.

You can filter the Channel Deployment History report on the interactive channel analysis tab by the following criteria:

- Deployment Destination. The server groups to which you have deployed this interactive channel
- Campaigns Updated by Change. The campaigns that contain the interaction strategies that are associated with this interactive channel

- **Deployment Owner.** The IBM users who deployed this interactive channel

The report does not load until you click **Refresh**. When it reloads, the report displays only the data you selected.

Filtering the Channel Treatment Rule Inventory report

You can use multiple criteria to filter the Channel Treatment Rule Inventory report.

You can filter the Channel Treatment Rule Inventory report by the following criteria:

- **Target Cells.** The cells that are assigned to the smart segments in your treatment rules associated with this interactive channel
- **Zones.** The zones in this interactive channel
- **Campaigns.** The campaigns that contain interaction strategies that are associated with this interactive channel

To filter the report, select the criteria by which you want to filter data and click **Refresh**. You can select multiple criteria per list by using **CTRL+click**. To select all criteria, click **Select all**. Selecting **Deselect all** indicates no filter, which shows the same data as **Select all**.

The report does not load until you click **Refresh**. When it reloads, the report displays only the data you selected.

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