

IBM Interact  
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*User's Guide*

**IBM**

**Note**

Before using this information and the product it supports, read the information in "Notices" on page 97.

This edition applies to version 9, release 0, modification 0 of IBM Interact and to all subsequent releases and modifications until otherwise indicated in new editions.

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## Chapter 1. Overview

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® suite of enterprise marketing management tools, and is integrated with IBM EMM.

Interact exploits both online and offline data—in-depth historical knowledge of customers as well as current customer activities—to create real-time customer interactions that 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.

Fully integrated with the IBM suite, Interact gives your marketing organization the ability to coordinate real-time inbound customer treatment strategies with your traditional outbound campaigns. With Interact, you leverage the power of IBM EMM to enhance your real-time marketing efforts in several ways:

- Leverage your multi-channel operations  
Use information from all of your customer touchpoints — web, call center, in-store, branch, and so on — to develop a rich understanding 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  
Leverage the power of your contact center for increased revenue generation and customer retention. Provide smarter 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).

Interact lets you control and fine-tune the real-time, analytical content delivered to your touchpoint systems. Your strategies can include factors you consider important. These strategies can drive the response to specific customer actions, driving personalized content from an instant offer button 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.

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## 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.

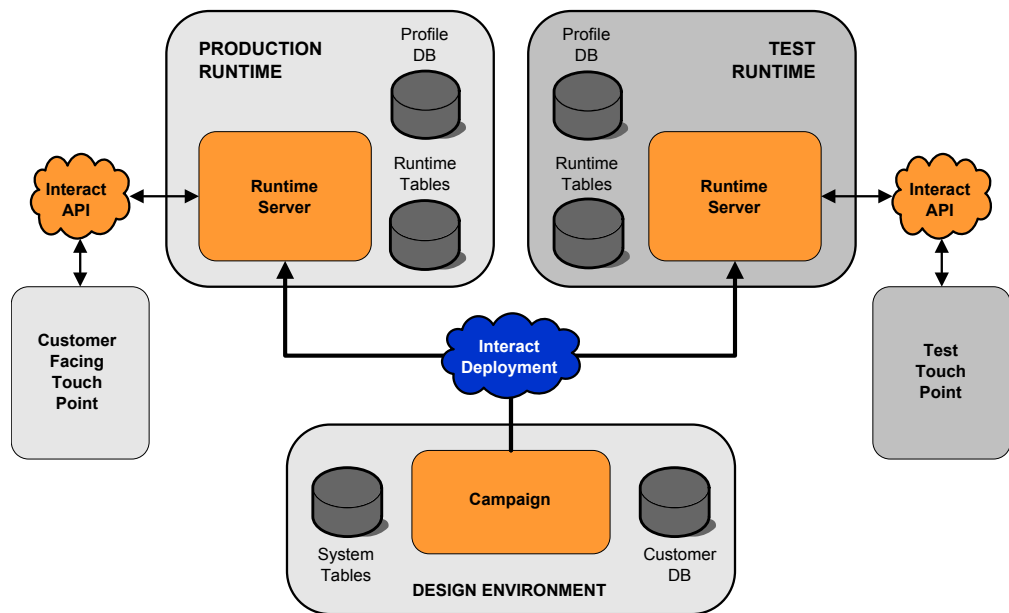
Interact is closely integrated with Campaign to define which offers are assigned to which customer. Because of this integration, you can use the same offers across all of your campaigns, along with all of Campaign's offer management tools. You can also integrate all the contact and response history across 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.

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## Interact architecture

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.

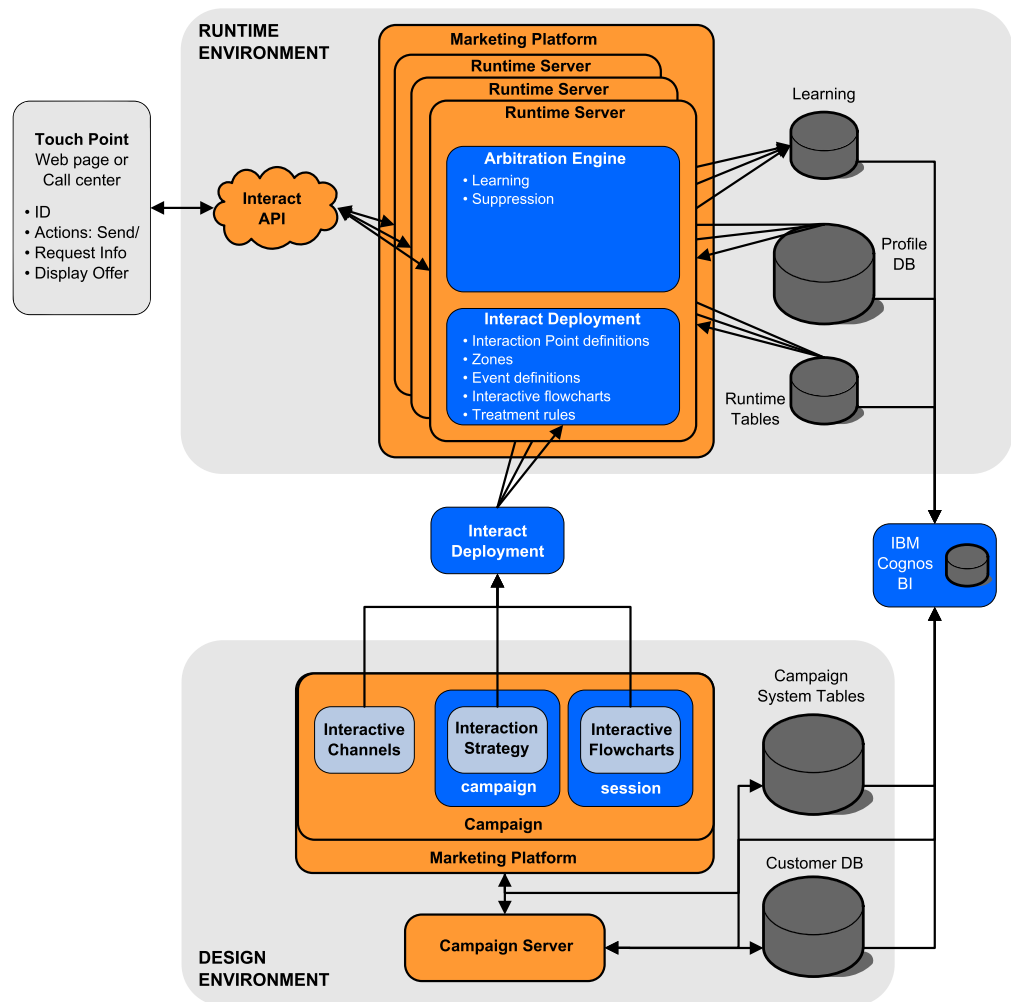


The design environment is where you perform the majority of your Interact configuration. The design environment is installed with Campaign and references the Campaign system tables and your customer databases.

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.

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## Campaign key concepts

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 web-based Enterprise Marketing Management (EMM) 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. For example, a set of campaigns could 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 as well as 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 may need to exist for businesses, companies, divisions, groups, individuals, accounts, and so on.

These audience levels may 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 simply 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 have opted 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 those 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 re-run.

## Flowcharts

In Campaign, flowcharts represent a sequence of actions that you perform 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 perform 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 a variety of ways.

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

Offers are re-usable:

- 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 target cells in flowcharts using one of the contact processes, and track your campaign results by capturing data about customers who received the offer, and customers who responded.

## 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.

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## Interact key concepts

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

### Design environment

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

The design environment is installed with the Campaign web application.

## Interactive channels

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 involved in interactive marketing.

An interactive channel is a tool 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 only have one set of production runtime and staging servers, or to divide your events and interaction points by customer facing system.

## Interactive flowcharts

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. In the case of 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, as well as 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, taken by a visitor, which triggers an action in the runtime environment, such as 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 using the `postEvent` method. An event can lead to one or more of the following actions 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, using the current data in the visitor's session.

When you are designing your interaction, remember that 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 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 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.

## Profiles

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

The runtime environment uses the information 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 web sites 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 may 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.

## Interact API

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

## 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

Interact is designed to be used by many people within your organization. Because Interact is a connection point between your touchpoints and your marketing campaigns, people 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

Configuring Interact is a multi-step, multi-person, iterative process. The process from an idea to deployment can be broken into three major components: design, configuration, and testing.

- **Design**—During the design phase you brainstorm about what kinds of interactive marketing strategies you would like to use. After you have an idea about what you want to have happen in your touchpoint, you need to determine

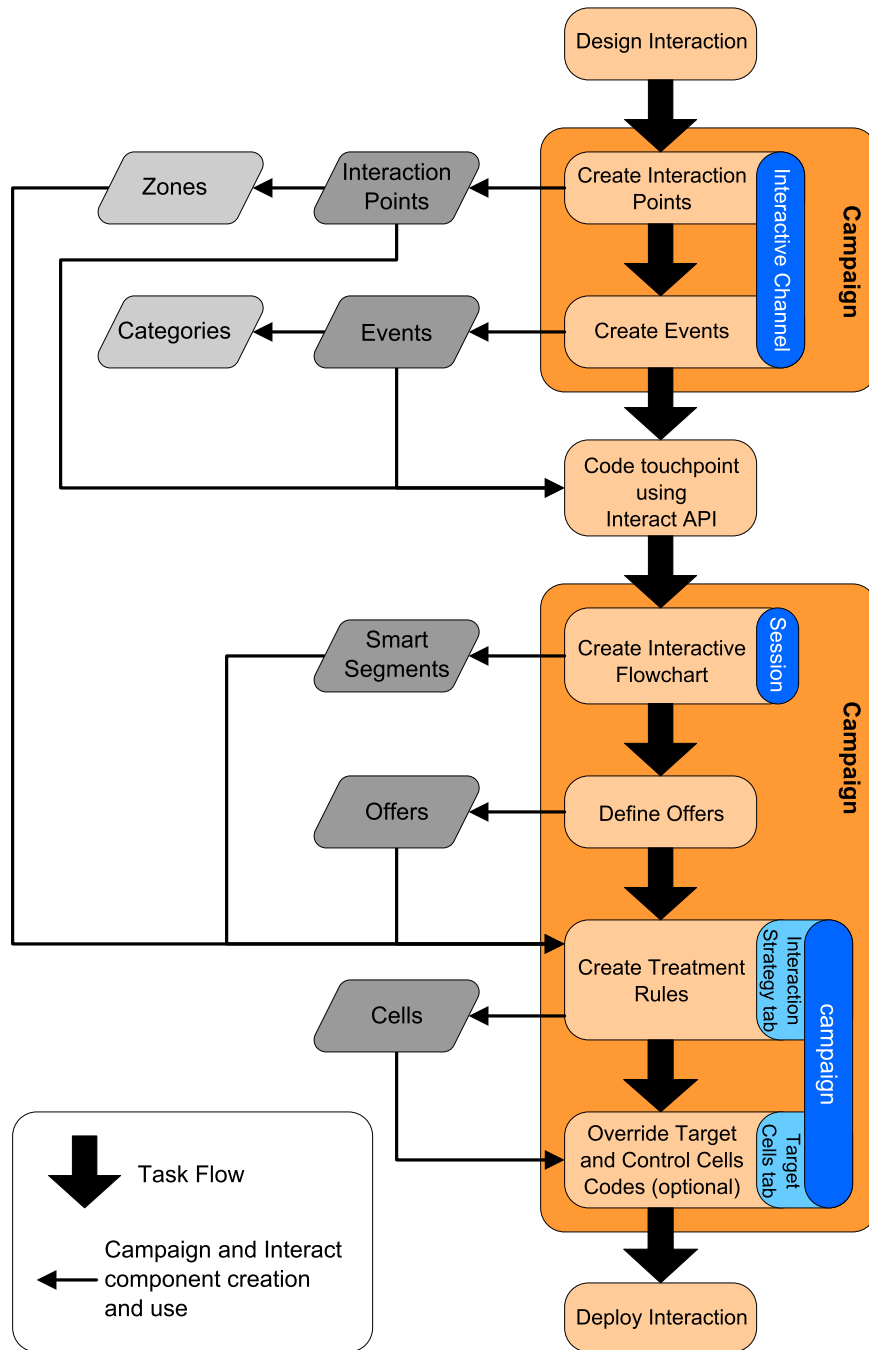
how to implement that with Interact. This brainstorming is a cooperative effort between the person managing the touchpoint and the person designing the marketing plan. Using business goals and target metrics, they can create a list of interaction points and zones, and a rough list of segmentation and suppression strategies. These discussions should also include the data required to perform the segmentation.

- **Configuration**—During the configuration phase the touchpoint administrator and a Interact user implement the design. The Interact user defines offer-to-segment assignments and configures the interactive channel within the design environment while the touchpoint administrator configures the touchpoint to work with the runtime server using the Interact API. Your data administrator needs to configure and create the data tables required for both testing and production.
- **Testing**—As you finish configuring Interact in the 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 involved with designing the Interact implementation review the results to confirm the configuration is performing as designed and the performance of the runtime environment is within tolerable limits for response time and throughput.

Users may need to make some changes and more testing may need to be performed. Once everyone is pleased by the results, the manager can mark the configuration for deployment to production servers.

At this time, the touchpoint manager may review all the results as well, to ensure that the configuration will have no adverse effects on the customer-facing system. Once the configuration has approval from all parties, it can be deployed to production runtime servers.

The following diagram shows a sample design workflow. While this diagram shows a linear progression, in practice, many people can be working on different components at the same time. It is also an iterative process. For example, to configure the touchpoint to work with Interact using the Interact API, you must reference events created in the interactive channel. As the touchpoint administrator configures the touchpoint in the runtime environment, the administrator may realize that more events are needed. A Interact user then needs to create these events in the design environment.



The first task is to design the interaction. Next, create interaction points, zones, events, and categories in the interactive channel. The touchpoint administrator uses the names of the interaction points and events with the Interact API to configure the touchpoint.

Continue to configure the interaction, creating interactive flowcharts in Campaign sessions and defining offers.

After you have created all your zones, offers, and segments, you can create treatment rules on the Interaction Strategy tab of a campaign. This is where you assign offers to segments per zone. You may also take the time to assign target and control cells on the Target Cells tab.



The interaction is now complete and can be deployed to a staging server for testing.

## Planning your Interact implementation

Designing your Interact implementation requires the coordination of several components. The following example proposes one method of organizing the different questions you should answer to design a successful Interact implementation. These questions are for designing an interaction configuration.

The first step of designing your implementation is asking, "How and where do I want to interact with my customers?" This question has an almost unlimited number of answers. 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 based on site navigation, a list of further choices based on previous selections, or money saving coupons based on the current purchases? Most touchpoints have more than one location available for interaction, so you may need to ask this question several times.

After you know what you want to do with Interact, you need to define what configuration components you need to create. You need to coordinate with the touchpoint administrator to define what interaction points and events must be created. You also need to consider what offers you present, how you segment your customers, and what sampling, integration, or tracking strategies you are using. The answers to these questions help define what information you will need to create in the profile database. At the same time, you should consider how you want to organize the interaction points into zones that are meant to serve a common purpose so you can fine tune your offer presentation.

There are several optional features, including offer suppression, learning, individual offer assignments, and score override, which you may 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*.

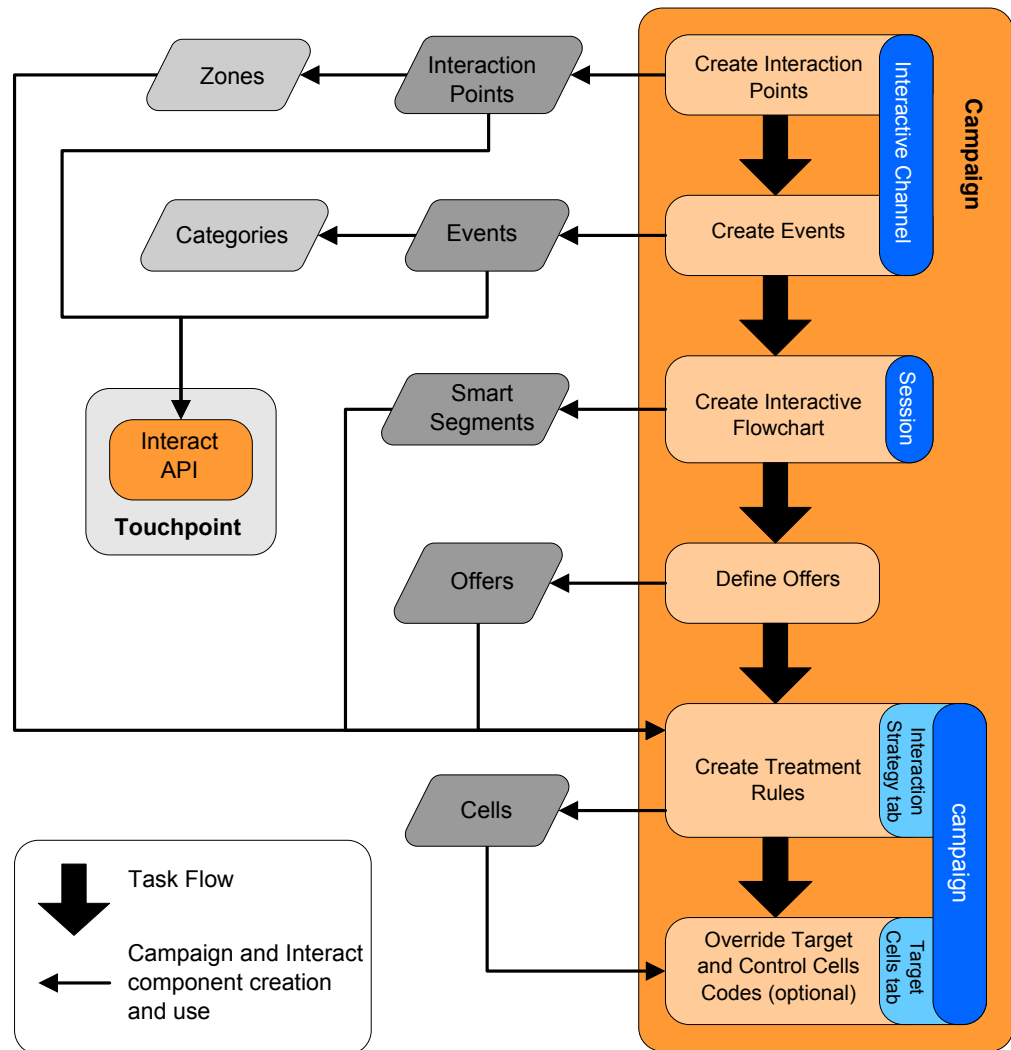
Since performance is an integral part of Interact, you must consider the data required to segment your customers. Since there is a performance impact each time data is retrieved from the database, you need to carefully design the information you provide for the runtime environments. For more information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



## Chapter 2. Design environment

Designing your Interact configuration is a multi-step process involving many people in your organization. This section focuses on the various configuration steps required within the design environment.

A large portion of the Interact configuration consists of setting up the integration with your touchpoint using the Interact API. For details regarding working with the Interact API, see the *Interact Administrator's Guide*



The previous diagram is an extract from the full design workflow, showing only the configuration components which take place in the design environment. While this diagram shows a linear progression, in practice, many 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 may 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.

A sample workflow could contain the following steps.

1. Create an interactive channel.
2. Create interaction points within the interactive channel.
3. Create events within the interactive channel.
4. Use interactive flowcharts to define smart segments.
5. Define offers.
6. Define treatment rules on the interaction strategy tab.
7. (Optional) Override target and control cells on the target cells tab.
8. Deploy the interaction.

After all of these tasks are completed, you have created all the components necessary for a Interact configuration in the design environment. You can mark these configurations **Ready for deployment**. Once the Interact administrator deploys the configurations to the runtime servers, and the touchpoint has been integrated with the Interact API, your Interact implementation is complete.

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## About the Interact API

Configuring Interact to work with your touchpoint consists of two main components:

- Configuring Interact in the design environment.
- Configuring your touchpoint to work with the runtime environment using the Interact API.

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

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

- interactive channels
- interaction points
- events

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

There are other elements of the Interact configuration you can use in the Interact API to enhance your interaction, including smart segments, campaign start and end dates, offers, and interactive flowcharts.

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 requesting a re-segmentation, which runs all of the interactive flowcharts 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.

The Interact API references the following elements of Campaign:

- 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 is the marketing score assigned on the interaction strategy tab. This score is relevant for Interact only, not your entire Campaign environment. You can modify or override the marketing score from the interaction strategy tab. For more information about the Interact API, see the *Interact Administrator's Guide*.

## Interact runtime

The following section provides a brief overview of what happens on the runtime server during an interaction.

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

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

As the visitor interacts with the touchpoint, the Interact API can perform several actions including 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.

This is a basic overview. There are many optional features you can enable which allow you to influence offer recommendation, for example, the learning module. For more information about these optional features, see the *Interact Administrator's Guide*.

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## Working with interactive channels

An interactive channel is a representation of a client-facing touchpoint that is used to coordinate all of the objects, data, and server resources involved in interactive marketing. In general, you should 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. However, you may also want to create different interactive channels for the purpose of 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 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) on the interactive channel summary tab for your convenience.

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 using the `startSession` method in the API. This name is not case-sensitive.

You can have as many interactive channels as required for your organization. Different campaigns can reference the same interactive channel for the interaction strategy tab. For example, if you have one campaign for new cell phones and another campaign for new calling plans, each campaign can have an interaction strategy tab for the website interactive channel. The same campaign can have several interactive strategy tabs, each referencing a different interactive channel. Therefore, the new cell phone campaign can have an interaction strategy tab for the website and an interaction strategy tab for the call center.

### The maximum number of times to show an offer

One of the settings for an interactive channel is the **Maximum # of times to show any offer during a single visit**. This setting defines how many 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 has not been presented, and therefore continues to recommend the offer, even if the maximum has been exceeded.

The runtime environment also does not consider default strings as offers for the purpose of calculating the **Maximum # of times to show any offer during a single visit**. For example, all your interaction points have the same default string presenting the same default offer and something has happened on your network so that the touchpoint cannot reach the runtime server. Therefore, the touchpoint is displaying the default string from the interaction point. Although the touchpoint is presenting the same offer multiple times, it does not count for the **Maximum # of times to show any offer during a single visit**.

## To create an interactive channel

1. Select **Campaign > Interactive Channels**.  
The All interactive channels page appears.
2. Click the **Add an Interactive Channel** icon on the All interactive channels page.  
The Add/Edit Interactive Channel page appears.
3. Enter a **Name** and **Description** for the interactive channel. The name and description you enter here are for your reference, and appear in windows and reports.
4. Select the **Security Policy** for the interactive channel. If you have not created any security policies, the default global policy is selected for you, and you cannot change it.
5. Select the server groups you want to associate with this interactive channel from the Runtime Server Groups list.  
You can select multiple server groups using **Shift+Click** or **Ctrl+Click**.
6. Select the production server from the **Production Runtime Server Groups** list.
7. Enter the **Maximum # of times to show any offer during a single visit**.
8. Click **Save Changes**.

The interactive channel summary tab for the new interactive channel appears.

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

**Note:** You cannot edit the security policy after you have created an interactive channel.

To delete an interactive channel, select the checkbox next to the interactive channel on the All interactive channels page and click the **Delete Selected** icon. When you delete an interactive channel, you delete all interaction points and events associated with it. Whether or not you can delete the interactive channel depends on the deployment status of the interactive channel.

## About mapping tables

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

A table mapping is the metadata 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.

### To map the profile table for an interactive channel

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

1. Click **unmapped** for the audience level you want to map under Mapped Profile table on the interactive channel Summary tab.  
The Map Profile tables for Audience Level wizard appears.
2. Complete the Map Profile tables for Audience level wizard.

When the Map profile tables for Audience Level wizard validates the table mapping, it references the data source defined in the Campaign > partitions >

partitionN > Interact > flowchart > datasource property. All interactive channels must reference the same data source. This data source is for test runs only.

To edit the mapping of a profile table, click the name of the Mapped Profile Table and complete the Map Profile tables for Audience Level wizard.

### To map dimension tables for an interactive channel

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

The Map profile tables for Audience Level wizard references the data source defined in the Campaign > partitions > partitionN > Interact > flowchart > datasource property.

All interactive channels must reference the same data source.

1. Click the name of profile table under Mapped Profile table on the interactive channel Summary tab.

The Map Profile tables for Audience Level wizard appears.

2. Click **Map a new Dimension table**.
3. Complete the Map Profile tables for Audience Level wizard.

### Map Profile Tables for Audience Level wizard

Use the Map Profile Tables for Audience Level wizard to map profile and dimension tables for your interactive channel.

The first screen of the Map Profile Tables for Audience level wizard displays a list of tables you can map, edit, or unmap.

- To map a dimension table joined to the profile table, click **Map a new Dimension Table**. You can only map dimension tables after you have defined a profile table for the audience level.
- To edit a table mapping, select the table you want to edit and click **Edit Mapping**.
- To unmap a table, select the table you want to unmap and click **Unmap**.

Table 1. Select a table to map

Field	Description
Select a table to map	<p>This is a list of all the tables in the data source defined by the Campaign &gt; partitions &gt; partitionN &gt; Interact &gt; flowchart &gt; 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 &gt; partitions &gt; partitionN &gt; AudienceLevels category. Each audience ID column should map name for name.</p>



Table 1. Select a table to map (continued)

Field	Description
Load this data in to memory when a visit session starts	Select this checkbox to load the record 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. This can improve the overall performance of a runtime session by having the performance impact of reading a database at the start of a runtime session, so all subsequent data requests during the runtime session are faster. You can reload data from tables 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.
IBM Table Name	The name of the table as it appears 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 IBM table name must also be unique within the table mapping, per audience level, per interactive channel.
Table details	<p>The Table details field displays the <b>Field Name</b> as it appears in the real data source, the <b>IBM Field Name</b> as it appears in the Interactive flowcharts, the <b>field Type</b>, and whether or not this is a <b>Audience Key</b> field.</p> <p>If you are mapping a profile table, most of this table is disabled. The fields that match the audience ID fields should have <b>Audience Key</b> selected. You can define <b>Default</b> values for every field.</p> <p>If you are mapping a dimension table, the Audience Key column is enabled. Select the <b>Audience Key</b> checkbox for the fields upon which you want to join the dimension table to the base table.</p>

If you are mapping a profile table, click **Validate mapping**.

If you are mapping a reference table, click **Map Dimension to Base**.

Table 2. 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 <b>Auto-selected</b> , <b>Inner Join</b> , and <b>Outer Join</b> .

## Validate Mapping

When you validate the mapping of a table, the design environment examines all interactive flowcharts, campaigns, and learning configurations associated with this

interactive channel to ensure that your changes do not break any part of your interaction configuration. If, for example, you remove a field required by an interactive flowchart, the design environment displays a list of the affected flowcharts that must be revised before you deploy to a runtime environment.

**Note:** To validate mapping, Interact uses your test run Interact server. Your test run runtime server must be running for Check Syntax to function.

If you are editing a profile table mapping, and the table or field names have changed, Interact unmaps all dimension tables associated with the profile table.

**Note:** You must click **Complete this Change** to finish the table mapping.

When you add or edit a dimension table, make sure the schema matches the profile table schema.

## Interactive channel summary tab

The interactive channel summary tab contains two main sections, the Interactive Channel Summary and the Deployment Status

### Interactive channel summary

*Table 3. Description of the Interactive Channel Summary section*

Heading	Description
<b>Description</b>	<p>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.</p> <p>You can change this value by clicking the <b>Edit</b> icon and modifying the description in the dialog that appears.</p>
<b>Security Policy</b>	<p>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.</p>
<b>Runtime Server Groups</b>	<p>A list of the runtime server groups available for this interactive channel.</p> <p>You can change this value by clicking the <b>Edit</b> icon and modifying the runtime server groups in the dialog that appears.</p>
<b>Production Runtime Server Group</b>	<p>The runtime server group you have chosen for your live, customer-facing touchpoint.</p> <p>You can change this value by clicking the <b>Edit</b> icon and modifying the production runtime server group in the dialog that appears.</p>
<b>Maximum # times to show any offer during a single visit</b>	<p>An integer defining 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 choosing offers to display.</p> <p>You can change this value by clicking the <b>Edit</b> icon and modifying the value in the dialog that appears.</p>

Table 3. Description of the Interactive Channel Summary section (continued)

Heading	Description
<b>Learning Mode</b>	Specifies whether the interactive channel uses the global learning model, uses the marketer's scores only for offer weighting, or uses the custom learning model you specified in the New or Edit interactive channel dialog.
<b>Mapped Profile Table</b>	<p>Displays the IBM name and actual name for the profile table for each audience level defined in Campaign.</p> <p>If you have not yet defined a profile table, this displays <b>unmapped</b>.</p> <p>The name of the table or <b>unmapped</b> is a link to the Map Profile Table for Audience Level wizard, where you can map profile and dimension tables for the interactive channel.</p> <p>The number of profile tables you have mapped is listed as the number of supported audience levels. You may have more audience levels 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>

## Flowcharts and Strategies

This section displays the flowcharts and interactive strategies that have been defined and associated with this interactive channel. This section contains the following options:

Table 4. Description of the Flowcharts and Strategies section

Heading	Description
<b>Associated Flowcharts</b>	<p>A listing of all flowcharts associated with this interactive channel.</p> <p>Each flowchart listed here is a link that will open the flowchart where you can view or edit it as needed.</p>
<b>Associated Strategies</b>	<p>A listing of all strategies that are associated with this interactive channel.</p> <p>Each strategy listed here is a link that will open the interactive strategy where you can view and edit the treatment rules, as well as mark or unmark the interactive strategy for deployment.</p>
<b>View the treatment rule inventory</b>	A link that displays the Channel Treatment Rule Inventory report, filtered for this interactive channel.
<b>View Deployment History</b>	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.

Table 4. Description of the Flowcharts and Strategies section (continued)

Heading	Description
<b>Edit Summary</b>	Displays the Interactive Channel Summary dialog where you can modify most of the information in the Interactive Channel Summary section, above. This is the same as clicking the <b>Edit</b> icon at the top of the Summary tab.

## Working with zones

Zones enable you to divide up your interaction points into like areas in your touchpoint. When you create your treatment rules, you can make them more specific by adding zones to the rules. For example, if you divide your website into section by product type such as calling plans and phones for a telecommunications company, you can organize your interaction points into zones related to the product type. In your treatment rules, you can assign the same segment different offers depending on which zone the customer is viewing. For example, if the visitor is in the calling plans zone, the visitor only sees offers relating to new calling plans with better rates. When the visitor moves to the phones zone of the touchpoint, all the offers are targeted for new cell phones.

You can move interaction points between zones. An interaction point can only be a member of one zone at a time.

### Adding zones to an 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.

1. Click the **Add Zone** icon on the Interaction Points tab of an interactive channel. 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 after you save the zone.

4. Optionally, 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:

**Learning Mode.** 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 list by name. Note that if you have not defined any custom learning models 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 highest score first, regardless of the built-in learning score.
- **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.

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 Selected** icon. You cannot delete a zone if it is used in a treatment rule.

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

- Rule group Group1 has a learning module 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 will have a mix of offers 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 using the rule groups above would be offer3 non-learning, offer4 non-learning, offer1 with learning, and finally offer2.
- If you select **Learning - Prioritizing Learning Offers** for this zone, the sequence of offers to be selected are based on selecting the learning offers first, so the sequence using the rule groups above would be offer1 Learning, offer2 Learning, offer3 non-learning, and finally offer4.
- If you select **Non learning - 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, that value would be used only when the learning mode is enabled. Offers other than the high priority would be prioritized according to the specified percentage.

## Working with interaction points

An interaction point is one of the three elements of the Interact configuration in the design environment that interacts directly with the Interact API. 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.

Whenever you use the `getOffers` or `postEvent` methods in the Interact API, you must reference an interaction point. The name of the interaction point used in the Interact API must match the name of the interaction point as configured in the design environment.

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

## To add an interaction point

1. Click the **Add Interaction Points** icon on the Interaction Points tab of an Interactive Channel.  
The Add/Edit Interaction Point dialog appears.
2. Enter a **Name** for the interaction point.
3. Select a **Zone**.  
You can move the interaction point to a new zone after it is created.
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.

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 by selecting the checkbox next to the interaction point and clicking the **Move to** icon.

You can delete an interaction point by selecting the checkbox next to the interaction point and clicking the **Delete Selected** icon.

## Interaction point reference

The interaction point tab uses the following icons.



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

Icon Name	Description
Add Zones	Click to add a new zone to this interactive channel.
Add Interaction Points	Click to add a new interaction point to this interactive channel.
Move to	Select interaction points then click this icon to move the selected interaction points to a new zone.
Delete Selected	Select interaction points or zones, then click this icon to delete them.

---

## Working with events

An event is an action, which is taken by a visitor, that triggers an action in the runtime environment such as placing a visitor into a segment, presenting an offer, or logging 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. 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. This name is not case-sensitive.

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 are 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.

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, using the current data in the visitor's session.

When you are designing your interaction, remember that 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 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.

If you create an event with more than 1 log offer action, remember that the Interact API performs the same action for the associated offer. For this reason, do not create an event which 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 through the use of 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 may need 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 may 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`.

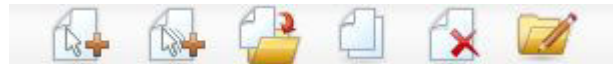
When you are working with the Interact API, there is no functional difference between the events, but the naming conventions can make the code clearer. Also, if you give each custom response a separate name, the Channel Event Activity Summary report displays more accurate information.

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

To monitor how often all of these events occur on your touchpoint, see “About the Channel Event Activity Summary report” on page 89.

## Event reference

The events tab uses the following icons.



You can move the mouse cursor onto each icon to see its name. The icons, left to right, are described in the following table.

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

## To add an event

1. Click the **Add Events** icon on the Interactive Channel Events tab.  
The Add Event dialog appears.
2. On the General tab, provide a name and description for this event that will help you identify it later.  
The description appears on the events tab and is intended for your reference only.
3. Optionally, 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. Click **Save and Return** to return to the Events tab or **Save and Add Another** to continue adding events.

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 selected items to the following category** icon.

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

## Working with categories and 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 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.

### To add a category

1. Click the **Manage Categories** icon on the Interactive Channel Events tab.  
The Manage Categories dialog appears.
2. Click **New** to open the New Category dialog.
3. Enter a **Category 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 additional categories.

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.

---

## Working with event patterns

An event pattern is a flexible way to personalize offers that are based on patterns of visitor activity. Using event patterns (also referred to as "behavior triggers"), you can test whether an event or a collection of events is occurring during an interaction and, if the specified pattern of event occurrences is met, to trigger one or more actions in response.

For example, you might define an event pattern such that, when a visitor views a certain combination of pages, or visits certain pages the specified number of times, a specific offer is presented. You can test for actions such as downloading certain documents, viewing specific media, and searching for different terms. For a call center, for example, events might include the reason for the interaction, or the service request that is initiated during the interaction.

You can define an event pattern to be specific to an Interactive Channel, or global to make it available across all Interactive Channels.

After you define the event patterns that are available for an Interactive Channel (either because they are defined in that IC, or because they are global), you can use them on your interactive flowchart. You can define Select, Decision, or PopulateSeg process boxes so that when an event pattern is matched (the event pattern state becomes true), the visitor is included in a predefined segment to which specific offers are then assigned.

Event patterns affect a visitor's interactive session with the runtime environment in the following ways:

- When an interactive session starts, Interact tries to load any previous event pattern states that are associated with the current visitor's audience ID, if event pattern states exist.
- When 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.
- When a session ends, the statuses of all the updated event patterns that are associated with the visitor's audience ID are stored in the database, if the audience ID is known (that is, the visitor's profile can be found in the profile data source). Otherwise, the event pattern states are discarded.

The advantage to this is that event pattern states are independent of user sessions, so that event activities from one user session are reflected in another session, as long as the audience ID matches and both sessions are active when those event activities happen.

Also, note that the event pattern states for unknown users are discarded by default at the end of the session, unless the configuration property `interact | services | eventPattern | persistUnknownUserStates` is set to `TRUE` or the session parameter `UACISavePatternStates` is set to `TRUE`.

**Note:** If the audience ID changes in the middle of a session, Interact tries to load the saved event pattern states for the new audience ID. In the scenario that the

previous audience ID is unknown and the configuration setting (`interact | services | eventPattern | mergeUnknownUserInSessionStates`) is set to true, or the session parameter `UACIMergePatternStates` is set to true, the user event activities that belong to the previous audience ID in the same session are merged into the new audience ID.

## To add an event pattern

The Events tab on the Interactive Channel page provides the ability to define event patterns to identify patterns of visitor activity and behavior, and perform specific actions when those patterns have been identified.

1. Click the Add Event Pattern icon on the Interactive Channel toolbar.
2. Optionally, choose a category in which you want to organize this event pattern. The category has no effect on how the event pattern operates; it is used solely for your organizational purposes.
3. Optionally, specify the date range during which you want the event pattern to be valid. The date fields are used in the following ways:
  - If no dates are specified, the event pattern is valid as long as it is deployed.
  - If you specify only a start date, the event pattern is valid from that date and time until it is undeployed.
  - 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.

4. Optionally specify a reset duration as a specified number of minutes, hours, or days.

The reset duration indicates how long the pattern state remains true (that is, the event pattern has been satisfied for a specific visitor interaction) until it is reset. After the reset duration has passed, the conditions of the event pattern must be met again before it is considered true again. The default setting for the reset duration is 1 day.

5. Use the Pattern tab to specify one or more events that must occur before the event pattern is considered to have been met (so that its state is true).
6. Select how the event pattern will be evaluated from the Pattern Type drop-down list, from one of the following options:
  - **Match All.** Requires that all of the events you specify below must occur before the event pattern has been met. Selecting this option allows you to add one or more events to the Selected Events list.
  - **Counter.** Allows you to specify a single event to use as a test, but requires that the event occur the specified number of times before the event pattern has been met. For example, you might require that the visitor generates a reject event 10 times, or that the visitor requests contact 1 time. Selecting this option allows you to add only one event to the Selected Events list.
  - **Weighted Counter.** Allows you to specify that the total score of the selected events must reach the specified total before the event pattern has been met. With this option, you can add multiple events to the Selected Events list, but rather than requiring that each event occur (as with Match All), the events must occur the specified number of times in any combination before the event pattern is met.

For example, if you select two events and a Weighted Counter value of 10, the event pattern would be met if one of the events occurs 10 times, if each event occurs 5 times, if one event occurs 2 times and the other 8 times, and so on.

7. Use the Actions tab to specify which actions should occur when the event pattern specified by the Patterns tab has been met. You can select one or more actions to perform, from the following list:
  - **Trigger Re-segmentation.** The runtime environment runs all the interactive flowcharts for the current audience level that is associated with the interactive channel again, using the current data in the visitor's session.

When you are designing your interaction, remember that 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 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.
8. Click **Save and Return** to close the Event Pattern dialog, or click **Save and Add Another** to save the event pattern and create a new event pattern.

After you have created event patterns, they become available within the design environment, appearing in interactive flowcharts in Select, Decision, and PopulateSeg process boxes, as well as in the Interact List process box in batch flowcharts. In those flowchart processes, you can define your queries so that, when

the event patterns are identified, the actions you have defined are executed and the visitor is presented with the appropriate offers.

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## Working with constraints

Offer constraints provide you with 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 quota of impressions (such as a certain number of impressions in one day) has been met, or to distribute offers on a webpage among different product lines.

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

### To add an offer constraint

1. Click the **Add Constraints** icon on the Constraints tab of an Interactive Channel.

The Add/Edit Constraints 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 the constraint should apply by selecting **in Folder** or **in Offer List**, then using the accompanying drop-down list to select the desired folder or offer list.

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

5. Specify the range of dates during which the offers should be made available by following these steps:
  - a. Click the **Start serving offers after** field and use the calendar tool that appears to specify the earliest date on which the offers should become available, then use the drop-down list next to it to select the earliest time they should become available.
  - b. Click the **Stop serving offers by** field and use the calendar tool that appears to specify the last date on which the offers should become available, then use the drop-down list next to it to select the latest time they should become available.
6. Optionally, complete the **Distribute evenly with** fields to specify the maximum number of impressions you want the offers displayed within a single time period.
  - Enter the maximum number of times you want the offers 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 (such as per hour, per day, and so on).

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

7. Optionally, 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.

8. Click **Enable** to make this offer constraint active within the parameters you have defined.
9. Click **Save and Return** to go back to the Constraints tab or **Save and Add Another** to continue adding offer constraints

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 checkbox next to its name and clicking the **Delete Selected** icon.

## To edit an offer 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 appears.
3. Optionally, 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 a new constraint.

The offer constraint is updated with the changes you have made.

## To enable and disable an offer constraint

Offer constraints are defined with a range of time during which it will be used. However, there may be times when you want to prevent the offer constraint from use without redefining its operating range, or you may want to disable an offer constraint after its start and end time to prevent it from being considered at all. You can disable and enable offer constraints using the Add/Edit Constraint dialog.

1. Click the name of the constraint you want to edit on the Interactive Channel Constraints tab.  
The Add/Edit constraint dialog appears.
2. To disable the offer constraint so that the selected offers are served without the restrictions 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.

## To delete an offer constraint

**Note:** You cannot recover a constraint once you have deleted it.

1. Select the check box next to the constraint(s) you want to delete.
2. Click **Delete Selected**.
3. Confirm the deletion.

Interact deletes the selected constraints.

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## Working with learning models

Interact has a built-in learning module that monitors the real-time behavior of your visitors to influence your interactive flowcharts and help select which 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 custom learning models. This is also referred to as "self learning."

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

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

### To add a learning model

1. Click the **Add Model** icon on the Self Learning tab of an Interactive Channel. The Add/Edit Learning models dialog appears.
2. Enter a **Name** for the learning model.
3. Enter a **Description** for the learning model. This description appears 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 have defined.
6. Click **Save and Return** to go back to the Self Learning tab or **Save and Add Another** to continue adding learning models

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 checkbox next to its name and clicking the **Delete Selected** icon.

### To edit an learning model

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 you want to edit. The Add/Edit Learning Model dialog appears.
3. Optionally, 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 a new learning model

The learning model is updated with the changes you have made.



## To delete a learning model

**Note:** You cannot recover a learning model once you have deleted it.

1. Select the check box next to the learning model(s) you want to delete.
2. Click **Delete Selected**.
3. Confirm the deletion.

Interact deletes the selected learning models. Note that you cannot delete a learning model that is currently in use.

## To enable and disable an learning model

There may be times when you want to prevent a learning model from being available in a learning channel without deleting it entirely, so that it is available again in the future when needed. You can disable and enable learning models using the Add/Edit Learning Model dialog.

1. Click the name of the learning model you want to edit on the Interactive Channel Self Learning tab.

The Add/Edit Learning Model dialog appears.


2. To disable the learning model so that it is no longer available in the interactive channel, click **Disable**.
3. To enable the learning model, click **Enable**.
4. Click **Save and Return** to return to the Self Learning tab, or click **Save and Add Another** to create an additional custom learning model.

---

## Working with smart segments

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.

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

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

## Create a session

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 will be 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 only perform test runs.

## Define an interactive flowchart

Interactive flowcharts provide the segmentation logic for your interaction. When the runtime environment creates a visitor's runtime session, one of the first steps is

to take all available profile information for the visitor and run it through all interactive flowcharts associated with the interactive channel. This places the visitor into zero or more smart segments. The runtime environment then uses these segments to recommend offers as defined by the treatment rules.

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

You can create interactive flowcharts inside of Campaign sessions only.

See Chapter 3, “About interactive flowcharts,” on page 55 for details about creating interactive flowcharts.

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## Define offers

If you have not already done so, you must create the offers that Interact can recommend.

**Important:** Interact does not support offer lists at this time.

As you create your offers, remember that 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

As you map offers in Campaign to offers on your touchpoint, for example HTML code for a banner ad, keep in mind what information is available for naming conventions. For example, you may want to save all the banner ads in files named the same as the offer code for easy reference.

When creating 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.

If you make changes to offers used in treatment rules, including retiring offers, you must re-deploy all the interactive channels associated with the server group for the changes to take effect on the server group.

### Offer templates for Interact

You must enable the `IP ID` and `IPName` offer attributes for all offers used by Interact. These attributes must exist, and are automatically populated during runtime, overwriting any default `IP ID` or `IPName` attributes you defined. The `IP ID` is the internal ID and the `IP Name` the name for the interaction point 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**, you can still use the offers with treatment rules; 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. In the case of Interactive flowcharts, the **Flowchart run date** is the time at which the runtime environment recommends the offer to the touchpoint for presentation.

## To create offer templates for 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** checkbox.
3. In Step 3 of 3: Default Values, define default values for **IP ID** and **IP Name**. You can enter any integer for the IP ID default value, and any string for IP Name. The values are automatically populated with the correct data by the runtime environment; however, the design environment requires a default value.

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## Working with treatment rules

Treatment rules are the main guidelines 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.

**Note:** 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 containing that segment or offer.

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

You should select offers 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, your report data will not be accurate.

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 you can implement 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 which offer eligibility features are available to you. For example, if you are using a score override table to override the marketing score, it may 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, 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 have configured your treatment rules across multiple campaigns, you can have multiple offers 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 has to 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 will be more likely to see different offers on each interaction. Note that you can change this behavior, if desired, 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 have assigned the same offer to the same segment with different scores, for example, two different campaigns may 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 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 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 have enabled 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.

Writing expressions for offer eligibility directly inside treatment rules allows you control over offer targeting from outside of interactive flowcharts. Some rules may be easier to manage at this level rather than at the segmentation level. For example, you could write the expression `offer.dynamic.ownProductX='yes'`, that is, if the offer attribute `ownProductX` is `yes`, use this treatment rule. In this example, you could include a specific offer or you could have a different score for the offer for people who already own product X. You can build very specific treatment rules, for example, assigning specific offers based on offer attributes or the day of the week.

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.

**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.

You can create as many campaigns containing 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.

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.

## 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 appear on the campaign Summary tab. You then deploy the interaction strategy tab. The offers still do not appear on the campaign

Summary tab. Two hours later, after the contact and response history module has finished the next data transfer, the offers appear on the campaign Summary tab.

Smart segments do not display on the campaign Summary tab.

## To create an interaction strategy tab

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 new campaign, click **Save and Add an Interaction Strategy**.
  - When viewing the summary tab of an existing campaign, click the **Add an Interaction Strategy** icon.

The new interaction strategy page appears.

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 the **Save and Create Treatment** rules button places you in the interactive strategy in edit mode, where you can make and save changes. See “To add or modify a treatment rule” on page 44 for information on 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 or not you can delete the interaction strategy depends on the deployment status of the interactive channel associated with this interaction strategy tab.

## To view the interaction strategy tab

Whenever a campaign has one or more interaction strategy tabs 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 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.

### 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 current status is "Not Yet Deployed," you can click this button to mark the interaction strategy for deployment.
  - **Mark for undeployment.** If the current 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 5. 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 82 for more information about using column filters.
View-only treatment rule settings.	For all other treatment rule information, including enabled/disabled, Marketers Score, Advanced Options, and Parameterized 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.

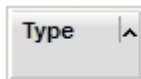
### Related tasks:

“Sorting tables in IBM products”

### Sorting tables in IBM products:




When you are viewing a table of information in IBM products, features may 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 appears, 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, as described below.

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 using the selected column in ascending order.
	Sorts the table using the selected column in descending order.
	Cancels the sorting of the table 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 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" appears, then click the "x".


## To add or modify a treatment rule

You must create smart segments and offers before creating 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 has been marked for deployment.



1. On an interaction strategy tab, click the **Add Rules** () icon.  
The Add Rules panel appears.



**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.

Note that after you have added a segment to the rule, you can click the following icons next to the segment name:

- The Self-Learning Settings icon () lets you determine the learning model that will apply 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 should be applied instead. See “Working with learning models” on page 36 for details.  
Note that 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 appears.
- 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 containing 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 containing offers you can recommend as part of this treatment rule appears.

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 checkbox 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 on defining advanced rules, see “To add advanced options to a treatment rule” on page 47.
9. To specify parameterized offers for a treatment rule, click the Parameterized Offer Attributes icon () in the **Off Attr** column, or select the checkbox next to one or more treatment rules and choose **Edit Selected Rules > Parameterized Offers**. Use the dialog box that appears to specify the parameterized offer attribute names and values as described in “To add parameterized offer attributes to a treatment rule” on page 48.
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 should 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.

## 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 rule for which you want to add advanced options, then perform 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**, **Adv. Opt** (Advanced Options), and **Off Attr** (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 appears. 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 if 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 supported by Interact  
For a list of the IBM macros 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.

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'
EXTERNAL_CALLOUT('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 his or her 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 has been deployed successfully,

the mappings you have created are used in the runtime environment to override the offer attribute values of the returned offers.


This task assumes that you have already defined offers with attributes that you can parameterize from the strategy tab, and that you have already 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 should 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 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 described here.
2. Select one or more treatment rules for which you want to add offer attribute parameterization settings, then perform 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**, **Adv. Opt** (Advanced Options), and **Off Attr** (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 appears, 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 appears to enter a literal constant for that offer attribute or to create an expression 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.

### To enable and disable 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 context menus by clicking the segment or offer.

#### Note:

The **Enabled**, **Marketers Score**, **Adv. Opt** (Advanced Options), and **Off Attr** (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 containing the treatment rules you want to modify.
2. Click the **Edit Strategy** icon to enter edit mode.
3. Modify the treatment rules using any of the following methods.

Action	Procedure
Enable a single rule	Click the <b>Enable Rule</b> icon until the checkmark is green (and not dimmed).
Enable all rules containing a particular offer	Click an offer and select <b>Enable all Rules involving this Offer</b> .
Enable all rules containing a particular segment (cell)	Click a segment and select <b>Enable all Rules for this Segment</b> .
Disable a single rule	Click the <b>Enable Rule</b> icon until you see a gray (dimmed) checkmark.
Disable all rules containing a particular offer	Click an offer and select <b>Disable all Rules involving this Offer</b> .
Disable all rules containing a particular segment (cell)	Click a segment and select <b>Disable all Rules for this Segment</b> .

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.

### To delete treatment rules

You can delete treatment rules you no longer need.

You can open the context 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 containing the treatment rules you want to modify.
2. Click the **Edit Strategy** icon to enter edit mode.
3. Delete the treatment rules using any of the following methods.

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

- 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.

## About deploying interaction strategy tabs

After you are finished configuring 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 appears on the interactive channel 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 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 all changes are deployed, the interaction strategy tab and all its treatment rules are removed from the runtime server.

### To mark an interaction strategy tab for deployment

After you have finished creating and modifying an interactive strategy as needed for an interactive channel, you are ready to mark it for deployment.

- View the summary page for the interaction channel associated with the interaction strategy you want to mark for deployment.
- In the Associated Strategies area on the summary page, click the interactive strategy you want to mark for deployment.

The interactive strategy tab appears.

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

The interaction strategy is marked for deployment. The interaction strategy is added to the list of items 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 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 bottom of the interactive channel summary tab, you can view the Interactive Channel Deployment History report to see the results of the deployments.

## To cancel a deployment request

1. View the interaction strategy tab for which you want 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 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.

## To mark an interaction strategy tab for undeployment

If you no longer require the smart segments 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 have previously deployed the interaction strategy tab.

1. View the interaction strategy tab 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 waiting to be deployed on the interactive channel summary tab. You cannot edit an interaction strategy tab which is marked for undeployment.

The next time 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.

## Interaction strategy reference

The interaction strategy tab uses the following icons.



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 a Flowchart	Click this icon to add a new batch flowchart to this campaign. Remember, to add interactive flowcharts, you must create them in a session.
Add an Interaction Strategy	Click this icon to add a new interaction strategy to this campaign.



Icon Name	Description
Copy Interaction Strategy	Click this icon (in view-only mode) to create a new copy of this interaction strategy. When you click this icon, a dialog appears 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 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, at this time, 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 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 may be broken. The offer for a control cell may 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*.

## To override 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 appears.
3. Edit the **Target Cell Name**.
4. Change the Cell Code as follows:
  - Generate a new cell code 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 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 starting with "ABC" only.

5. Click **Save and Return** to close the Override Cell Name and Code dialog, or click **Save and Edit Next** to edit the cell name and code of the next segment.

---

## Deploy the Interact configuration

As 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 75 for details about deploying interactive channels.

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## Chapter 3. About interactive flowcharts

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

You use batch flowcharts in Campaign to perform 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 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 created by interactive flowcharts are different from those created in batch flowcharts. Segments created by batch flowcharts are a list of IDs. Segments created by interactive flowcharts, called smart segments, are the definition of which customers should 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 collected in real time from the touchpoint.

Interactive flowcharts can have one audience level per flowchart. You can, however, have many interactive flowcharts per audience level.

As you design your interactive flowcharts, you need to remember that interactive flowchart performance is different from batch flowchart performance. These flowcharts will be run in real time. If it takes too long for the perfect advertisement to load on your website, your customer may go to a different site. When designing flowcharts, you need to work in tandem with your touchpoint administrator, balancing your segmentation requirements with your touchpoint performance requirements. Some design considerations 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. You can, however, 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—enable you to create detailed segments. The Decision and Sample processes let you 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 lets you 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 lets you divide the input into different cells by creating branches 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.

---

## To create interactive flowcharts

**Important:** When creating interactive flowcharts, remember that 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 a Flowchart** icon.  
The New Flowchart page appears.
3. Enter a name and description for the flowchart.
4. Select the **Interactive Flowchart** flowchart type.  
When you select **Interactive Flowchart**, configuration settings for interactive flowcharts appear.
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 Interactive Flowchart page displays the process palette and a blank flowchart workspace.

You can now edit the interactive flowchart.

---

## Interactive flowcharts and data sources

Like batch flowcharts, you use interactive flowcharts to define the segments audience members belong in, based on characteristics of the data associated with them. However, the data you use in an interactive flowchart is different from the data 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 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. This can include all the traditional data you have about your visitors, name, account number, address, and so on.

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 perform test runs of interactive flowcharts, you must have sample real-time session data in a test run profile table.

### The 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 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 of a visitor came from and stores it with the name `linkFrom`, there will be a column called `linkFrom` in the test run profile table.

The test run profile table may 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 designing interactive flowcharts, the person designing and coding 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 needs to 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 may 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 is in dimension tables.

### Dimension tables

You can map dimension tables for interactive flowcharts, however you must map the tables in the Interactive Channel, not within the Campaign table mapping

available in Campaign Settings. These 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 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 need to 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 take into consideration 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 regarding 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 or not you can delete an interactive flowchart depends on its deployment status.
- If you access the Table Mappings dialog, clicking **Load** will only load general tables.

You should perform all table mapping for an interactive flowchart in the interactive channel 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 allow you 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 provide access to the state of every event pattern defined for the interactive channel (including out of date range event patterns). Including event patterns in your query allows you 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 6. 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 <b>Enabled</b> checkbox 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.

## About 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 using Campaign's date format settings.

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
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 following table describes the query building block, whether it is available in interactive flowcharts or advanced options, and any special notes.

Unless otherwise described here, 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 which 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 None data type.
IBM Macros	Yes	Yes	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> . <b>Note:</b> NUMBER, IS, and IN behave differently in interactive flowcharts and advanced options than Campaign.  EXTERNALCALLOUT is only available for interactive flowcharts. This function enables you to make synchronous callouts to external services.
Custom Macros	Yes	No	

## Using EXTERNALCALLOUT

EXTERNALCALLOUT is a function available to you when working with custom macros in Decision, Select, and Snapshot processes in interactive flowcharts.



EXTERNALCALLOUT lets you 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 using the `IAffiniumExternalCallout` interface. For more details about the `IAffiniumExternalCallout`, see the *Interact Administrator's Guide*.

---

## About the Interaction process

All interactive flowcharts must start with the Interaction process. The Interaction process fulfills two purposes:

- Start an interactive flowchart.
- Define the size of the test profile sample Interact uses when performing a test run of interactive flowcharts.

---

## About the Decision process

The Decision process is the workhorse of the interactive flowchart. The Decision process divides the cells passed into the process into new cells 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 which 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.

## To configure the Decision process

1. In an interactive flowchart in **Edit** mode, add a Decision process to the flowchart workspace.
2. 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.
3. Double-click the Decision process.  
The Process Configuration window appears displaying the Decision tab.
4. Select a source cell from the **Input** drop-down list.
5. Select **Create Mutually Exclusive Branches** if you want the created segments to be mutually exclusive.  
If you want a branch to contain all the remaining customer IDs, you must select **Create Mutually Exclusive Branches**.
6. Configure the branches.
7. (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 mouse over the process in the flowchart.

8. Click **OK**.

The process is configured and appears enabled in the flowchart.

## To configure Decision process branches

1. In the Decision process on the Decision tab, do one of the following:
  - Select a branch and click **Edit** to edit the branch condition.
  - Click **Add Branch** to create a new branch.
  - Select a branch and click **Remove** to delete a branch.
2. In the Edit or Add a Branch window, enter a **Branch Name**.
3. If you do not want to create a query, or to select all remaining customers, choose **Select All Customer IDs**.

Choosing Select All Customer IDs 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. 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 using queries.
6. Click **OK**.

The Add or Edit a Branch window closes and you return to the Decision tab of the Decision process. You can continue to configure branches or finish configuring the Decision process.

---

## About the 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. These segments you create with the PopulateSeg process are the smart segments you use in treatment rules. The PopulateSeg process is a terminal node of interactive flowcharts.

Remember that only smart segments can be used in interaction strategies. You cannot use strategic segments in interaction strategies.

## To create smart segments

1. In an interactive flowchart in **Edit** mode, add a PopulateSeg process to the flowchart workspace.
2. Provide input to the PopulateSeg process by connecting it to one or more data manipulation processes.

Data manipulation processes include Decision, Sample, or Select.
3. Double-click the PopulateSeg process.

The Process Configuration window appears displaying the Define Segments tab.

4. Select one or more source cells from the **Input** drop-down list.
5. In the Result Segments area, select an input cell and select a **Segment Name**.  
If you want to create a new 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.
6. (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 mouse over the process in the flowchart.
7. Click **OK**.

The process is configured and appears enabled in the flowchart.

---

## About the 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. In an interactive flowchart, however, during runtime, 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 should 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 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 it is desirable, to ensure that visitors are eligible to be sampled differently after a period of repeatedly being placed in to the same cell, you should configure a reset time and periodicity for the deterministic hash function.

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 will be placed in.

## To configure the Sample process

1. In an interactive flowchart in **Edit** mode, add a Sample process to the flowchart workspace.
2. Provide input to the Sample process by connecting it to one or more data manipulation processes.  
Data manipulation processes include Decision, Sample, or Select. You can connect the Sample process to an Interaction process also.
3. Double-click the Sample process.
4. Select one or more source cells from the **Input** drop-down list.  
All output cells from any process connected to the Sample process are listed in the drop-down list. To use more than one source cell, select the **Multiple Cells** option. If more than one source cell is selected, the same sampling is performed on each source cell.
5. 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, 3 samples are created for each input cell, with default names "Sample1", "Sample2" and "Sample3."
6. Select each sample under the **Output Name** column and do the following:  
The **Edit Output Cell** section is enabled.
  - a. Place your cursor in the **Cell 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 % field, or select the **All Remaining** checkbox.  
The % must be less than 100.00.
7. (Optional) Change the **Hash Seed** under the **Deterministic Hash Function**.  
You need to 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.
8. (Optional) Enter the **Date of first reset** under the **Deterministic Hash Function**.  
Click the ellipsis button  for a calendar to select the date.
9. (Optional) Enter the number of days between resets.
10. (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 mouse of the process in a flowchart.
11. 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 you use for sampling.

---

## About the 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 only contains 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 that 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 may reference a table with household transaction data in an interactive flowchart with the customer audience level to sort by information in the household data.

### To configure the Select process

1. In an interactive flowchart in **Edit** mode, add a Select process to the flowchart workspace.
2. Provide input to the Select process by connecting it to one or more data manipulation processes.  
Data manipulation processes include Decision, Interaction, Sample, or Select.
3. Double-click the Select process.
4. Select one or more source cells from the **Input** drop-down list.  
All output cells from any process connected to the Select process are listed in the drop-down list. To use more than one source cell, select the **Multiple Cells** option. If more than one source cell is selected, the same select actions are performed on each source cell.
5. Determine whether you want to select all rows from the data source or whether you want to filter the rows based on specified criteria. Select one of the following options.
  - a. **Select All IDs** to include all the rows of data from the data source in the Input drop-down list.
  - b. **Select IDs With** to create a query to select only certain IDs based on criteria you define.
6. If you use the Select IDs With option to select only certain IDs based on specified criteria, create a query.
7. (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 appears on the process in the flowchart. The notes appear when you mouse over the process in a flowchart.
8. Click **OK**.

The process is configured and appears enabled in the flowchart.

---

## About the 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. You

also cannot order or skip duplicate entries in the table, however, since interactive flowcharts only handle 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 using default data types. You can override these default data types by creating a table of alternate data types. For details, see the *Interact Administrator's Guide*.

## To configure the Snapshot process

- In an interactive flowchart in **Edit** mode, add a Snapshot process to the flowchart workspace.
- Provide input to the Snapshot process by connecting it to one or more data manipulation processes.  
Data manipulation processes include Decision, Interaction, Sample, or Select.
- Double-click the Snapshot process.
- Select one or more source cells from the **Input** drop-down list.  
All output cells from any process connected to the Snapshot process are listed in the drop-down list. To use more than one source cell, select the **Multiple Cells** option. If more than one source cell is selected, the same snapshot actions are performed on each source cell.
- Select a table from the **Export to** list.  
If a table does not exist, select **New Mapped Table** and follow the instructions for creating a new table in the *Campaign Administrator's Guide*.
- Select an option to specify how updates to the output table are handled:
  - Append to Existing Data**—append the new information to the end of the table. This is the recommended method for database tables.
  - Replace All Records**—remove any existing data from the table, and replace it with the new information.
  - Update Records**—all fields specified for snapshot are updated with the values from the current run of the process.
- Specify the fields that are written out by the Snapshot process.

- a. The fields in the table appear in the Export Fields list under the Table Field column. You can automatically find matching fields by clicking **Match>>**. Fields with exact matches for the table field names are automatically added to the Export Fields list. If there are multiple matching fields, the first match is taken.
- 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 using **Ctrl+Click** or a contiguous range of fields 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 desired, re-order 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.
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 appears on the process in the flowchart. The notes appear when you mouse over the process in a flowchart.
9. Click **OK**.

The process is configured and appears enabled in the flowchart.

---

## Understanding interactive flowchart test runs

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.

Interactive flowchart test runs merely check the segmentation logic. 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, perform a test run. While the results may seem similar—each segment is assigned some number of members—the way the flowchart assigns the members is different. When you perform 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 supplied in tables 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 need to work with your Interact administrator to add sample data into the test run profile that will properly test your interactive flowcharts. For example, if you define segmentation logic that separates audience members based on the first digit of their zip code, make sure 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 used in a test run, but you can adjust the number of records 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 5 records, the design environment uses the first 5 records in your test run profile table, 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 may 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 defined by the testRunDataSource.

- **TestAttr\_n**—Contains the data for the Test Run Attribute Data report, that is, all the data in the profile table for each audience ID.
- **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.

## To configure the test run size

1. In an interactive flowchart in **Edit** mode, double-click the Interaction process. The Process Configuration window appears displaying the Input tab.
2. Select **Limit input records to** and enter the number of records.
3. Click **OK**.

## 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. In an interactive flowchart in **Edit** mode, click the **Run** 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.

2. 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.

---

## About deploying interactive flowcharts

Once you are finished with configuring the interactive flowchart, you must mark the flowchart for deployment. When you mark an interactive flowchart for deployment, a notification appears on the interactive channel 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 need 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 pending deployment.

When an interactive flowchart is no longer needed, you can mark it for undeployment. This will add the retirement request to the deployment queue. The next time all changes are deployed, the interactive flowchart is removed from the Interact server. Treatment rules containing the smart segments created by the flowchart you removed still exist, however, since there is no interactive flowchart to assign a visitor to that segment, no visitor will ever be assigned to the segments created by the flowchart you removed.

### To deploy an interactive flowchart

1. View the interactive flowchart you want to mark for deployment.  
You need to view the flowchart. You cannot mark a flowchart for deployment in edit mode.  
Interactive flowcharts are available in sessions only.
2. Click **Mark for deployment**.

The interactive flowchart is marked for deployment. The interactive flowchart is added to the list of items waiting to be deployed on the interactive channel summary tab. You cannot edit an interactive flowchart which is marked for deployment.

The next time you deploy the interactive channel, the changes to this interactive flowchart are included.

### To cancel a deployment request

1. View the interactive flowchart for which you want to cancel deployment.  
You need to 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 waiting to be deployed on the interactive channel summary tab. You can now edit the interactive flowchart.

## To undeploy an interactive flowchart

If you no longer require the smart segments created by an interactive flowchart, you can undeploy the flowchart. This removes all references of the flowchart from the runtime server.

This option is available only if you have previously deployed the flowchart.

1. View the interactive flowchart you want to mark for undeployment.

You need to 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 waiting to be deployed on the interactive channel summary tab. You cannot edit an interactive flowchart which is marked for undeployment.

The next time you deploy the interactive channel, all references to this interactive flowchart are removed from the runtime servers.

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## Chapter 4. About the Interact List process in batch flowcharts

You use batch flowcharts in IBM Campaign to perform 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 required for your campaign. IBM Interact provides integration with Campaign batch flowcharts to help determine the list of offers that may be served to a specific audience or type of audience.

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 using table-driven features.

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### 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 will be 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. Note that a batch flowchart may contain multiple instances of the Interact List process box.

When you are working with the Interact List process, you should be familiar with the following concepts:

- Chapter 4, "About the Interact List process in batch flowcharts"

Tasks you can perform from this page:

- "To configure the Interact List process"

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### To configure the Interact List process

1. In a batch flowchart in **Edit** mode, add an Interact List process to the flowchart workspace.

Note that the Interact List process is available on a batch flowchart only if IBM Interact is installed on your Campaign server.

2. Provide input to the Interact List process by connecting it to one or more data manipulation processes, such as Sample or Select.
3. Double-click the Interact List process in the flowchart.  
The process configuration dialog appears.
4. 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 should 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 should be offered (similar to White list) for an entire audience type; that is, a default offer that every visitor in a specified audience should see, regardless of the segment of which they might otherwise be a part.
  - **Offer Filters (Offers by SQL)** — Allows you to provide a SQL query to determine which offers will be served to the specified visitors. This option allows you, for example, to serve up an offer based on a specific visitor preference.

Note that 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, as well as 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 should apply to the Interact List process you are defining.

This drop-down list automatically lists the interactive channels you have already defined within the Interact design time environment.


- c. (**White list** or **Black list** only) From the **Input** 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 ellipses () button next to the **Input** field, then use the Select Cells to Use dialog that appears select the input cells to use.

Note that 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 will be no cells to select from in the **Input** 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.

- d. (**Global Offer** only) Use the **Audience** drop-down list to specify the audience type for which you want this Interact List process to apply.
- e. Use the **Target Data Sourced** drop-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 you specify is created automatically when the process runs, if it does not already exist.

- g. To specify the fields that are written to the specified OfferList table each time this process runs, click the ellipses (  ) button next to the **Table name** field.

The Personalization Options dialog appears. The predefined set of fields that will be written to the table appear in the **Fields to Log** 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 Log** list, select the candidate field, then select a field in the **Fields to Log** 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 **Fields to Log** list, then click **Add>>**.
- Remove fields from the **Fields to Log** list by selecting them and clicking **<<Remove**.
- If desired, re-order the fields in the **Fields to Log** list by selecting a field and clicking **Up1** or **Down1** to move it up or down in the list.
- If desired, click the **Derived Fields** button to create a new 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 writing the new output data.

5. 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 appears.

The way in which you configure the output on the Treatment tab depends on the **OfferList type** you selected on the Fulfillment tab.

- 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.
- 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.
- Global Offers (Default Offers)** — For each target cell displayed in the table, click the **Offer** column to select the desired 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 selected on the Fulfillment tab for this process, regardless of the segment into which they fall.
- Offer Filter (Filter by SQL)** — Click the Offer by SQL button to create a SQL expression that will allow 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 appears 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 if your expression is valid. Note that **Check Syntax** uses your test run Interact runtime server for validation. Your test run runtime server must be running for check syntax to function.

For more information on using the Create Offer by SQL dialog, see *Creating queries using SQL* in the IBM Campaign *User's Guide*.

6. (Optional) Click the **General** tab to assign a name and/or notes to the process. The name appears on the process in the flowchart. The notes appear when you mouse over the process in the flowchart.
7. 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.

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## Chapter 5. Understanding deployment to runtime servers

Deployment is how you transfer all the configuration you have defined 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 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.

The first deployment contains the following data:

- All interactive flowcharts associated with the interactive channel that have been marked for deployment.  
This includes the smart segments.
- All interaction strategies associated with the interactive channel that have been marked for deployment.  
This includes the treatment rules, which also include offers.
- All events, zones, and interaction points 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 associated with the interactive channel including interaction points and events.
- All edited interactive flowcharts and interaction strategies associated with the interactive channel that have been marked for deployment.
- The last deployed version of all interactive flowcharts and interaction strategies 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:** Once 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 re-use the same runtime server by associating it with a new design environment, deployment will fail. This scenario may 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 associated with an interactive channel for deployment.
2. Configure and mark all strategy tabs 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 should deploy your interactive channel when you make changes to 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 make changes to any of the other required data not specific to interactive channels, you must redeploy all the interactive channels associated with the server group for the changes to take effect.

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## Understanding runtime servers

Runtime servers are the workhorses of your Interact implementation. The runtime servers listen and respond to requests from the touchpoint via 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.

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## Deployment and delete

To ensure that you do not accidentally remove data required for a Interact runtime server to run correctly, deploying an interaction configuration locks Interact objects so you cannot delete them. Once you deploy an interaction configuration, you cannot delete any interaction strategy tab, interactive flowchart, or interactive channel associated with the interaction configuration until you undeploy the object from all server groups.

If you mark an interaction strategy or an interactive flowchart for undeployment, 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 undeploy an interactive channel from all server groups to which you had 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 for undeployment, and mark interactive flowchart B for deployment. You deploy this 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 need to 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 undeploy 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. Once you undeploy 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.

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## About 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 additional 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:** Be aware that redeploying a version (rolling back to a deployment version) should be used with care. For example, campaign objects or offers that existed at the time of the original deployment may no longer exist, or may 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 7. 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 additional changes. You can select individual flowcharts or strategies to reload, or reload the entire interactive channel.

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## To deploy 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 have been tested and approved.

Also, once you create a stable deployment, you should not make any changes to the Interactive channel, interactive flowcharts, and interaction strategies associated with this deployment to ensure you send the same configuration when you deploy to the next group of servers (such as the production servers).

1. Navigate to the deployment tab of the interactive channel you want to deploy.  
The interactive channel deployment tab appears.
2. Click **Deploy Interactive Channel Changes**.  
The Deploy Interactive Channel Changes dialog appears.
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 will be meaningful to you in the deployment history and other reports.
5. Optionally, enter a description for this deployment that will be meaningful to you in the deployment history and other reports to help track the decisions and purpose behind this deployment.
6. Optionally, select or clear the **Also deploy current global settings** check box. This check box is selected by default, and will deploy global settings that include learning configuration settings, offer attribute definitions, audience level mappings, and custom macros. Because deploying these settings may affect other interactive channels that are already deployed in the same server group, you may want to clear this check box to leave existing settings in server group as they already are configured.
7. Confirm you have verified the prerequisites by selecting the check boxes.  
The **Deploy the Changes** button does not become active until you have confirmed all the prerequisites.
8. Click **Deploy the Changes**.
9. Enter the username and password for the Interact user on the runtime server and click **Login to Server**.

If you perform multiple deployments during the same IBM EMM 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 have been defined within IBM Marketing Platform, even if Windows Integrated Login has been 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 Interactive channel deployment history report.

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## To undeploy

If you are bringing an interactive channel or touchpoint off-line, 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. In Campaign, 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 this button 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. Optionally, provide an explanation of the reasons for undeploying in the Deployment **Description** field.
4. Confirm you have verified the consequences by selecting the check box. The **Undeploy the Interactive Channel** button does not become active until you have confirmed the consequences.
5. Click **Undeploy the Interactive Channel**.
6. Enter the username and password for a valid Interact user on the Interact runtime and click **Login to Server**.

If you perform multiple deployments during the same Campaign user session, the login data for the Interact runtime 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 used in reports.

If you undeploy all interactive channels and their associated data from a Interact runtime server, it does not disassociate the runtime server from the design environment.

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## To view 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 have defined. For example, you might have one version of the interactive channel 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 have been marked for deployment but haven't been deployed yet. The title of the Pending Changes section indicates how many objects will be changed by the pending deployments.

Note that this section lists only 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 containing the change.
- **Source of Change** — A link to the session or campaign containing 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 has passed since the change was marked for deployment. Note that this value does not refresh automatically, but will update 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 has not been marked for deployment. For example, your original deployment contained interactive flowcharts A and B, and interaction strategies C and D. You make changes to interaction strategy C and mark it for deployment. The Change Waiting for Production Deployment list displays A, B, C, and D, but only C is black. A, B, and D are disabled. You make changes to interactive flowchart B, but do not mark it for deployment. If you deploy at this time, 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 captured in Interact can be viewed here and sorted by any of the column types shown. You can also filter the information shown here by server group and by status. For example, you might use the column filter to show only the interactive channels deployed to your production server group.

The Deployment History section contains the following information:

- **Version name** — The name 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 checkmark indicates that they were). Note that you cannot sort on the Global Settings status.
- **Deployment Description** — The description 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 44

## Filtering tables in IBM products



When you are viewing a table of information in IBM products, features may 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, this indicates that filtering is available but not currently in use for this column. The different states of this icon are described below:

*Table 8. Column filter status icons*

Filter icon	Description
	When this icon appears next to a column heading, it indicates that no filter using that column or its values is currently active on the table. Click the icon to begin filtering.
	When this icon appears next to a column heading, it indicates that a filter using that column or its values is currently active on the table. Click the icon to view, modify, or remove the filter.

1. To filter a table using a single column, click the filter icon in the column heading. When you click the icon, the filter dialog appears displaying all of the values on which you can filter the table. By default, all of the values are selected, indicating that no information is currently omitted from the table based on this filter criterion.
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 only want to display 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 have made and see the table 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 you chose to display that have the specified status values.





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## Chapter 6. About Interact reporting

Interact is integrated with IBM EMM reporting. The IBM EMM reports provides reporting schemas and related maintenance tools required to integrate Interact with the supported version of IBM Cognos® BI, and to run and maintain the Cognos reports available in Interact.

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### 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 regarding offers, and data from the contact and response history from the production runtime server.

So as to not impede performance of the production environment, the runtime environment stores all contact and response history in staging tables. 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 will not have the correct data.

Several reports require specific data regarding offers. To ensure the reports contain the correct data, you must use offers created with an offer template with **Allow offers created from this template to be used in real-time interactions** enabled.

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### Interact Reports and 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 additional performance reporting schemas for additional 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	

	Interactive View schema	Interact Performance View schema	Interactive Channel / Campaign Deployment History	Interact Runtime View schema	Interact Learning View schema
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	

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## Viewing Interact reports

Interact integration with reports allows you to run Cognos reports from within Campaign. Some reports contain links to other reports to provide additional 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 additional audience levels. For details about how to customize Interact example reports, see the *Marketing Platform Administrator's Guide*.

### To view reports from the interactive channel Analysis tab

The following reports are available from the Interactive Channel Analysis 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 Interactive Channel Analysis tab.

If no additional configuration is needed, the report appears.

2. If there are configuration options after the report appears, 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 may be the case with the Channel Learning Model Performance Over Time report, select the desired report filters and options, then click the **Next** or **Finish** buttons at the bottom of the report.

The selected report appears.

### To view Interact reports from the Campaign Analysis tab

The following reports are available from the Campaign Analysis tab:

- Channel Deployment History
- Channel Learning Model Performance Over Time
- 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 a Campaign Analysis tab.  
If no additional configuration is needed, the report appears.
  2. If there are configuration options after the report appears, 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 may be the case with the Channel Learning Model Performance Over Time report, select the desired report filters and options, then click the **Next** or **Finish** buttons at the bottom of the report.

The selected report appears.

## To view Interact reports from Analytics Home

The following reports are available from the Interact Reports folder of the Campaign Analytics area:

- Channel Deployment History
- Channel Learning Model Performance Over Time
- 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

An additional report is available when you click the Zone Performance folder in the Interact Reports folder of the Campaign Analytics area:

- Zone Performance Report by Offer
1. Select **Analytics > Campaign Analytics**
  2. Select the **Interact Reports** folder. Optionally, click the Zone Performance folder to view the zone performance reports list.
  3. Select the report you want to view.  
The Report Parameters window appears.
  4. Select the campaign for which you want to view data, then click **Generate the Report**.  
If no additional configuration is needed, the report appears.
  5. If there are configuration options after the report appears, 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 may be the case with the Channel Learning Model Performance Over Time report, select the desired report filters and options, then click the **Next** or **Finish** buttons at the bottom of the report.

The selected report appears.

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## About the 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*.

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## About the Channel Deployment History report (interactive channel)

From the interactive channel Analysis tab, the Channel Deployment History report is an audit log for tracing changes to all runtime servers. 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 your browser's Back button.

This report is also available from the campaign Analysis tab and the Interact Reports folder in Analytics Home.

## About the Channel Event Activity Summary report

The Channel Event Activity Summary report enables you 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.

## 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.

## About the Channel Treatment Rule Inventory report

The Channel Treatment Rule Inventory report is a list of all the treatment rules 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, filtered by that offer. To return to the Channel Treatment Rule Inventory report, use your browser's Back button.

## About the Interactive Segment Lift Analysis report

Lift analysis reports show the performance improvement 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)

From the campaign Analysis tab, the Channel Deployment History report displays the deployment data for all interaction strategies and associated interactive channels for this campaign.

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 your browser's Back button.

This report is available from the interactive channel Analysis tab.

## About the Interactive Offer Learning Details report

The Interactive Offer Learning Details report displays all the learning attributes you are tracking with the built-in learning module. Each chart shows the likelihood of a visitor to respond to the specified offer if they have a specific value for a given 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.

## About the 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 given campaign. When you filter by target cell, you are filtering by the cell assigned to the smart segment in your treatment rule. You can sort these reports by all cells or a specific target cell. This report displays the number of offers presented, accepted, and rejected by a target cell over time or by offer. This report covers all target cells 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 using a link under the **Analytics > Campaign Analytics** menu, the report covers all target cells, but can be filtered for specific cells after it appears.

## About the 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 given campaign. You can sort these reports by all offers or a specific offer. This report displays the number of times an offer was presented, accepted, and rejected over time or by target cell (segment). This report covers all offers associated with the treatment rules in a campaign.

## About the Interactive Cell Lift Analysis report

Lift analysis reports show the performance improvement created by using Interact built-in learning. The Interactive Cell Lift Analysis report shows the acceptance rate of offers by cell, comparing offers presented by random 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 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 desired.

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## About the Zone Performance Report by Offer

The Zone Performance Report by Offer is an interactive cell performance report 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.

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## To filter by interaction point

You can filter the Channel Interaction Point Performance Summary report by interaction point.

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.

## To filter 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.

## To filter by offer

You can filter the following reports by offer:

- Interactive Offer Learning Details
- Interactive Offer Performance by Cell
- 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.

## To filter by target cell

You can filter the following reports by target cell:

- Interactive Cell Performance by Offer
- Interactive Cell Performance Over Time

When you filter by target cell, you are filtering by the cell 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.

## To filter by time

You can filter the following reports by time:

- Interactive Cell Performance Over Time
- Interactive Offer Performance Over Time
- Channel Event Activity Summary
- 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 checkbox, 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 will go 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.

## To filter the Channel Deployment History report

You can filter the Channel Deployment History report on the interactive channel analysis tab by the following:

- **Deployment Destination** — the server groups to which you have deployed this interactive channel
- **Campaigns Updated by Change** — the campaigns containing interaction strategies associated with this interactive channel
- **Deployment Owner** — the IBM users who deployed this interactive channels

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.

## To filter the Channel Treatment Rule Inventory report

You can filter the Channel Treatment Rule Inventory report by the following:

- **Target Cells** — the cells assigned to the smart segments in your treatment rules associated with this interactive channel
- **Zones** — the zones in this interactive channel
- **Campaigns** — the campaigns containing interaction strategies 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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If you encounter a problem that you cannot resolve by consulting the documentation, your company's designated support contact can log a call with IBM technical support. To ensure that your problem is resolved efficiently and successfully, you collect information before you log your call.

If you are not a designated support contact at your company, contact your IBM administrator for information.

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Before you contact IBM technical support, gather the following information:

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- Detailed error messages that you see when the issue occurs.
- Detailed steps to reproduce the issue.
- Related log files, session files, configuration files, and data files.
- Information about your product and system environment, which you can obtain as described in "System information."

### System information

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You can access the About page by selecting **Help > About**. If the About page is not accessible, you can obtain the version number of any IBM application by viewing the `version.txt` file that is located under the installation directory for each application.

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