Unica Interact V12.1.5 User Guide

Contents

Chapter 1. Unica Interact overview

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

What Unica Interact does

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

Use Unica Interact to enhance your marketing efforts

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

- Use your multi-channel operations.

  Use information from your customer touchpoints, including web, call center, in-store, branch, to develop knowledge of customers and prospects, create a consistent brand, and maximize customer communications.
- Create leading-edge website personalization.

  Engage known and anonymous visitors, consider behavior, and personalize interactions with them by making cross-sell offers, selecting editorial content, offering appropriate service options, and coordinating banner messages.
- Optimize contact center interactions.

Use the power of your contact center for increased revenue generation and customer retention. Provide better interactive voice response (IVR) navigation, on-hold message selection, instant offers for retention and cross-selling, prioritization of offers, and website intervention (such as chat or VoIP).

Use Unica Interact to refine your marketing strategies

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

Understanding Unica Interact

Unica 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. Unica 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 Unica Interact, Unica 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 Unica Interact to integrate with your touchpoints using an application programming interface (API). Using this API, you configure Unica 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.

Unica Interact is closely integrated with Unica 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 Unica Interact and how they work together.

Unica Interact architecture

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

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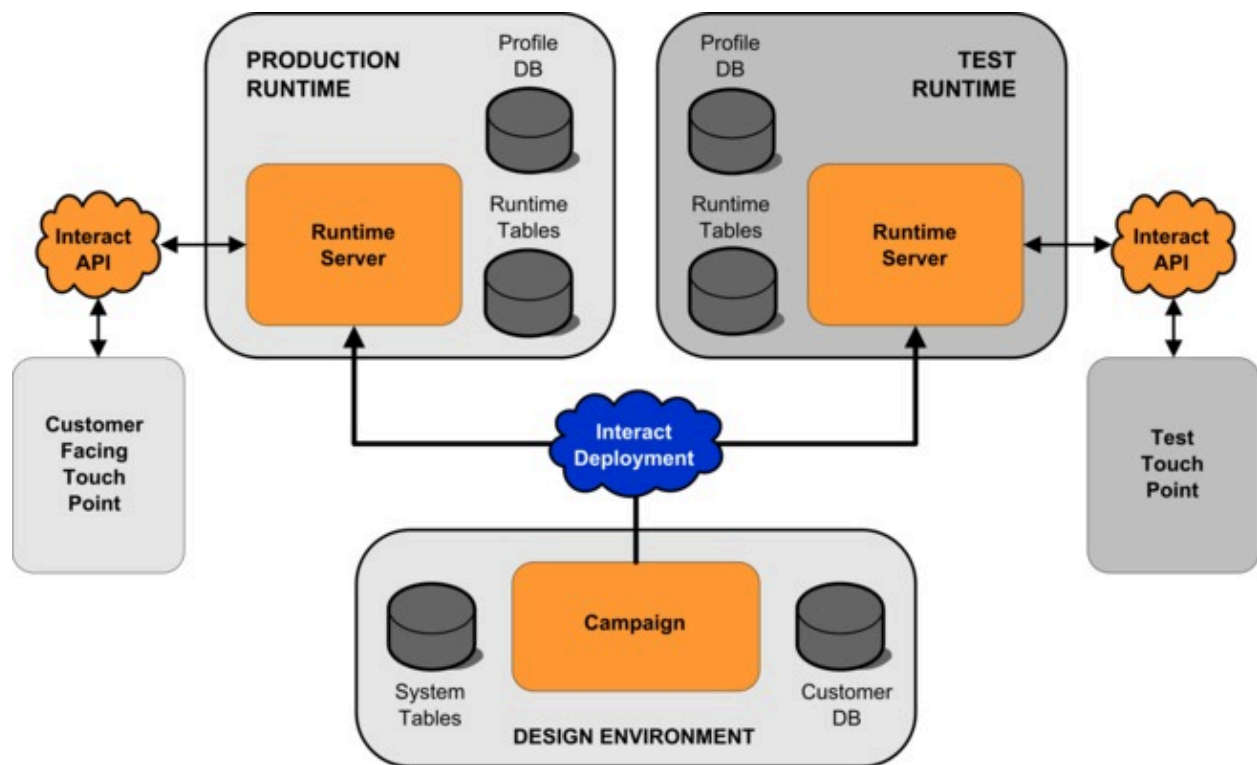
The design environment is where you perform the majority of your Unica Interact configuration. The design environment is installed with Unica Campaign and references the Unica Campaign system tables and your customer databases.

After you design and configure how you want Unica 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 Unica Interact environment in more detail.
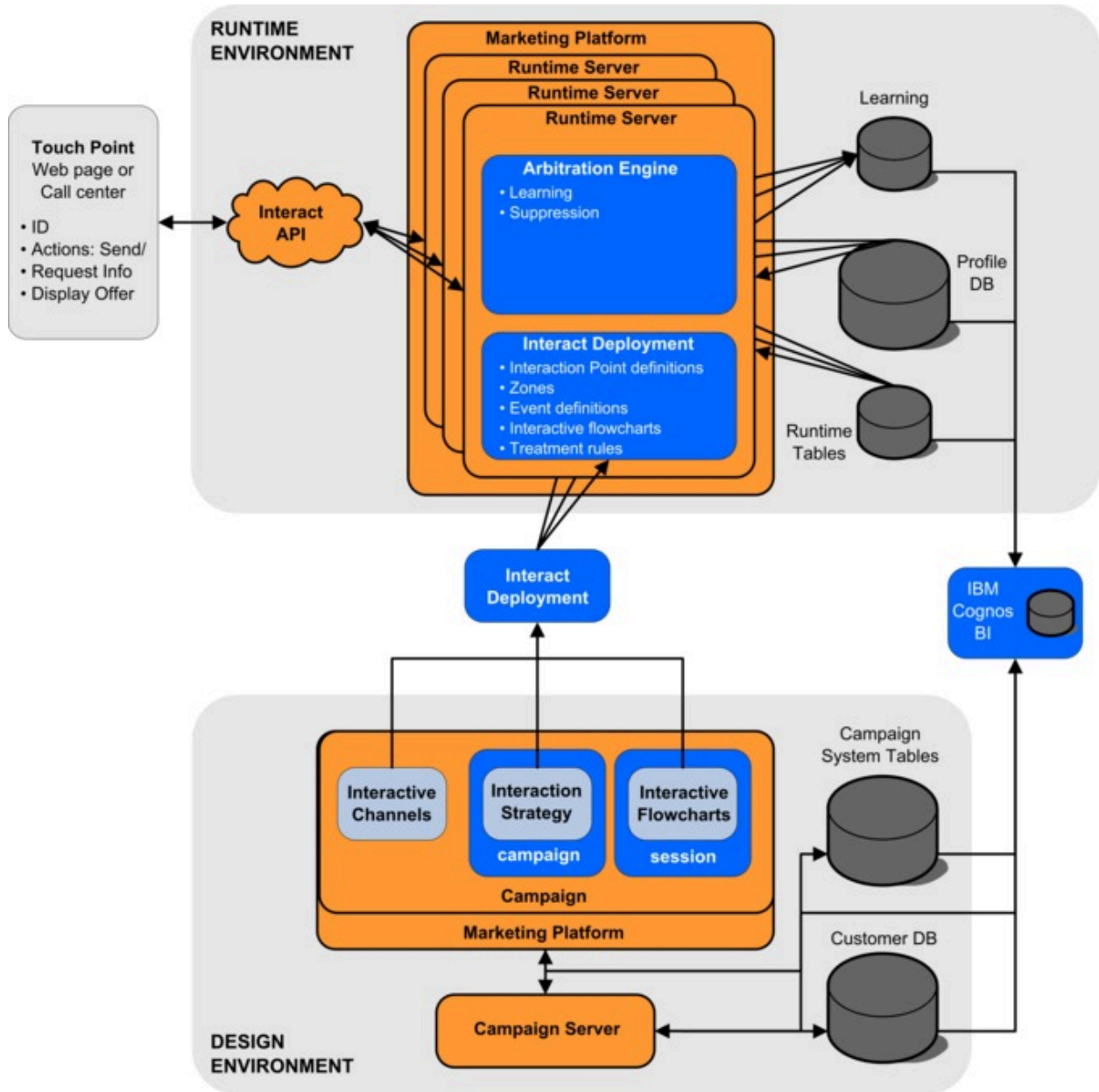
In the design environment, you define what Unica Interact does at certain points in your touchpoint by configuring interactive channels. You then divide your customers into segments by creating interactive flowcharts. Within interactive flowcharts, you can perform test runs to confirm that your customer 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 Unica Interact components, you are ready to deploy the configuration to a staging runtime environment.

Unica Interact deployments consist of the following:

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

While not part of your Unica 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 Unica 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 Unica 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 Unica Interact configuration in Unica 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 Unica Campaign contact and response history. This data is used in reports that you can use to determine the effectiveness of your Unica Interact installation and revise your configurations as necessary. This data can also be used by Unica Campaign and other products such as Unica Optimize, 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 Unica 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 Unica Campaign and Unica Interact.

Unica Campaign key concepts

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

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

About Unica Campaign

Unica Campaign is a solution that enables users to design, execute, and analyze direct marketing campaigns. Unica 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 Unica Campaign to define and execute your marketing campaign by assigning offers, sending e-mails, and so on. You can also use Unica Campaign to track the response to the campaign, creating output lists and logging contacts to contact history, and use that information in your next campaign.

Audience levels

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

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

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

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

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

These audience levels can have different relationships with each other, for example one-to-one, many-to-one, or many-to-many. By defining audience levels, you allow these concepts to be represented within Unica 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. Unica Campaign also contains objects called campaigns which are representations of marketing campaigns that facilitate design, testing, automation, and analysis.

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

Cells

A cell is a list of identifiers (such as customer or prospect IDs) from your database. In Unica 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 Unica Campaign are called target cells. A target cell is a distinct group of homogeneous audience members. For example, cells can be created for high-value

customers, customers who prefer to shop on the web, accounts with on-time payments, customers who opt to receive email communications, or loyal repeat buyers. Each cell or segment you create can be treated differently, with different offers or contact channels, or tracked differently, for comparison in performance reporting.

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

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

Flowcharts

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

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

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

Each flowchart has the following elements:

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

Offers

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

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

Offers are reusable:

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

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

Interact supports "DRAFT", "PUBLISHED" and "RETIRED" Centralized Offer Management states. Only "PUBLISHED" offers can be used and deployed in Interact. If any "PUBLISHED" offer in Interact, is redrafted or retired, the corresponding status "(redraft)/(retired)" is displayed with the offer.

> **Note:** Each offer used in Interact must have an unique offer code. It is case insensitive. In addition, each offer attribute must have a unique name. It is case insensitive.

Offer lists

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

Offer lists are configurable groups of offers that you can use to manage offers. The same offer can exist in more than one offer list. You can add offers to offer lists and assign offer lists to smart rules. You can also edit, move, delete, or retire offer lists.

There are two types of offer lists.

- Static offer lists: The pre-defined lists whose contents do not change unless you edit the list.
- Smart offer lists: A dynamic list of offers which are specified by a query, so its contents can change each time it is used.

Previewing offers and offer lists from Centralized Offer Management

Interact can use offers and offer lists from Campaign or from Centralized Offer Management. If the offers being used are from Centralized Offer Management, from version 12.1.5, an icon appears succeeding the offers and offer lists.

The icon appears succeeding the offers and offer lists for the following features of Interact:

- Strategy
- FlexOffer
- AB Test
- Triggered Action

Clicking the icon gives you a preview of the offers and offer lists. The preview differs for offers and offer lists and in offer lists the preview differs for static offer lists and smart offer lists. The preview opens up as a side panel and displays relevant information related to offers and offer lists.

The preview icon appears in all features of Interact where offers are used and it works only if you have installed and integrated Centralized Offer Management with Interact. To enable it, ensure that the following configurations are set:

- **Enable Centralized Offer Management** is set to `YES` in `Affinium|Unica Platform`.
- **relyOnOfferManagement** is set to `YES` in `Affinium|Campaign|partitions| partition1|Interact|offerArbitration`.

> **Note:** If you do not configure the earlier mentioned parameters, the 👁 icon does not appear despite the installation of Centralized Offer Management.

Sessions

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

Like campaigns, sessions are also composed of individual flowcharts.

Unica Interact key concepts

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

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

Design Time environment

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

The design time environment is where you complete most of your Unica Interact configuration. In the design time environment, you define Interactive channels, interactive flowcharts, strategies and treatment rules, events and event patterns, interaction points, smart segments, and FlexOffers. After you configure these components, you deploy them to the runtime environment.

The design time environment is installed with the Unica Campaign web application.

Interactive channels

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

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

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

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

You can extend an interactive channel, from an existing interactive channel, to reuse marketing objects. Currently, an interactive channel extends only existing Profile Tables, Events, Event Patterns, Gateways, and Gateway Groups.

Some features of interactive channels are as follows:

- An interactive channel uses all marketing objects defined in the parent interactive channels or grandparent interactive channels.
- The relationship is always a multi-level relationship and never a cyclic relationship.
- You can view and edit the marketing objects, defined in the parent interactive channel, from the same UI.
- The system deploys each interactive channel separately.
- If the deployment of the parent interactive channel occurs at run-time, the marketing objects of the parent interactive channel are considered.

Profiles

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

The customer data is used for the following purposes:

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

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

- To personalize offers
- As attributes to track for learning

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

This data is read-only for the runtime environment.

Interactive flowcharts

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

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

Interactive flowcharts contain a subset of the batch flowchart processes, and a few interactive flowchart-specific processes. The "Update" option is not available in Interactive flowcharts.

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

> **Note:** For test run of interactive flowchart, it is recommended to use the server group rather than the Production Server group.

Note: DT_DELIM_XXX formats cannot be used with Interactive Session flowcharts.

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 Unica Interact.

Touchpoints

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

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

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.

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.

Strategy and treatment rules

An Interactive channel can have multiple marketing strategies. A Strategy, key focal point of Interact application, consists of a set of treatment rules. Treatment rules are also called Smart rules in Interact after version 12.0. Treatment rules assign an offer to a smart segment. These assignments are further constrained by the custom-defined zone that you associate with the offer in the treatment rule.

For example, you have one set of offers that you assign to a smart segment in the "login" zone, but a different set of offers for the same segment in the "after purchase" zone.

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 the offer Interact suggests. Offer score can either have static number score called Marketer score or dynamic score, which is defined as an expression (also called Predicate in Interact) of profile or offer attributes. Interact Runtime uses this expression to calculate the offer score based on attributes values at runtime. Offer Eligibility is the way to further determine if an offer is eligible or not even it is enabled. An offer is only eligible if it is falling into effective period (between Effective and Expiration date) and/or an expression is evaluated true at run-time. When Interact presents an offer to end users, instead of taking offer attributes' values from the offer, Interact has the capability to override offer attribute values, even with an expression calculated from profile data at Interact Run-time. Users can define Parametrized Offer Attributes for the offer in a treatment rule. The offers the runtime environment suggests can be influenced by a learning module, an offer suppression list, and global and individual offer assignments.

FlexOffers

FlexOffers is a large mapping table associated with Interact Channel. It collects offer data, user profile data and user activity data. Marketers can easily map offers, zones, cells, segments, user profiles, customer fields through a user friendly interface, and also

add advanced configuration settings. User can create FlexOffers through delimited file or database table.

FlexOffers filters define the search criteria for FlexOffers mapping table. They are deployed to Interact RT with Interact channel. Interact runtime uses FlexOffers filter to get the best FlexOffers to customer. For details, see the sections under FlexOffers (on page 160) section.

Event and event patterns

Event

An Event represents an occurred user activity that can trigger an action in runtime environment. Examples of an event can be visiting website, opening a checking account, calling customer service, etc.

Events are first created in Interactive Channels through Interact Design Time UI and then posted to Interact runtime environment by calling runtime API postEvent.

Event Patterns

An Event Pattern consists of series of events that occur in a particular way. Marketers can use event patterns to track and record pattern of customers' activities in real-time and act accordingly. A pattern starts with pattern state "condition-not-met". By posting events to Interact at selected stages of customers' activities, the pattern state is checked and updated. When all defined events for the pattern occur in the defined way, the pattern state is changed to "condition-met", and configured actions are triggered. Event patterns can be used in customer segmentations and offer arbitration logics.

Interact supports the following 11 types of event patterns.

- Match all
- Counter
- Weighted Counter
- Match all (time bound)
- Counter (time bound)
- Weighted counter (time bound)

- Sequence (time bound)
- Match all (rolling time)
- Counter (rolling time)
- Weighted counter (rolling time)
- Sequence (rolling time)

Match all: It is a pattern that fires (being set to "condition-met" state) when all composing events occur. For example, "Event A" and "Event B" and "Event C" must all occur, then pattern's condition is met. The sequence of event occurrence does not matter.

Counter: It is a pattern that fires if each composing event occur more than a predefined number of times. For example, "Event A" occurs >= 5 times and "Event B" occurs >= 5 times, then pattern's condition is met. The sequence of event occurrence does not matter.

Weighted counter: It is a pattern in that each composing event is weighted and the pattern fires when a cumulative sum is reached to a predefined number of times. For example, if a pattern consists of "Event A" with score 2 and "Event B" with score 5, and a total score is 10, then pattern's conditions is met when any of following situations occur.

- "Event A" occurs 5 times because 5x2=10
- "Event B" occurs 2 times because 2x5=10
- "Event A" occurs 3 times and "Event B" occurs 1 time because 3x2 + 1x5 = 11.

For patterns types of Match all, Counter and Weighted Counter, there are no time constraints for them. As long as events posted fall into defined Start and End date, they are evaluated for the pattern. If Start date is not defined, the pattern starts be effective immediately once deployed. If End date is not defined. pattern is effective forever. Marketers can use Pattern Reset feature to reset pattern state for these three types of patterns. In contrast, Time Bound patterns and Rolling Time patterns are time bounded patterns.

Sequence: It is a pattern similar to "Match all" pattern, but the sequence of event occurrences matters. The pattern fires when all composing events occur restrictively in a defined sequence. For example, "Event A" must occur before "Event B" and "Event B" must occur before "Event C", then the pattern's condition is met. The dependency cannot have a cyclic nature. In other words, eventA->eventB->eventA is not allowed. The "Event A" is

a dependent event of "Event B", while the "Event B" is the depending event of "Event A". A time frame between a minimum and maximum duration can be optionally defined for a depending event, namely, only a depending event occurred in this time frame after its dependent event occurred is counted in the pattern evaluation. This provides the marketers' a flexibility to limit that only events occurred in a specific time window are valid to the pattern's state evaluation. Both minimum and maximum duration are relevant duration from time when its dependent event occurrs. The both are optional. If none or either one is not specified, there is no time limit respectively. Only sequencing for qualifying events are supported, not for suspending (negative) events.

Rolling Time pattern: A rolling time pattern can be a "Match all", "Counter" or "Weighted counter" pattern, but all composing events must occur within a time window. At any time when a composing event is posted to Interact Runtime, Interact checks the occurrences of pattern's all composing events in the time window starting from the current time point. If event occurrences do not meet pattern definition, the pattern state stays as "condition-not-met". Otherwise, if all events are occurred within the time window, the pattern state is set to "condition-met" (may trigger actions if configured). After that, the pattern's state is continuously re-evaluated in same way as above and is repeated on rolling base

Time Bound Pattern: A time bound pattern can be a "Match all", "Counter" or "Weighted counter" pattern, but all composing events must occur within a time window. At any time when a composing event posted to Interact Runtime, Interact checks the occurrences of pattern's all composing events in the time window starting from current time point. If event occurrences do not meet pattern definition, the pattern state stays as "condition-not-met". Otherwise, if all events occur within the time window, the pattern state is set to "condition-met" (may trigger actions if configured). Now Interact checks another setting called "Extend true state for additional period of time" and keeps the pattern as "condition-met" state for the additional period of time (no pattern evaluation in this period of time). When the additional time passes, pattern state is reset to "condition-not-met" and the evaluation starts another cycle. In other words, Time Bound Pattern allows pattern to pause for a certain time after condition-met. The setting "Extend true state for additional period of time" is only applicable to Time Bound pattern.

For example, P1 is a Time Bound pattern and P2 is a Rolling Time pattern. Both patterns consist of "Event A" and "Event B", and they must occur within 7 days. In run time, "Event

A" occurred on Monday and "Event B" occurred on Saturday. When "Event B" occurred, the pattern state is changed to "condition-met" for both P1 and P2 because two events occurred within 7 days. Now for P1, if the setting "Extend true state for additional period of time" is 4 days, then P1 stays in "condition-met" state till Wednesday, and then all the occurrences of two events are cleared and the pattern starts from the scratch on Wednesday. On the contrary, the state of P2 is evaluated continuously after Saturday. If "Event B" happens on Tuesday, P1's state will become "condition-not-met" because "Event A" did not occur from the last Wednesday to this Tuesday.

Qualifying Event and Suspending Event: An event pattern is composed of series of events. The events that make the pattern's state change to "condition-met" is called Qualifying Events. While the events that make the pattern pausing for evaluation is called Suspending Events. For example, a pattern has two events, "open_bank_account", "ATM_activity" and "offer_credit_card", all must occurs in 2 months. If a customer has already applied and got bank's credit card at the time of 1 month from time opening account, marketers would not want bother the customer again by offering card. Therefore, marketers can define a suspending event "got_card" in the pattern which will pause the pattern for evaluation. The marketers can also use setting "Effective duration" to set if the pattern being suspended forever or just for a period of time.

Event Macro: Besides events that customers define, Interact also supports six event macros that can participate in pattern definition, as either Qualifying Events and Suspending Events. The following are the six macros.

- offerAccepted
- offerContacted
- offerRejected
- offerAcceptedInCategory
- offerContactedInCategory
- offerRejectedInCategory

offerAccepted, offerContacted or offerRejected for an offer can be served as an event in a pattern. offerAcceptedInCategory, offerContactedInCategory, or offerRejectedInCategory can have all offers that have similar attribute value as an event in a pattern.

Pattern in-activity: A pattern not only can be evaluated for "condition-met", but also "condition-not-met". Marketers can use this feature to track customers' in-activities. For example, a pattern has two events, "add_item_to_cart" and "checkout", all must occur in seven days. Marketers can add check point on 3rd day, if customer has not checked out the item yet, that is, pattern's state is "condition-not-met", then an action of "send_reminder_email" would be executed for the customer.

Event Category

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

Actions

An Action can be triggered when an event occurs or when event pattern's conditions are met or not met. They are configured in Interact Design Time when you define events or event patterns.

Interact supports eight types of actions.

- Trigger re-segmentation: The runtime environment runs all or a selective subset of the interactive flowcharts for the current audience level that is associated with the interactive channel again, by using the current data in the visitor's session. This is useful to place the visitor into new segments after significant new data is changed to the runtime session object, such as new data from requests of the Unica Interact API (such as changing the audience) or customer actions (such as adding new items to a wish list or shopping cart). It is worth noting that excessive re-segmentation within a single visit can affect the performance of the touchpoint in a customer-visible way.
- 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 specify the treatment code for the offer that Unica 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 where you can define the value of a session variable by using profile attributes, real-time attributes, together with Unica Interact macros, including functions, variables, and operators, including EXTERNALCALLOUT. You can assign the return value of the expression to any profile attribute
- Trigger events: You can use the Trigger Events action to trigger another one or multiple events upon source event occurs. This allow marketers have chained events.
- Suppress offers. Offer suppression can be triggered from events and event patterns. The suppression rules can be defined based on specific offers or a group of offers having the same attribute values. The difference of offer suppressing action and existing suppression rules are that the former can be triggered without relating to treatment rules.
- Qualify segments. User can specify which segment is enabled as result of an event or event pattern.

Besides invoking actions immediately when event occur or pattern condition is met, actions can also be invoked with a delay, either delayed after period of time or at scheduled date and time. This give marketers' control on executing actions at preferred times. Action delay is not applicable to 'Offer Suppression' and 'Qualifying Segments"

Triggered action

Interact is able to send messages through triggering events or event patterns. With more adaptation of this feature recently, enhancements are added to provide better flexibility and usability.

Triggered actions allows you to deliver offers to a different channel than the one where the request was sent in Interact. These offers are triggered by predefined user events and/ or event patterns. In Unica Interact, events are posted for an audience ID, which triggers a predefined notification rule. The rule results in a push of the selected offer to this audience

ID in a different outbound channel. The inbound channel, which triggered this message does not receive the offers from Interact as the result of the triggered event post. However, the same offer may still be returned to the inbound channel as the result of getOffers or getOffersForMultipleInteractionPoints API calls. Events and event patterns are the two types of triggers that are used in the triggered messages process flow. Once an event or event pattern is triggered, the eligibility conditions determine what offer selection method is used and which channel is used for offer delivery. You can select an audience level eligibility and add conditions based on eligible segments, profile attributes, and session attributes. You also have to set offer criteria. You can choose between automatically selecting the next best offer or selecting the specified offer or offer list. After you select the offers for your triggered messages, you must specify at least one touchpoint (gateway or outbound channel) for these offers. You can also add a delay factor for the channel so that messages are sent at a later scheduled time from the time the trigger occurred. The delay factor is specified between event or event patter execution and offer delivery time. Without a delay factor, the message is sent the moment it is triggered.

The following capabilities are provided in triggered actions (TA):

1. Any user-defined event or event pattern from an interactive channel and its parent interactive channels can be used as the trigger.
2. Each TA entry has one and only one trigger, whereas a trigger may have multiple TA entries.
3. Each TA entry has one or more branches.
4. Each TA branch has three components: eligibility, offers, and Touchpoint.
5. In each eligibility, users need to choose a mapped audience level and optionally create one or more conditions using the following attributes.
    a. Profile attributes
    b. Real time attributes
    c. Segments
    d. Session Parameter
6. There are two options for choosing the next best offer.

- Apply the normal offer candidacy logic, similar to that in getOffers request, which requires a zone to be selected.
- Explicitly specify the desired offer or offer list. When this option is selected, you can select a specific offer or offerlist, and use advanced options to specify eligibility and score of the offer, personalize the offer's attributes, and configure the learning settings.

7. You can browse the offer and select one offer or offer list from specific folder.

8. Offer attributes for offer list in advance option will be offer attributes of all offers of offerlist.

9. In the Touchpoint component, one and only one Touchpoint has to be selected from one of the following four types of sources

    a. The Gateway groups created and managed via the Touchpoints tab, where a drop down box is displayed with all available gateway groups for users to choose the target Touchpoint.

    b. The Gateways created and managed via the Touchpoints tab, where a drop down box is displayed with all available and valid gateways for users to choose the target Touchpoint.

    c. A Touchpoint defined in an audience profile attribute (Customer Preferred Channel), where a drop down box is displayed with all available profile attributes for users to choose the target Touchpoint.

    d. A Touchpoint defined in an offer attribute (Offer Preferred Channel), where a drop down box is displayed with all available offer attributes for users to choose the target Touchpoint.

10. Touchpoint page has following information.

    - Touchpoint selection box displays the list of gateway groups and gateways with type.
    - It supports SECOND, MINUTE, HOUR, DAY, DATE delay unit with IMMEDIATE, DELAY and NO_DELAY delay type.

11. When creating or updating the triggered action, gateways, or gateway groups (channels) defined in the parent interactive channels will be available in the

Touchpoint Name drop-down. There will be an info icon for each gateway or gateway group (channel) to show the names of the interactive channels where it is defined in the hierarchy.

Triggered action user interface

Triggered Action page

The following is the triggered action page. You can add a new triggered action from here.

Click ⋮ besides the existing TA to get options to edit, copy, and delete the existing TA.

Action Name ⇕	Trigger ⇕	Audience level	Eligibility	Offer	Touchpoint		
test_TA	contact					▾	⋮
test_TA2	contact					▾	⋮
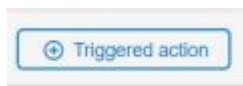
If the triggered action consists of a gateway or gateway group (channel) from its parents, and the parent for the current interactive channel has been removed or changed to another interactive channel, those gateway or gateway group (channel) will be suffixed to **(obsolete)** in the triggered action branch list.

Action Name ⇕	Trigger ⇕	Audience level	Eligibility	Offer	Touchpoint		
EmailTA	contact					▴	i
		All levels	All levels, No Condition	All zones	Gateway: ParentEmail (obsolete)		
		All levels	All levels, No Condition	All zones	Channel: ParentUBX (obsolete)		

Add triggered action

Complete the following steps to add triggered action.
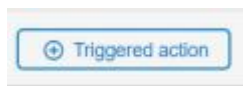
1. Click [⊕ Triggered action].
2. In the Add triggered action page, under Triggered action name, specify an appropriate name.
3. Optional. Under Description, provide an appropriate description.
4. Optional. Under Effective date, provide the date for the TA to be effective.
5. Optional. Under Expiry date, provide the date for the TA to expire.

6. Click **Next**.

7. Under **Trigger**, expand **Click to set Trigger**. Under Event and Event Pattern, you can either search or select the appropriate event pattern.

8. Under Audience Level, select the audience level.

9. Under Condition, expand **Click to set Eligibility**. Click ⊕ Condition to add a condition.

10. Under **Condition type**, **Subject**, **Operator**, **Value**, and **AND/OR** columns, provide appropriate values.

11. Click **Save**.

12. Under **zone**, you can click **+Branch** to add a new branch. Once you do so, you msut set the condition.

13. Select either **Automatically select the best offer** or **Assign a specific offer**.

14. In the **From zone** list, select the appropriate option.

15. In case you selected Assign a specific offer, under **Offer**, click **Browse** to select the offer. You can also click **Advanced Options** to perform further settings for the offer.
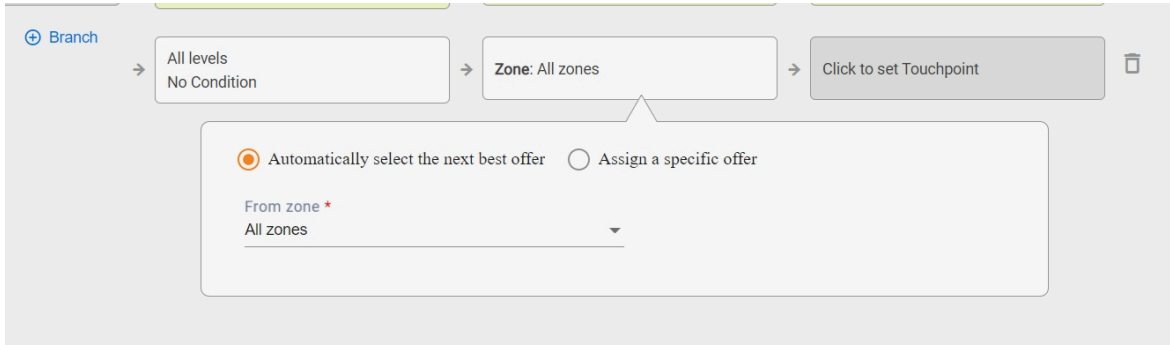
16. Click **Save**.

17. Under **Touchpoint name**, select the gateway or gateway group (channel). The info icon will show the names of the interactive channels where it is defined in the hierarchy.
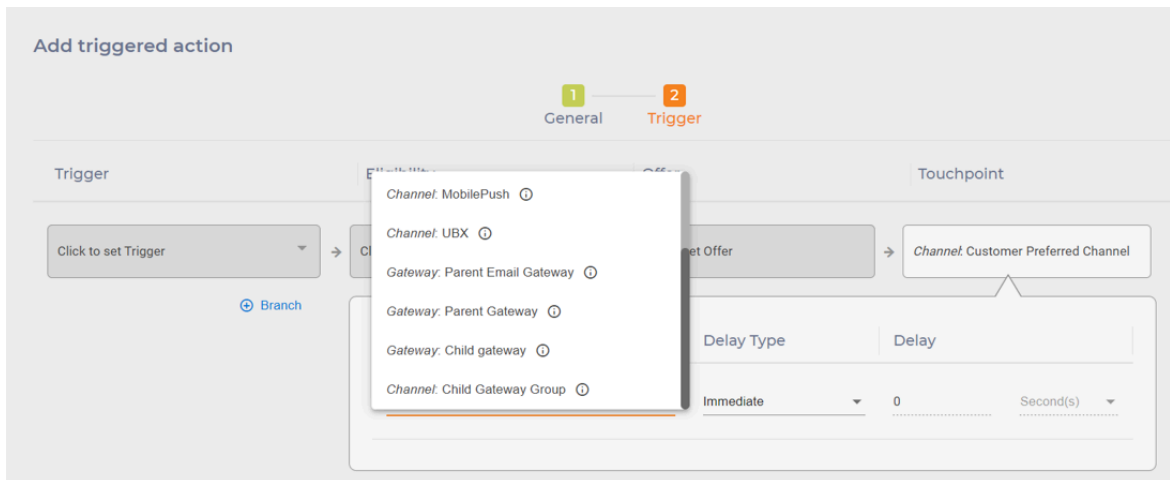
18. Under **Delay type** list, select one of the options.

19. In the **Delay** list, select the delay time in seconds and click **Save**.
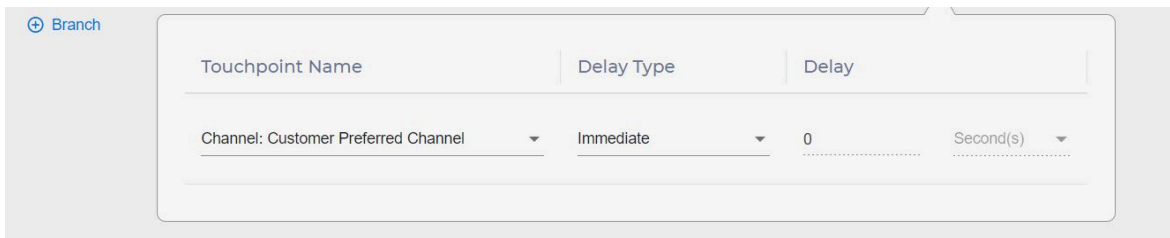
DT deployment of Triggered action

1. If an old triggered action exists (after migration), then old triggered action will be deployed.
2. If only new triggered action exists, then new triggered action will be deployed.
3. If both old triggered action (after migration) and new triggered action exist, then new triggered action will be deployed.
4. The triggered action should not be included in the deployment if it is expired.

Reload of Triggered action

1. Triggered action can reload from older deployment version and current deployment version data should be removed.
2. If you have performed migration and triggered action which was deployed before migration is reloaded, then it should be reloaded into new triggered action UI. i.e., the column details column in UACI_EventAction table must migrate to UACI_EventAction UACI_TriggeredAction, UACI_TABranch, and UACI_TAOffer tables.
3. If you have new triggered action in reloading version, then it will reload new triggered action version.
4. If you do not have new triggered action in reloading version, but have old triggered actions, then it will convert old triggered action to new triggered action and it will reload the converted new triggered action in UI.

Runtime flow of Triggered action

The below points illustrate the run time handling of triggered actions.

1. All the triggered actions, both old and new, created in the design time will be processed in the Interact runtime.
2. When an event is posted or a pattern's condition is met, all triggered actions are searched for those that have this event or pattern as the trigger.
3. The effective and expiration date of the triggered actions are compared with the current date. Any triggered action which has expired in runtime will not be used for sending messages to the customer and a valid error message will be logged.

4. For each of the triggered actions selected in the above steps, the eligibility rules of all its branches are evaluated.

5. For each branch whose eligibility rule is satisfied, its offer selection policy and the usual arbitration process is applied.

6. If there is an eligible offer, the Touchpoint selection policy is applied and the offer, together with the profile attributes, is sent to the selected Touchpoint.

7. The new triggered actions allow a gateway to be used directly as a gateway groups in a triggered action. In this scenario, a "pass-through" gateway groups with the same name as the gateway is created for it.

8. The user does not have to provide a channel and handler configuration in platform if the gateway is used directly as a gateway groups in the triggered action.

9. The deployment information will display in deployment info page with new triggered action information.

10. You can configure additional attribute in contact History to record the triggered message. You can pass values for those in postevent as parameters while posting an event which will trigger outbound triggered message..

11. If you assign offers in the associated and deployed strategy with channel and personalize them, and in triggered message choose "Automatically select next best offer" then those offer parameterization will be applied too.

12. If the integration with Contact Central is enabled, Contact Central is checked to determine whether a pending message should be sent to the specified channel.

    For more details, see the topic.

13. If the triggered action consists of a gateway defined in the parent interactive channel, then the gateway will be suffixed to (Inherited).

14. If the parent interactive channel is not deployed, then the gateways will be shown as cross-outs.

Gateway groups in Touchpoints tab
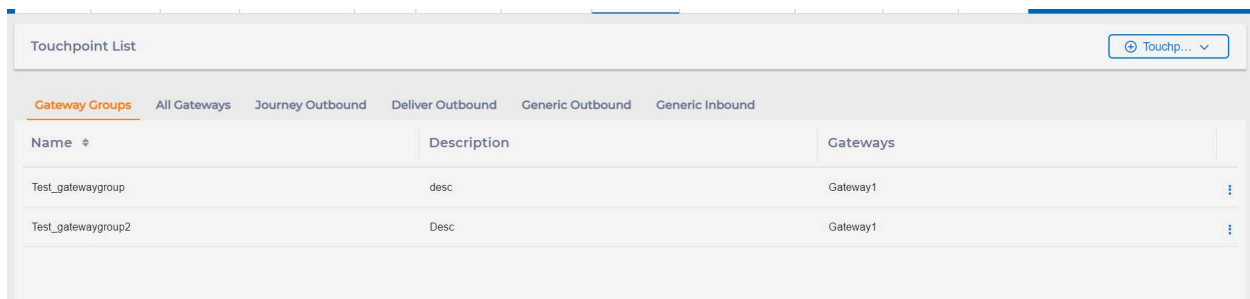
An additional tab 'Gateway Groups' is added into the Touchpoints tab. You can add, delete, or update new Gateway Groups and can associate the list of available gateways with it.

The following capabilities are provided in gateway groups:

- The gateway groups defined in the parent interactive channel can be viewed from the child interactive channel and will be suffixed to (Inherited).
- An inherited gateway group can only be viewed or copied. It cannot be modified or deleted.
- The gateway group from the child interactive channel will take precedence if the gateway group from the parent and child interactive channels have the same name.
- If the gateway group (channel) consists of a gateway from its parents, and the parent for the current interactive channel has been removed or changed to another interactive channel, those gateways will be suffixed to (obsolete) in the gateway groups list.

Gateway groups user interface

The following is the Touchpoint page. You can add gateway groups here. Click ⋮ besides the existing gateway groups to get options to edit, copy, and delete the existing gateway groups.

Add Gateway Group

To add gateway group, complete the following steps.

1. Click **+Touchpoint** and select **Gateway Group**.
2. In the **Name** field, specify an appropriate name of gateway group.
3. In the **Description** field, type the appropriate description.
4. Under **Available Gateways** column, select the gateway and drag and drop under **Selected Gateways** column.

5. Click **Save**.

Runtime flow of Gateway groups

The below points illustrate gateway groups handling for Interact runtime:

1. The gateway groups defined in the design time will be processed at runtime.
2. If a gateway group or channel have a configuration in Platform (based on case-insensitive name match), this configuration overrides the one set in the gateway groups UI.
3. If a gateway groups does not have a configuration in Platform, a configuration is created in memory. A handler is automatically created with InMemoryQueue as the dispatcher and contains all the valid gateways belonging to this gateway groups. These gateways will be used to send messages at runtime.

Deployment process at Runtime flow for Gateway groups

1. All gateways created in the design time UI must be configured at run time in order to be usable in run time.
2. During deployment, invalid gateways are removed. A gateway is invalid when the initialization of that configured gateway fails.

3. If a gateway is used directly as the gateway groups in a triggered action, a "pass-through" gateway groups with the same name as the gateway is created for it.

4. During deployment, the run time deployment cache will keep the mapping between gateway groups and their respective valid gateways for lookup.

5. The gateway groups linked to the triggered actions will be checked and if the gateway groups configuration is present in Platform, it will take precedence over the one which is created in Design Time UI.

Runtime environment

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

The runtime environment uses the information that is deployed from the design environment in combination with the Unica 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.

Unica Interact API

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

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

Unica Interact users

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

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

The following list describes potential Unica 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 Unica 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 Unica Platform, Unica Campaign, and Unica 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 Unica 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 Unica Interact. This person may not ever 'use' Unica 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.

Unica Interact workflow for implementing the marketing plan

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

Workflow process

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

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

Design the interaction

During the design phase, you brainstorm about what kinds of interactive marketing strategies you would like to use. When you have a strategy for how you want the visitor to

interact with your touchpoint, you need to determine how to implement that strategy with Unica Interact.

This brainstorming is a cooperative effort between the person who:

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

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

Configure the interaction

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

Test the interaction

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

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

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

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

Review the interaction

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

Deploy the interaction

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

Design workflow diagram

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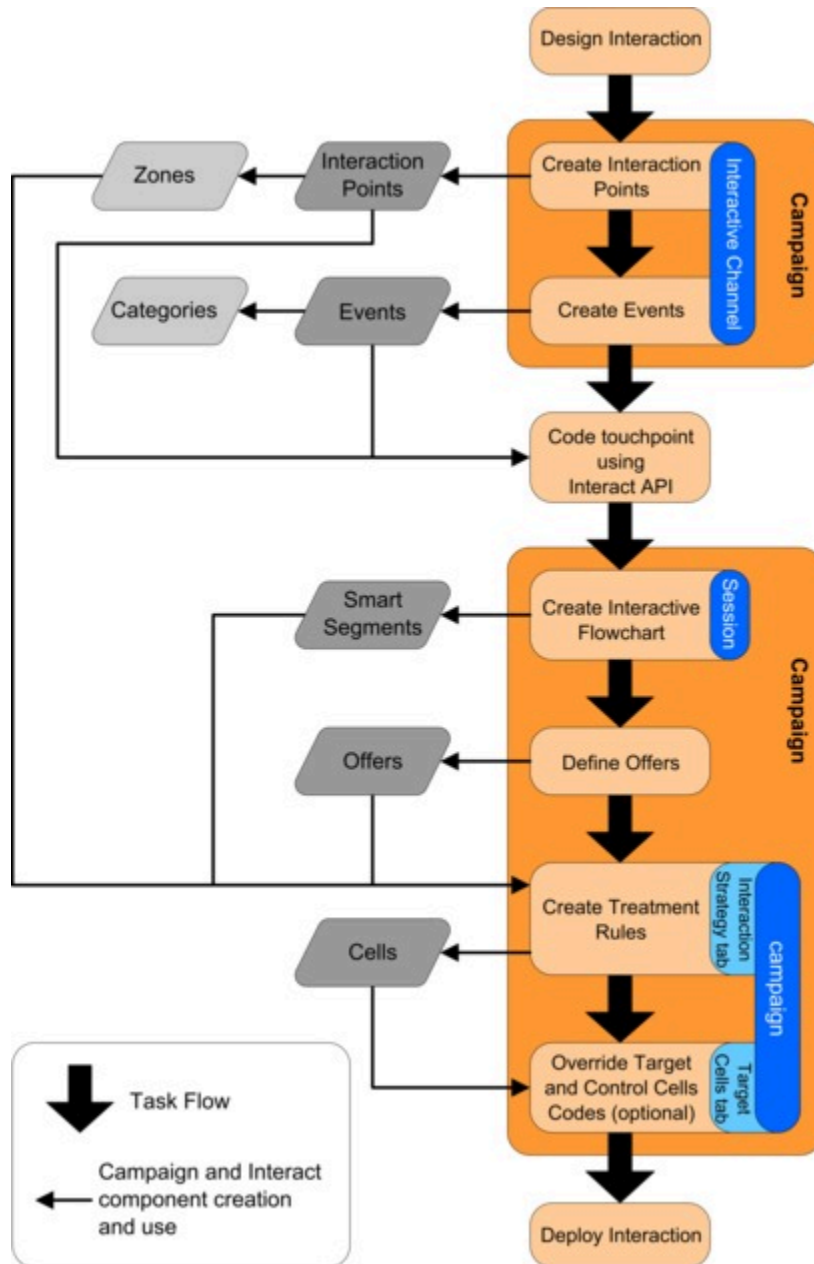
While this diagram shows a linear progression, in practice, many people are working on different components at the same time. It is also an iterative process. For example, to use Unica Interact API to configure the touchpoint to work with Unica Interact, the administrator must reference events that are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

Planning your visitor interaction

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

Determine how to interact with the visitors

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

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

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

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

Define the components you configure in Unica Interact

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

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

Evaluate extra options

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

Consider performance

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

Logging in to Unica

Use this procedure to log in to Unica.

You need the following.

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

The URL is:

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

where

`host` is the machine where Unica Platform is installed.

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

`port` is the port number where the Unica Platform application server is listening.

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

Access the Unica URL using your browser.

- If Unica is configured to integrate with Windows™ Active Directory or with a web access control platform, and you are logged in to that system, you see the default dashboard page. Your login is complete.
- If you see the login screen, log in using the default administrator credentials. In a single-partition environment, use `asm_admin` with `password` as the password. In a multi-partition environment, use `platform_admin` with `password` as the password.

  A prompt asks you to change the password. You can enter the existing password, but for good security you should choose a new one.
- If Unica is configured to use SSL, you may be prompted to accept a digital security certificate the first time you sign in. Click **Yes** to accept the certificate.

If your login is successful, Unica displays the default dashboard page.

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

Note: Starting with version 12.1.4 Unica Campaign has migrated to OpenSSL 3.x.

Although we expect all functionality to work normally, there may be cases that any third-party software running on same machine as Campaign server may not yet support OpenSSL 3.x.

In such cases it may be necessary to have installed Campaign version to switch to OpenSSL 1.x.

Setting your start page

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

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

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

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

Unica Interact documentation and help

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

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

Table 1. Get up and running

This two-columned table provides information about the tasks in one column, and documentation in the second column.

Task	Documentation
View a list of new features, known issues, and workarounds	*Unica Interact Release Notes®*
Learn about the structure of the Unica Interact database	*Unica Interact System Tables and Data Dictionary*
Install or upgrade Unica Interact and deploy the Unica Interact web application	One of the following guides: • *Unica Interact Installation Guide* • *Unica Interact Upgrade Guide*

Table 1. Get up and running

This two-columned table provides information about the tasks in one column, and documentation in the second column.

(continued)

Task	Documentation
Implement the IBM Cognos® reports provided with Unica Interact	Cognos Reports Installation and Configuration Guide
Implement the Unica Insights reports provided with Unica Interact	Unica Insights Reports Installation and Configuration Guide

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

Table 2. Configure and use Unica Interact

This two-columned table provides information about the tasks in one column, and documentation in the second column.

Task	Documentation
• Maintain users and roles • Maintain data sources • Configure Unica Interact optional offer serving features • Monitor and maintain runtime environment performance	*Unica Interact Administrator's Guide*
• Work with interactive channels, events, learning models, and offers • Create and deploy interactive flowcharts • View Unica Interact reports	Unica Interact User's Guide
Use Unica Interact macros	Macros for Unica: User's Guide
Adjust components to obtain optimal performance	Unica Interact Tuning Guide

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

Table 3. Get help

This two-columned table provides information about the tasks in one column, and documentation in the second column.

Task	Instructions
Open online help	1. Choose **Help > Help for this page** to open a context-sensitive help topic. 2. Click the **Show Navigation** icon in the help window to display the full help.
Obtain PDFs	Use either of the following methods: • Choose **Help > Product Documentation** to access Unica Interact PDFs. • Choose **Help > All HCL Unica Documentation** to access all available documentation.

Chapter 2. Marketing Campaign

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

Workflow diagram

This diagram is an extract from the full design workflow and shows only the configuration tasks that you do in the design environment.
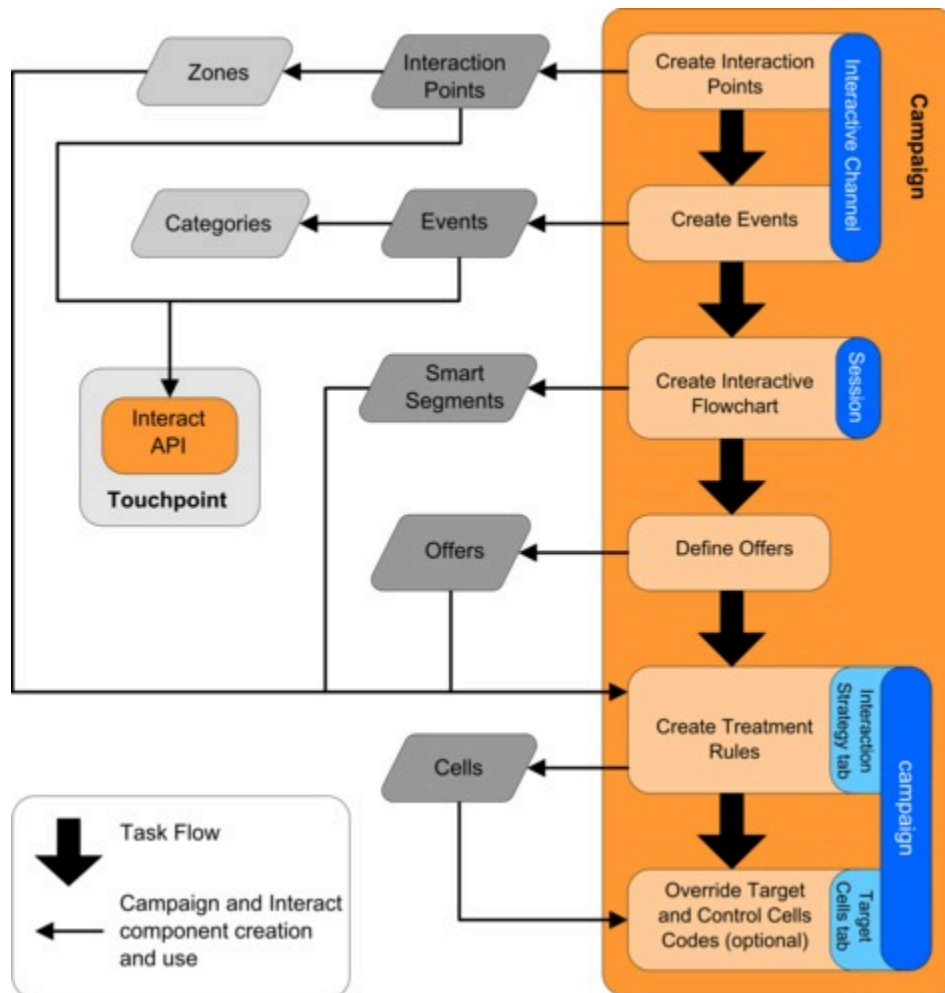
The diagram shows a linear progression even though several people can be working on different components at the same time. It is also an iterative process. For example, as you

work with treatment rules, you might discover that you need to reorganize your interaction points and zones. Working with Unica Interact configurations is also related to creating and working with traditional campaigns.

Sample workflow

A sample workflow can contain the following steps:

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

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

Configuration information shared by the user interface and the Unica Interact API

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

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

the touchpoint, you might have to create more events and interaction points. As you design the interaction in the design environment, you might have more requirements for the person who works with the API.

Element shared by name

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

- Interactive channels
- Interaction points
- events

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

Unica Interact API and runtime information requests

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

Shared Campaign elements

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

Use the Unica Interact API to reference these Unica Campaign elements:

- Audience ID
- Audience level
- Custom offer attributes

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

Since these elements are shared across the whole of the design environment, you must decide standards for these elements across your organization. Some of this information you must provide to properly call the Unica 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 Unica Interact API. In general, this score is the marketing score that is assigned to an interaction strategy. This score is relevant for Unica Interact only, not your entire Unica Campaign environment. You can modify or override the marketing score. For more information about the Unica Interact API, see the Unica Interact Administrator's Guide.

Unica Interact API interactions in the runtime environment

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

1. Creating a runtime session.

   A runtime session is an instance on the runtime server, which contains all data that is associated with the visitor. This instance includes all known profile data and the results of any requests to the runtime server, such as segment membership or a list of offers.

2. Loading the visitor profile data into the runtime session.
3. Running all interactive flowcharts that are associated with the interactive channel and places the visitor into segments.

As the visitor interacts with the touchpoint, the Unica Interact API can complete several actions that include triggering events, requesting profile information, and changing the

audience level of the visitor. When the visitor reaches an interaction point in the touchpoint, the Unica 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.

API recording

When API recording is enabled, all the information in the original request and its response are logged into the configured database table. When a batch is used as the request, the batch itself is not recorded; instead, its constituent commands are recorded individually. The response includes the following information.

- The status code.
- The advisory message, if it exists.
- If the API is for requesting offers, the treatment codes of the returned offers.
- If the API is for requesting profile attributes, the profile attributes and their values.

This is disabled by default. In order to enable it for an individual audience level, perform the following steps.

1. Change the value of configuration `Affinium|interact|general| API:enabledLogging` to `True`.
2. In the Interact runtime database, create a table based on the template UACI_APIRequestInfo.
3. Set the value of configuration `Affinium|interact|profile|Audience Levels|< Audience Levels>:requestLogTable` to the name of the table created in the previous step.

Offer Arbitration log

When offer arbitration log is enabled, the following information is included in the response of getOffers or getOffersForMultipleInteractionPoints request as an informational detailed message and in the API log, if that is also enabled.

> 📝 **Note:** This feature is available from version 12.1.0.3 onwards.

- The eligible smart and static segments.
- The initial candidate offers.
- Suppressed offers and their suppression reason.

This is disabled by default. In order to enable it, perform either of the following steps.

- Change the value of configuration `Affinium|interact|offerserving:includeArbitrationInfo` to `True` to enable it globally.
- Pass the parameter `UACIIncludeArbitration` with the numeric value of 1 as part of the getOffers or getOffersForMultipleInteractionPoints request to enable it only for this particular request.

Chapter 3. 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 that are involved in interactive marketing.

Guidelines

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

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

Interactive channels and the other components

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

Interactive channels and the Unica Interact API

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

Number of interactive channels used

You can have as many interactive channels as required for your organization. Different campaigns can reference the same interactive channel for the interaction strategy. The

interaction strategies for the interactive channel are accessed from the **Summary** tab of the interactive channel.

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

Restrict how often an offer is presented

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

Set the maximum number of times an offer is presented

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

Default strings not counted as offers

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

Creating an interactive channel to coordinate your interactive campaign resources

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

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

1. The name of the interactive channel.
2. The description for the interactive channel.
3. The security policy for the interactive channel. If you did not create any security policies, the default global policy is selected for you, and you cannot change it. You cannot edit the security policy for the interactive channel after you create the interactive channel.
4. The parent interactive channel for the interactive channel to reuse marketing objects. By default, `[No Selection]` is selected.
5. The server group for the interactive channel.
6. The production server for the interactive channel.
7. The maximum number of times you want to show an offer to a visitor in a single session on this interactive channel.

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

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

1. Select **Interact > Interactive channels**.

   The **All interactive channels** page opens.
2. Click the **Add interactive channel** icon on the **All interactive channels** page.

   The **Interactive channel summary** dialog opens.
3. Enter a **Name** and **Description** for the interactive channel.

The name and description you enter here are for your reference, and is displayed in windows and reports.

4. Select the **Security policy** for the interactive channel.

5. To reuse marketing objects, select the parent interactive channel for the interactive channel. By default, `[No Selection]` is selected.

6. Select the server groups that you want to associate with this interactive channel from the **Runtime server groups** list.

   You can select multiple server groups by using **Shift+Click** or **Ctrl+Click**.

7. Select the production server from the **Production runtime server groups** list.

8. Enter an amount for the **Maximum # of times to show any offer during a single visit** field.

9. Click **Save and return**.

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

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

About table mapping

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

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

The following capabilities are provided for table mappings:

- By default, all the table mappings defined in the parent interactive channel will be inherited. (Including dimension tables)
- Users cannot edit, un-map, or add a new dimension table to inherited table mapping in the child interactive channel.
- Users can either reuse existing table mapping or can define a new table mapping in the child interactive channel.
- The inherited table mapping from the parent interactive channel will be serialized and deployed to run-time if not defined in the current interactive channel.
- In the case of reloading to design time, the table mappings will not be considered if inherited from parent interactive channels.

Accessing the audience levels defined in Unica Campaign in your interactive strategy

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

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

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

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

When the **Map profile tables for audience level** wizard validates the table mapping, it references the data source that is defined in the `Campaign > partitions > partitionN > Interact > flowchart > datasource` property. For your data source, the `OwnerForTableDisplay` property in `Campaign > partitions > partitionN >`

`dataSources` must be updated to include the schema owner of the profile table that is used for the interactive flowchart test run. All interactive channels must reference the same data source. This data source is for test runs only.

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

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

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

In the **Mapped profile table** section on the **Summary** tab of an interactive channel, if table mapping is inherited from the parent interactive channel, then the audience level of that table mapping will be suffixed to `- Inherited`.

Mapped profile table	Physical table	Audience level
dbo_customer_audience	Customer_Audience	(Customer) - Inherited

(1 Supported audience levels)

In the Map tables for audience level: Audience-level popup, if table mapping is inherited from the parent interactive channel, then the table type will be suffixed to `- Inherited`.

Accessing a dimension table from Unica Campaign in your interactive strategy

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

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

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

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

The **Map tables for audience level** wizard uses the data source that is defined in the

`Campaign > partitions > partitionN > Interact > flowchart > datasource` **property.**

All interactive channels must reference the same data source.

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

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

Map tables for audience level wizard

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

Requirements

When you are working with the wizard and you:

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

Available tasks

Use the wizard to complete table mapping tasks:

Tasks	Flow
Map a new profile table	1. Click **Unmapped** for the audience level that you want to map.
	2. Complete the fields for the profile table.

Tasks	Flow
	3. Select **Validate mapping** to validate the mapping. 4. Select **Complete this change** to finish the mapping.
Map a new dimension table	You can map dimension tables only after you define a profile table for the audience level. 1. Click **Map a new dimension table**. 2. Complete the fields for the dimension table. 3. Select **Complete this change** to finish the mapping. You do not validate this mapping.
Edit a table mapping	When you edit a profile table mapping and change the table or field names, Unica Interact unmaps all dimension tables that are associated with the profile table. 1. Select the table that you want to edit. 2. Modify the fields for the table. 3. If you modify a profile table, Select **Validate mapping** to validate the mapping. 4. Select **Complete this change** to save the mapping changes.

Tasks	Flow
Unmap a table	1. Select the table that you want to un-map. 2. Click **Unmap**. 3. Select **Complete this change** to save the changes.

Fields used when you select a profile table to map

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

Table 4. Select a table to map

Field	Description
Select a profile table to map	This list is a list of all the tables in the data source that is defined by the `Campaign > partitions > partitionN > Interact > flowchart > dataSource` property. If you are mapping the profile table, you must select a table that contains the audience ID defined in the `Campaign > partitions > partitionN > AudienceLevels` category. Each audience ID column maps name for name.
Load this data in to memory when a visit session starts	Select this check box to load the record that is associated with the Audience member into the runtime session when the session starts. If you select this feature for all dimension tables in the interactive channel, all database reads for the selected audience level occur at the start of a runtime session. The process of reading a database at the start of a runtime session so that all subsequent data requests during the runtime session are faster can improve overall runtime performance. You can reload

Table 4. Select a table to map (continued)

Field	Description
	data from tables by using the `setAudience` method. If you load all data in to memory, while it can improve performance, it also increases the memory requirements for the system.
Unica Interact table name	The name of the table as it is displayed in Interactive flowcharts. You can change how the table name displays in interactive flowcharts to make it easier for your flowchart designers to select the correct tables. The name cannot be empty, must begin with a letter, and can contain only alphanumeric characters and underscores. The Unica Interact table name must also be unique within the table mapping, per audience level, per interactive channel.
Table details	The **Table details** field displays information for the field: • The field name as it is displayed in the real data source. • The **Unica Interact field name** as it is displayed in the interactive flowcharts. • The field **Type**. • Whether this field is a **Audience key** field. If you are mapping a profile table, most of this table is disabled. The fields that match the audience ID fields have **Audience key** selected. You can define **Default** values for every field. If you are mapping a dimension table, the Audience Key column is enabled. Select the **Audience key** check box

Table 4. Select a table to map (continued)

Field	Description
	for the fields upon which you want to join the dimension table to the base table.

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

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

Table 5. Map dimension to base

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

Interactive channel Summary tab

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

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

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

Summary tab and fields

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

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

Field	Description
View the treatment rule inventory	A link that displays the Channel Treatment Rule Inventory report, which is filtered for this interactive channel.
View deployment history	A link that displays the Channel Deployment History report for this interactive channel. You can also view the interactive channel's deployment history in a different format on its deployment tab.
Edit summary	Displays the **Interactive channel summary** dialog box where you can modify most of the information on the interactive channel **Summary** tab.
Description	The description for the interactive channel. The more detailed the description, the better other design environment users understand the purpose of this particular interactive channel. You can change this value by clicking the **Edit summary** icon and modifying the description in the dialog that is displayed.
Security policy	The security policy applicable for this interactive channel. This value is specified when you create the interactive channel. You cannot change the security policy on an existing interactive channel.
Runtime server groups	A list of the runtime server groups available for this interactive channel. You can change this value by clicking the **Edit summary** icon and modifying the runtime server groups in the dialog that is displayed.

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

Field	Description
Production runtime server group	The runtime server group that you chose for your live, customer-facing touchpoint. You can change this value by clicking the **Edit summary** icon and modifying the production runtime server group in the dialog that is displayed.
Maximum # times to show any offer during a single visit	An integer that defines the maximum number of times to show a particular offer during a single visit. The runtime environment uses this number along with treatment rules and the learning engine when you choose offers to display. You can change this value by clicking the **Edit summary** icon and modifying the value in the dialog that is displayed.
Learning mode	Whether the interactive channel uses the global learning model, uses the marketer's scores only for offer weighting, or uses the custom learning model that you specified in the **New interactive channel** or **Edit interactive channel** dialogs.
Mapped profile table	Displays the Unica Interact name and actual name for the profile table for each audience level that is defined in Unica Campaign. If no profile tables are defined, this table is empty. The name of the table is a link to the **Map tables for audience level** wizard, where you can map profile and dimension tables for the interactive channel. The number of profile tables that you mapped is listed as the number of supported audience levels. You might have more audience levels that are defined in Unica Campaign than you require for your touchpoint. You do not have to de-

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

Field	Description
	fine profile tables for all audiences, only the audiences you use with your interaction on your touchpoint.
Associated flowcharts	A listing of all flowcharts that are associated with this interactive channel. Each flowchart that is listed here is a link that opens the flowchart where you can view or edit it as needed.
Associated strategies	A listing of all strategies that are associated with this interactive channel. Each strategy that is listed here is a link that opens the interactive strategy where you can view and edit the treatment rules. ✏️ **Note:** Starting from version 12.0, Interact introduced new user interface to work with strategies associated with an interactive channel through "Strategy" tab (see the Strategies and treatment rules *(on page 119)* section). As a backward compatibility, old Strategy UI can still be accessed through Campaign Summary page. Due to underline data model changes, a strategy created through old UI cannot be displayed in new UI, vice versa. But, both strategies created through old or new UI are displayed here on Summary tab. Clicking a strategy link allows you to navigate to either old or new Strategy UI based on how it is created. If a strategy is upgraded to smart strategy through upgrade tool provided

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

Field	Description
	with version 12.0 installation, it appears in both old and new Strategy UI.

Group your interaction points into zones

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

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

Adding zones for your interaction points to the interactive channel

When you define interaction points for your visitors, you can further specialize those interaction points by adding them to zones. Each zone can have its own set of rules that determine how offers are presented to visitors. Use the **Add zone** icon on the **Interaction points** tab of the **Interactive channel** window to add a zone.

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

   The **Add/edit Zone** dialog is displayed.
2. Enter a **Name** for the zone.
3. Enter a **Description** for the zone.

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

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

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

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

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

There are many different levels in Unica Interact through which learning is enabled or disabled - globally for each interactive channel, for each zone, and for each treatment rule. There can be conflicts 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. This is because each zone and each treatment rule can define its own learning rule and the model defined for a treatment rule can be different from the model that is defined for the zone.

The following are the settings that determine how Unica Interact resolves conflicts in these situations.

- **Intermixing - Use Learning Mode for this zone (Default)** indicates that the sequence of offers is selected based on the learning mode that is defined for this zone. This overrides the settings on individual rules.
- **Prioritizing non-learning offers** indicates that the sequence of offers selects non-learning offers first, followed by learning-based offers.

- **Prioritizing learning offers** indicates that the sequence of offers selects learning offers first, followed by non-learning-based offers.
- **Prioritizing non-learning offers: dedupe** provides the same results as the **Prioritizing Non-learning Offers** option, but with duplicate offers removed when the same offer is provided by learning and non-learning sources.
- **Prioritizing learning offers: dedupe** provides the same results as the **Prioritizing Learning Offers** option, but with duplicate offers removed when the same offer is provided by learning and non-learning sources.

% Random specifies the chance that the returned offer is randomly selected, without considering scores. You can also use `percentRandomSelection` in `Campaign | partitions | partition[n] | Interact | learning` to globally configure the percent of the time the learning module presents a random offer. If you set **% Random** here, it overrides the global configuration.

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

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

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

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

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

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

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

Create interaction points for the visitor to interact with your touchpoint

An interaction point is how you identify where in your touchpoint you request information. You organize all of your interaction points in zones. When you define which offers go to which segments in your treatment rules, you can also define these rules by zone. Therefore, you can have different types of offers available for different sections of your touchpoint.

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

Interaction points and the Unica Interact API

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

Adding visitor interaction points to your touchpoint interactive channel

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

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

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

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

1. Click **Add interaction points** on the **Interaction points** tab.

   The **Add/edit interaction point** dialog is displayed.
2. Enter a **Name** for the interaction point.
3. Select a **Zone**.
4. Enter the **Default string to return**.
5. Enter a **Description** for the interaction point.

   This description displays on the **Interaction points** tab.
6. Click **Save and return** to go back to the **Interaction points** tab or **Save and add another** to continue adding interaction points.

Interaction points tab reference

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

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

Icon Name	Description
Add zones ⊟	Click to add a zone to this interactive channel.
Add interaction points ▤⁺	Click to add an interaction point to this interactive channel.
Move to ⤇	Select interaction points then click this icon to move the selected interaction points to a new zone.
Delete 🗑	Select interaction points or zones, then click this icon to delete them.

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

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

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

Creating a constraint for an offer

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

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

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

1. Click the **Add constraints** icon on the **Constraints** tab of an interactive channel.

   The **Add/edit constraint...** dialog appears.
2. Enter a **Name** for the offer constraint.
3. Enter a **Description** for the constraint.

   This description appears on the Constraints tab to identify this offer constraint.
4. Specify the offers to which to apply the constraint by selecting **in folder** or **in offer list**. Use the accompanying drop-down list to select the folder or offer list that you want.

   You can specify that the offers be available during a specific range of dates and times, be available up to a maximum number of times within a specific period, or both.
5. Specify the range of dates during which the offers can be made available:
   a. Click **Start serving offers after** and use the calendar tool that opens to specify the earliest date on which the offers can become available. Use the drop-down list next to the **Start serving offers after** field to select the earliest time that the offers can become available.
   b. Click **Stop serving offers by** and use the calendar tool that opens to specify the last date on which the offers can become available. Use the drop-down list next to the **Stop serving offers by** field to select the time they stop being available.
6. Enter the maximum overall number of times you want the offers to be served in the **Impressions** field.

   If you do not enter a value in this field, no maximum number of offers constraint is applied.
7. Complete the **Distribute evenly with** fields to specify the maximum number of impressions you want the offers to be displayed within a single time period.

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

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

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

Modifying a constraint to change when an offer is presented

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

1. Click the **Constraints** tab of an interactive channel to view the list of constraints.
2. Click the name of the constraint you want to edit.

   The **Add/edit Constraints** dialog opens.
3. Modify the **Name**, **Description**, or definition settings of the constraint.
4. Click **Save and return** to go back to the **Constraints** tab or **Save and add another** to save your changes and add another constraint.

Enabling or disabling an offer constraint

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

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

- Used without redefining its operating range
- Considered at all

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

1. Click the name of the constraint you want to edit on the **Constraints** tab.

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

Deleting a constraint that is no longer needed

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

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

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

Use learning models to select offers

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

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

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

> **Note:** The support for BINARY_DOUBLE and BINARY_FLOAT Oracle column type is added. With updated JDBC drivers and Oracle database, the schema change to the FINALSCORE column can sometimes overcome the issue without the JVM parameter. If the schema change does not work, then the `-DLearning.MAX_VALUE=9.99E+25 JVM` parameter must be used.

Adding a learning model to customize offers for a visitor

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

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

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

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

   The **Add/edit learning model** dialog box opens.
2. Enter a **Name** for the learning model.
3. Enter a **Description** for the learning model.

   This description is displayed on the **Self learning** tab to identify this learning model.
4. Complete the definition for the learning model by adding visitor attributes and/ or Event Patterns to the **Predictive attributes of interest** list.

   This list specifies which visitor attributes, Event patterns you want Unica Interact to monitor to determine the best offers to present to visitors.

   > **Note:** Two different ICs having two different patterns used in learning models and deployed- When posted an event from IC2's pattern event pattern from IC1 is also written to the Learning Table. Fundamentally, Unica Interact is

designed to be cross channel, so the idea of learning is that the system can learn and apply attributes from all channels.

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

Editing a learning model

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

1. Click the **Self learning** tab of an interactive channel to view the list of learning models.
2. Click the name of the learning model that you want to edit.

    The **Add/edit learning model** dialog box is displayed.
3. **Optional:** Modify the **Name**, **Description**, or definition settings of the learning model.
4. Click **Save and return** to go back to the **Self learning** tab or **Save and add another** to save your changes and add another learning model.

Deleting a learning model

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

You cannot recover a learning model after you delete it.

You cannot delete a learning model that is in use.

1. Select the check box next to the learning model that you want to delete. You can select multiple learning models.
2. Click **Delete**.
3. Confirm the deletion.

Enabling and disabling a learning model

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

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

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

AutoBinning

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

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

Add a new bin definition

1. Go to Interact -> Global Learning

2. Click on Add on "All Bin Definitions" tab. This will take you to "New Bin Definition" page

3. Select an attribute from a dropdown that lists all attributes from all mapped profile tables in design time. Each attribute in the list is suffixed with its data type.

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

4. An empty row in Bin Definitions section will be displayed.

5.Specify Description optionally

6.In Bin Definitions section provide a name for the bin definition.

7.Select "Type" as "Range" or "List".

8.Select the appropriate Operator and provide values as per the selected type and operator.

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

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

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

Edit/Delete/Add an existing bin definition

1.Go to Interact -> Global Learning

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

3.Click on edit on detail page

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

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

6.Save Changes.

When a global deployment package is pushed to run time, all the included bin definitions will be parsed and compared to existing ones.

> **Note:** If there is any change in the bin definition, all the existing data for that attribute will be cleared. In case a new bin is created for an attribute that already has learning data, the existing data will be cleared and future data will be logged according to the new Binning logic.

Delete existing Attributes from "All Bin Definitions"

1.Go to Interact -> Global Learning

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

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

Use with smart segments to refine offers

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

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

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

Create a Unica Campaign session for interactive flowcharts

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

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

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

Define an interactive flowchart to segment your visitors

Interactive flowcharts provide the segmentation logic for your interaction. When a visitor's runtime session is created, the runtime environment takes all available profile information for the visitor and runs it through all interactive flowcharts that are associated with the interactive channel. This filtering places the visitor into zero or more smart segments.

The runtime environment then uses these segments to present offers as defined by the treatment rules.

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

You can create interactive flowcharts inside of Unica Campaign sessions only.

See Interactive flowcharts (on page 93) for details about creating interactive flowcharts.

Define real-time interactive offers for visitors

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

⚠️ **Important:** Unica Interact does not currently support offer lists.

Offer template requirements for Unica Interact

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

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

number of days after the effective date. For interactive flowcharts, the **Flowchart run date** is the time at which the runtime environment recommends the offer to the touchpoint for presentation.

Offers and naming conventions

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

Offers and treatment rules

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

Offers and the Unica Interact API

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

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

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

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

Creating offer templates for Unica Interact

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

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

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

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

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

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

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

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

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

Rules for suppressing offers in real time

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

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

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

Table 7. Offer suppression rules

Offer suppression rules

Rule	Description
Offer acceptance	An offer acceptance is an offer that has received any response that is recorded as an acceptance response. By default, a visitor response can trigger an "accept" action for an offer, but you can specify other response types as acceptance actions.
	When you are defining an offer for real-time interaction, suppressing the offer that is based on acceptance is defined in the **On Offer Acceptance** section.

Table 7. Offer suppression rules

Offer suppression rules

(continued)

Rule	Description
	The complete list of response types available for rule suppression is defined in the `UA_UsrResponseType` table in theUnica Campaign system tables. See the Unica Campaign Administrator's Guide for details.
Offer rejection	An offer rejection is an offer that has received any response that is recorded as a rejection response. By default, a visitor response can trigger an "reject" action for an offer, but you can specify other response types as rejection actions. When you are defining an offer for real-time interaction, suppressing the offer that is based on rejection is defined in the **On Offer Rejection** section. The complete list of response types available for rule suppression is defined in the `UA_UsrResponseType` table in theUnica Campaign system tables. See the Unica Campaign Administrator's Guide for details.
Offer fatigue	When an offer has been presented to a visitor a specific number of times, the offer is suppressed to prevent offer fatigue, where an offer is seen so many times it is no longer noticed. When you are defining an offer for real-time interaction, suppressing the offer that is based on the number of times it has been presented is defined in the **On Offer Presentation** section.
Related offer suppression	For any offer suppression (**On Offer Acceptance**, **On Offer Rejection**, or **On Offer Presentation**), you have the option of also suppressing other offers that are related to the current offer. An offer is related if the offer attribute (as defined on the offer template) has a matching value to the offer that is being suppressed. For example, you might be suppressing an offer that has been accepted by visitors where the attribute "Average response revenue" is less than $100. By sup-

Table 7. Offer suppression rules

Offer suppression rules

(continued)

Rule	Description
	pressing other offers that are based on this attribute having the same value, you can suppress other low-value offers to the same visitor.
	If an offer is related to other offers that have been accepted, rejected, or presented too many times, the offer is no longer presented.
	Be aware of the following practices concerning attribute matching:
	- If an offer rule defines both an attribute name and an attribute value, then offers with the same attribute whose value matches the configured value are suppressed for the configured duration. - If an offer rule has only an attribute name, then all offers with the same attribute whose value matches the value of the offer being posted against are suppressed for the configured duration. If an offer is not associated with an Interactive Channel, its offer suppression rules will not be deployed with that Interactive Channel. For the Related offer suppression to work between Interactive Channels, the offer for which the suppression rule is defined must be present in a treatment rule for all the Interactive Channels that the suppression rule should be deployed to.

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

Support of real-time attributes in flowcharts and strategies

Earlier in Unica Interact, whenever an attribute was needed while creating an expression in flowcharts or strategies, that attribute had to exist in the mapped profile table. There are scenarios that the value of an attribute will never exist in the profile table but be provided via API parameters or other sources. When that is the case, you had to work rounded by adding a corresponding column in the profile table and map the table again, which caused unnecessary hassle. You can now add and manage such attributes and use them in flowcharts or strategies. These attributes are available globally, cross Interactive Channels.

Ability to support real-time attributes

A real-time attribute is an attribute defined by users. The values of the attribute come from API or other external source at run-time other than from profile tables. These values can be used in expressions of Flowchart for segmentation or Strategy for offer selections at run-time. A real-time attribute can have data type of String, Numeric and Date. It can also have default value if no value is passed in at run-time. Once a real-time attribute is defined, it is globally available in Interact without tying to any IC, audience level or profile table.

You can define User Variables, Derived Fields and Session Variables in a Flowchart. But these attributes are too tied to Flowchart and Unica Campaign UI and are not easy to be managed by Unica Interact. They are retained, gradually we discourage you using those attributes and encourage you to shift to using real-time attributes instead.

User Interface

Unica Interact top menu

A "Global definition" menu is present after "Global learning" under the Unica Interact main menu. Click it to lead to a tabbed page where the first tab is "Real-time attributes", listing all real-time attributes.

Real-time attributes page

There is one centralized page that displays a list of all the real-time attributes. You can also create, edit and delete from this page as well. The following columns displayed in the list: "Selector", Name, Data type, Description, Default value, Used, and Actions.

You can create a new attribute by clicking the "Add" link on the top-right. A new editing row is displayed at the top of the list. Once the required fields (Name and Data type) are filled, you can either click "Check" icon to save attribute or "Cancel" icon to cancel the change. Once new record is saved, it will add to the list, in a sorted position.

You can click Edit to edit existing attribute. Once the required fields (Name and Data type) are filled, you can either click "Check" icon to save attribute or "Cancel" icon to cancel the change. Once the updated record is saved, the editing row will be hidden and list reflects the newly updated data.

The following constraints are imposed when creating and editing a real-time attribute:

- The Name must be unique.
- The default value should be validated with the data type.

In the "Used" column, a check mark indicates if the attribute is used or not.

If an attribute is not used, the Actions column has the icons, "Edit" and "Delete". Click "Edit" enables inline editing in the same row. All fields can be changed.

If the attribute is used, Actions columns has icons": "Show usage", "Edit" icons. "Show usage" opens a popup and display where the attribute is used (like flowchart, strategy, simulator or learning model etc). "Edit" enables inline editing, but only "Description" and "Default value" can be changed. The changed data (default value) has to be re-deployed in order to take effect.

You can delete multiple attributes in this page by selecting selectors in from of each row. If an attribute is used or deployed, then it cannot be deleted. You have to remove its reference first manually and then delete it.

A search box is present on top of list which can perform wildcard search to filter the attribute list. A "cancel" icon is present at the right which clears the search text and brings the full list back.

Paging and sorting (on Name, Data type and Default value columns) can be performed on the list page.

Use real-time attributes when designing Flowcharts

When Unica Interact is installed, the "Real-time attributes" tree node is shown after "Derived Fields" under "Available fields" in the Edit Branch page of the Interactive Flowchart designer. You can select the attributes as same as selecting other available fields. Real-time attributes are prefixed with RTAttr when used in expressions - this is meant to distinguish RTA from other variable types.

Use real-time attributes in Advanced Option when defining Strategy

Real-time attributes are shown as the last tree node under Function, variables, and operators in the Advance option of Strategy page. You can select the real-time attributes in the same way you select other variables.

Use real-time attributes in Parameterized Offer Attributes when defining Strategy

Real-time attributes are shown as the last tree node under Function, variables, and operators in the Parameterized Offer Attributes when defining Strategy. You can select the real-time attributes in the same way as you select other variables.

Define real-time attributes for startSession API in Advanced Scenario in Simulator

When you define the startSession API in an advanced scenario in Simulator,Only real-time attributes used in Flowchart and Interaction Strategies associated with the particular Interactive Channel are displayed in the parameters drop-down.. so that the attributes can be selected and values can be assigned to it

Record usage of a real-time attribute when it is used

Once an attribute is used in a Flowchart, Strategy or a Simulator, its usage is recorded in an attribute usage table. Hence, whenever a real-time attribute is used, a usage record is added to the DT database table UACI_RealtimeAttributeUsage. There is a UI to display attribute usages which help you - the user manage real-time attributes.

Unica Interact Runtime working with real-time attributes

All real-time attributes defined in Unica Interact design-time are deployed to Unica Interact Run-time as part of global data. The expression in Flowchart and Strategies using real-time attributes is deployed to the Run-time with no difference as before. At Unica Interact Run-time, a real-time attribute used in a Flowchart or Strategy expression can be passed in as a parameter in startSession or postEvent API. During the process of offer evaluation, Unica Interact uses the value of real-time attribute if the value is passed through an API parameter or a flowchart sessionVar. If not, then the value of audienceprofile is used. Otherwise, the default value available with the real-time attribute is used.

Exporting an interactive channel

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

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

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

The interactive channel is exported in the following structure.

- Dependent objects
    - Campaigns
    - Offers
- Global data

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

Icon Name	Description
Edit strategy ✎	Click to add new treatment rules to this interaction strategy.

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

(Optional) Assign target and control cells

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

The TCS® functions a little differently with interaction strategies than with batch flowcharts. You can use both the top-down and bottom-up approaches. Cells that are generated by treatment rules in the interaction strategy become bottom cells in the TCS®. You can use the top-down approach the same as with batch flowcharts. However, currently, the offer to the cell assignment from the interaction strategy 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 to assign offers to cells for real-time interactions.

You do not need to approve cells that are used in interaction strategies in a Unica Plan TCS®.

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

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

Overriding cell codes

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

1. Click the segment for which you want to edit the cell code.
2. Select **Override this cell name or code**.

    The **Override cell name and code** dialog is displayed.
3. Edit the **Target cell name**.
4. Change the cell code as follows:
    - Generate a new cell code by using the Unica Campaign cell code generator by selecting **Use an auto-generated or hand entered code created just for this rule** and clicking **Auto-generate**.
    - Enter a cell code by selecting **Use an auto-generated or hand entered code created just for this rule** and entering a new **Target cell code**.

- Select a cell code that is created in the Target Control Spreadsheet (TCS) with the top-down method by selecting **Select or type a pre-created target cell code** and selecting the code from the list.

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

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

Deploy the Unica Interact configuration

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

See Understanding deployment to runtime servers (on page 230) for details about deploying interactive channels.

Chapter 4. Interactive flowcharts

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

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

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

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

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

As you design your interactive flowcharts, you must remember that interactive flowchart performance is different from batch flowchart performance. These flowcharts are run in real time. If it takes too long for the perfect advertisement to load on your website, your

customer might go to a different site. When designing flowcharts, you must work in tandem with your touchpoint administrator, balancing your segmentation requirements with your touchpoint performance requirements. Some design considerations that you should discuss with your touchpoint administrator include the number of interactive flowcharts to run per audience level and the number of times you require a database lookup.

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

Building interactive flowcharts

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

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

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

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

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

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

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

Creating interactive flowcharts

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

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

1. Open the **Summary** tab of the session to which you want to add an interactive flowchart.
2. Click the **Add flowchart** icon.

   The **Flowchart properties** page is displayed.
3. Enter a name and description for the flowchart.
4. Select the **Standard batch flowchart** flowchart type.

   When you select **Standard batch flowchart**, configuration settings for interactive flowcharts are displayed.
5. Select the interactive channel for this interactive flowchart.
6. Select the **Audience level** for this interactive flowchart.
7. Click **Save and edit flowchart**.

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

You can now edit the interactive flowchart.

Interactive flowcharts and data sources

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

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

The test run profile table

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

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

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

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

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

Dimension tables

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

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

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

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

Configuring interactive flowcharts

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

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

- Remember that you cannot change audience level in an interactive flowchart.
- Whether you can delete an interactive flowchart depends on its deployment status.
- If you access the Table Mappings dialog, clicking **Load** loads only general tables.

  You must complete all table mapping for an interactive flowchart in the interactive channel that is associated with the flowchart.
- Stored table catalogs are not used in interactive flowcharts.

Queries and Unica Interact

Several processes in Interactive flowcharts and advanced options in treatment rules can be used to create queries to select data from your data source. These are, in general, the same queries as Unica 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 Unica Campaign User's Guide.
- Event pattern matching provides access to the state of every event pattern that is defined for the interactive channel and its parent interactive channels (including out-of-date range event patterns). You can include event patterns in your query to

combine other segmentation logic with behavioral logic, or you can use the pattern state alone to define a behavioral segment.

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

Table 8. Event pattern states

Event pattern states and their meanings

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

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

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

Data types and stored objects

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

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

Given the following:

- `X [operation] Y = Z` where `X`, `Y`, and `Z` are vectors
- `Sx`, `Sy`, `Sz` are the size of each vector
- `Dx`, `Dy`, `Dz` are the data types for each vector, and `X` and `Y` must contain the same data types.

Then the following is true:

- `Sz = Sx * Sy`
- `Dx = Dy = Dz`

Take the following two examples.

The following table shows how Unica 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 Unica Interact

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

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

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

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

Using EXTERNALCALLOUT

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

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

Interaction process

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

Decision process

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

An interactive flowchart can contain as many Decision processes as necessary. For example, the first Decision process in an interactive flowchart might create the cells HighValue, MediumValue, and LowValue. You can then have three more Decision processes, one for each of the first segments to divided them into more refined segments, for example FrequentShopper, Shopper, and RareShopper.

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

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

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

Configuring the Decision process

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

1. Open an interactive flowchart for editing (click **Edit** ✎ in the flowchart toolbar).
2. Drag the Decision process from the palette to your flowchart.
3. Provide input to the Decision process by connecting it to one or more data manipulation processes.

   Data manipulation processes include Interaction, Decision, Sample, or Select.
4. Double-click the Decision process.

   The **Decision process configuration** dialog box opens and displays the **Decision** tab.
5. Select a source cell from the **Input** drop-down list.
6. If you want the created segments to be mutually exclusive, select the **Mutually exclusive branches** check box.

   If you want a branch to contain all the remaining customer IDs, you must select **Mutually exclusive branches**.
7. Configure the branches.
8. **Optional:** Click the **General** tab to assign a name and notes to the process.

   The name appears on the process in the flowchart. The notes appear when you point to the process in the flowchart.
9. Click **OK**.

The process is configured and appears enabled in the flowchart.

Configuring Decision process branches

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

1. Complete one of the following actions on the **Decision** tab of a Decision process:
    - Select a branch and click **Edit** to edit the branch condition.
    - Click **Add branch...** to create a branch.
    - Select a branch and click **Remove** to delete a branch.
2. In either the **Edit branch** or **New branch** dialog boxes, enter a branch name.
3. If you do not want to create a query, or to select all remaining customers, choose **Select all remaining records**.

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

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

    Select Customer IDs with is selected by default, and the query builder is active.
4. Select a table from the **Select based on** drop-down list.
5. Create a condition for the branch by using queries.
6. Click **OK**.

The dialog box closes and you return to the **Decision** tab of the Decision process. You can continue to configure branches or finish configuring the Decision process.

PopulateSeg process

The PopulateSeg process performs a similar function as the CreateSeg process in batch flowcharts; the PopulateSeg process takes the input cells and makes them smart

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

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

Creating smart segments

You must create smart segments for interaction strategies. You cannot use strategic segments in interaction strategies.

1. Open an interactive flowchart for editing (click **Edit** ✏ in the flowchart toolbar).
2. Drag the PopulateSeg process from the palette to your flowchart.
3. Provide input to the PopulateSeg process by connecting it to one or more data manipulation processes.

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

   The **PopulateSeg process configuration** dialog box opens and displays the **Result segments** tab.
5. Select one or more source cells from the **Input** drop-down list.
6. In the **Result segments** section, select an **Input cell** and select a **Segment name**.
   If you want to create a segment, select **New segment** and complete the **New smart segment** dialog. Enter a **Name** and **Description** and select the segment folder under which you want to create the segment. You can organize your smart segments the same as you organize strategic segments.

   📝 **Note:** Special characters should not be used in smart segment names.

7. **Optional:** Click the **General** tab to assign a name and notes to the process.

   The name is displayed on the process in the flowchart. The notes are displayed when you point to the process in the flowchart.
8. Click **OK**.

The process is configured and appears enabled in the flowchart.

Sample process in interactive flowcharts

The Sample process in interactive flowcharts fills the same purpose of Sample processes in batch flowcharts: to create one or more cells for different treatments, control groups, or a subset of data for modeling. However, the interactive flowchart Sample process contains only a subset of the features in the Sample process in batch flowcharts. The Sample Size Calculator and Maximum Cell Size are removed. Interactive flowchart Sample processes also have a new method for selecting the sample, the Deterministic Hash Function.

In a batch flowchart, the Sample process randomly selects some number of customers to be in a sample cell. However, in an interactive flowchart during run time, the Sample process works with a single customer at a time. When you define the % for a sample, you are defining the probability that a visitor becomes a member of that cell.

When defining sample cells, you must create at least two. Define a **%** for one sample, and select **All Remaining** for the other. If you do not do this, you will have undefined results. For example, if you create one 30% sample only, the remaining 70% of visitors are not assigned to any cell.

You must connect the Sample process to a PopulateSeg process to complete creating a smart segment that you use for sampling.

The Deterministic Hash Function assigns visitors to samples randomly. However, if the same visitor passes through the interactive flowchart more than once, the visitor is placed in the same cell. If you want to ensure that visitors are eligible to be sampled differently after they have been placed in the same cell repeatedly, you can configure a time period for the Deterministic Hash Function. (Adjust the Date of first reset and Number of days between resets.)

If you are creating a flowchart that copies the functionality of another flowchart, you can ensure that the Sample process uses the same Deterministic Hash Function as the original interactive flowchart by using the Hash Seed field. To place visitors in the same sample group, use the same number of cells, Hash Seed, Date of First Reset, and reset period in

both Sample processes. Unica Interact uses the value of the Hash Input seed and the reset date to determine which cell the visitor is placed in.

Configuring the Sample process

Use an interactive flowchart in the Edit mode to configure a Sample process.

1. Open an interactive flowchart for editing (click **Edit** ✎ in the flowchart toolbar).

2. Drag the Sample process 👥 from the palette to your flowchart.

3. Provide input to the Sample process by connecting it to a data manipulation process.

   Data manipulation processes include Decision, Sample, or Select. You can connect the Sample process to an Interaction process also.

4. Double-click the Sample process.

5. Select a source cell from the **Input** drop-down list.

   All output cells from any process that is connected to the Sample process are listed in the drop-down list.

6. Determine the number of samples that you want to create for each of your input cells, and enter that number in the **# of Samples/Output cells** field.

   By default, three samples are created for each input cell, with default names `Sample1`, `Sample2`, and `Sample3`.

7. Select each sample under the **Output name** column and complete the following actions:

   a. Double-click the output name text box and type to modify the sample name.

      You can use any combination of letters, numbers, and spaces. Do not use any periods (.) or slashes (/ or \).

   b. Enter the probability that a visitor is assigned to the sample in the **Size** field, or select the **All remaining** check box.

      The % must be less than 100.00.

8. **Optional:** Change the **Hash seed** under the **Deterministic hash function**.

You must change the Hash Seed only if you want this Sample process to assign visitors to cells the same way as another Sample process. The hash seed must be an alphanumeric value.

9. **Optional:** Enter the **Date of first reset** under the **Deterministic hash function**.

   Click the ellipsis button [···] to select a date from the calendar.

10. **Optional:** Enter the number of days between resets.

11. **Optional:** Click the **General** tab to assign a name and notes to the process.

    The name is displayed on the process in the flowchart. The notes are displayed when you mouse of the process in a flowchart.

12. Click **OK**.

The process is configured and appears enabled in the flowchart.

You must connect the Sample process to a PopulateSeg process to complete creating a smart segment that you use for sampling.

Select process in interactive flowcharts

The Select process in interactive flowcharts fills the same purpose of Select processes in batch flowcharts to specify the customer data that you want to use in your interactive flowchart. The interactive flowchart Select process contains a subset of the batch flowchart Select process; it contains only the Source and General tabs.

You can use the Select process to select data from your data source to augment the profile table you referenced in the Interaction process. You also have access to user variables, derived fields, and macros. Remember interactive flowcharts are limited to one audience level. However, you can use the Select process to reference data in a dimension table at a different audience level. For example, you might reference a table with household transaction data in an interactive flowchart with the customer audience level to sort by information in the household data.

Configuring the Select process

Use an interactive flowchart in the Edit mode to configure the Select process.

1. Open an interactive flowchart for editing (click **Edit** ✏ in the flowchart toolbar).

2. Drag the Select process 👤 from the palette to your flowchart.

3. Provide input to the Select process by connecting it to a data manipulation process.

   Data manipulation processes include Decision, Interaction, Sample, or Select.

4. Double-click the Select process.

5. Select a source cell from the **Input** drop-down list.

   All output cells from any process that is connected to the Select process are listed in the drop-down list.

6. Determine whether you want to select all rows from the data source or whether you want to filter the rows that are based on specified criteria. Select one of the following options.

   a. **Select <Customers> IDs** to include all the rows of data from the data source in the Input drop-down list.

   b. **Select <Customers> IDs with** to create a query to select only certain IDs based on criteria you define.

7. If you use the **Select <Customers> IDs with** option to select only certain IDs based on specified criteria, create a query.

8. **Optional:** Click the **General** tab to add a name and notes to the process or to configure the **Output cell name** or **Cell code**.

   The name is displayed on the process in the flowchart. The notes are displayed when you mouse of the process in a flowchart.

9. Click **OK**.

The process is configured and appears enabled in the flowchart.

Snapshot process in interactive flowcharts

The Snapshot process in interactive flowcharts fills the same purpose of Snapshot processes in batch flowcharts to capture a list of IDs and associated data, and export them to a table. The interactive flowchart Snapshot process contains a subset of the batch flowchart Snapshot process. You can save to a table only. However, you also cannot order

or skip duplicate entries in the table because interactive flowcharts handle only one record at a time, these features are not necessary.

Snapshot and data formats

When saving to an existing table from the Snapshot process, Unica 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 Unica Interact runtime environment dynamically creates a table by using default data types. You can override these default data types by creating a table of alternate data types. For more information, see the Unica Interact Administrator's Guide.

Configuring the Snapshot process

You can use an interactive flowchart to configure the Snapshot process.

1. Open an interactive flowchart for editing (click **Edit** ✏ in the flowchart toolbar).

2. Drag the Snapshot process 📷 from the palette to your flowchart.

3. Provide input to the Snapshot process by connecting it to a data manipulation process.

   Data manipulation processes include Decision, Interaction, Sample, or Select.

4. Double-click the Snapshot process.

5. Select a source cell from the **Input** drop-down list.

   All output cells from any process that is connected to the Snapshot process are listed in the drop-down list.

6. Select a table from the **Export to** list.

   If a table does not exist, select **New napped table** and follow the instructions for creating a table in the Unica Campaign Administrator's Guide.

7. Select an option to specify how updates to the output table are handled:

   a. **Append to existing data** - Append the new information to the end of the table. This is the recommended method for database tables.

   b. **Replace all records** - Remove any existing data from the table, and replace it with the new information.

   c. **Update records** - All fields that are specified for snapshot are updated with the values from the current run of the process.

8. Specify the fields that are written out by the Snapshot process.

   a. The fields in the table are displayed in the **Candidate fields** list under the **Field name** column. You can automatically find matching fields by clicking the Match button. Fields with exact matches for the table field names are automatically added to the **Fields to snapshot** list. If there are multiple matching fields, the first match is taken.

   b. You can manually select the fields to include.

   a. Select the fields that you want to include in your output from the **Candidate fields** list.

   You can select multiple fields at one time by using **Ctrl+Click** or a contiguous range of fields by using **Shift+Click**.

   b. Move selected fields to the **Fields to Snapshot** list by clicking **Add >>**.

c. You can manually modify the pairings by clicking **<< Remove** or **Add >>**.

d. If wanted, reorder the fields in the **Fields to snapshot** list by selecting a field and clicking **Up1** or **Down1** to move it up or down in the list.

9. **Optional:** Click the **General** tab to add a name and notes to the process or to configure the **Process name**.

The name is displayed on the process in the flowchart. The notes are displayed when you point to the process in a flowchart.

10. Click **OK**.

The process is configured and appears enabled in the flowchart.

Understanding interactive flowchart test runs

Interactive flowchart test runs check the segmentation logic of an interactive flowchart. Interactive flowcharts are intended to run on a runtime server with one visitor at a time. However, you can test them in Unica Campaign to ensure that the interactive flowchart creates and assigns visitors to the segments you expect. For a complete test of your interactive flowcharts and how it interacts with your touchpoint, you must deploy the interactive flowchart to a test runtime server.

The method of testing interactive flowcharts is the same as testing batch flowcharts, that is, complete a test run. While the results might seem similar (each segment is assigned some number of members), the way the flowchart assigns the members is different. When you complete a test run of an interactive flowchart, the design environment uses a runtime environment. The runtime environment treats each row in your profile table as a visitor, running each visitor one at a time through the flowchart.

The runtime environment references the customer data that is supplied in tables that are referenced in interactive flowcharts and all real-time data available from event parameters, external callouts, and so on. During a test run, the design environment does not have access to actual real-time data. The design environment uses the data available in your test run table. You must work with your Unica Interact administrator to add sample data into the test run profile that can properly test your interactive flowcharts. For example, if you define

segmentation logic that separates audience members that are based on the first digit of their postal code, make sure that you have one entry in your test run profile for each possible first digit.

By default, the Interaction process limits the number of input records in your profile table that is used in a test run, but you can adjust the number of records that are used as needed. The design environment selects the first number of records in audience ID order. For example, if you limit your test run to five records, the design environment uses the first five records in your test run profile table, which is sorted by audience ID.

> **Note:** Interactive flowcharts are not optimized to run with thousands of records. If you start a test run to process a high number of records, the test run might take several minutes to complete.

You can view the results from the last test run only. the design environment deletes all data from the previous test run when starting a new test run. If there are over 1000 entries in your test run, or to view test run data after closing the test run window, the test run data is stored in the following tables in the database that is defined by the `testRunDataSource`.

- `TestAttr_n`. Contains the audience IDs for the Test Run.
- `TestCount_n`. Contains the data for the Test Run Cell Counts report, that is, the number of members in each cell.
- `TestError_n`. Contains the data for the Test Run Errors report, that is, any errors, if they occurred, in the test run.
- `TestSeg_n`. Contains the data for the Test Run Segment Data report, that is, the audience ID and the assigned segment.

The suffix `_n` indicates the flowchart ID. You can determine the flowchart ID by examining the `UA_Flowchart` table in the Unica Campaign system tables.

Configuring the test run size

You can configure the test run size of an interaction process.

1. Open an interactive flowchart for editing (click **Edit** ✎ in the flowchart toolbar), and double-click the Interaction process.

   The **Interaction process configuration** dialog box appears displaying the **Input** tab.

2. Select **Limit input records to** and enter the number of records.

3. Click **OK**.

Performing a test run

Use an interactive flowchart in the Edit mode to perform a test run.

Interactive flowcharts test runs function differently than batch flowchart test runs. You cannot pause and restart or stop an interactive flowchart test run.

1. Open an interactive flowchart for editing (click **Edit** ✎ in the flowchart toolbar).

2. Click **Run** ▷▼ in the flowchart toolbar, and select **Test run flowchart**.

   The design environment uses the runtime environment defined in the `serverGroup` configuration property with all the data in the test run data source to test the interactive flowchart.

   A test run status dialog opens.

3. When the test run completes, click **View results** to view the results.

The test run results consist of four tables:

- **Test run segment data**. Displays the audience ID and the assigned segment.
- **Test run attribute data**. Displays all the data in the profile table for each audience ID.
- **Test run cell counts**. Displays the number of members in each cell.
- **Test run errors**. Displays any errors, if they occurred, in the test run.

Similar to batch flowcharts, the test run also populates the number of members in each cell output by the process. Since processes without successors do not output cells to another process, the numbers are not populated. For example, create a simple flowchart, Interaction > Decision > PopulateSeg. After a test run, the Interaction process displays the number of members in its output cell below the blue checkmark indicating the process ran

successfully. This number should be the same as the **Test run size**. The Decision process displays the number of members in each cell. If the Decision process creates three cells, there will be three numbers, separated by semicolons (;), for example 29;11;10. Because the PopulateSeg process does not output cells to another process, it does not display any members.

Deploy interactive flowcharts

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

When an interactive flowchart is marked for deployment, you cannot edit the flowchart. If you have to make more changes before the interactive flowchart is deployed, you can cancel the deployment request. This removes the flowchart from the list of items that are pending deployment.

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

Deploying an interactive flowchart

You can deploy an interactive flowchart while you are viewing the flowchart.

Make sure that the flowchart is not in edit mode.

1. View the interactive flowchart that you want to mark for deployment.

   You must view the flowchart. You cannot mark a flowchart for deployment in edit mode.

Interactive flowcharts are available only in sessions.
2. Click **Mark for deployment**.

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

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

Canceling a deployment request

By canceling a deployment request, you can remove an interactive flowchart from the list of items that are waiting to be deployed. You can then edit the flowchart.

1. View the interactive flowchart for which you want to cancel deployment.

   You must view the flowchart. You cannot cancel a flowchart's deployment in edit mode.

   Interactive flowcharts are available in sessions only.
2. Click **Cancel deployment request**.

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

Undeploying an interactive flowchart

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

- You have an interactive flowchart that is deployed.
- The interactive flowchart is not in edit mode.

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

   You must view the flowchart. You cannot mark a flowchart for undeployment in edit mode.

   Interactive flowcharts are available in sessions only.

2. Click **Mark for undeployment**.

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

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

Chapter 5. Strategies and treatment rules

When Unica Interact runtime environment receives requests for the upcoming best offers, it uses the given information to perform a lookup and runs a series of arbitration logics. A majority of these actions are done by processing treatment rules through strategies.

A strategy provide the following functionalities.

- For the given segments for which the active visitor is assigned to and the interaction point are being requested for, it looks for the candidate offers or offers from an offer list, which are defined in the format of treatment rules.
- For each candidate offer, it performs an eligibility test with the criteria defined with each treatment rule.
- For each eligible treatment rule, a score is calculated, which can be dynamically based on each visitor's real-time profile data and historic activities.
- For each offer, its attributes values can be optionally personalized using the active visitor's real-time profile data.

Strategies are child objects of interactive channels, and hence all its objects are valid only within the enclosing channel. As a core component, it references other objects defined in this channel or globally. So, some of those dependencies may be created beforehand elsewhere. An interactive channel can possess multiple strategies based on the requirements of marketers.

The following sections include details on most commonly used operations.

Treatment rules

Treatment rules are the main guidelines used by Unica Interact to present offers. A treatment rule includes the following three required elements: a smart segment to target, a zone with interactive points where visitor interacts, and an offer or offer list that marketers intend to make. You can assign any number of offers or offer lists to a segment. You can also assign the same offer or offer list to the same segment multiple times with different

zones. You can define a treatment rule with same segment, zone, and offer or offer list, but with different properties like personalized offer attributes.

You can also add a marketing score to each rule to add more weightage to the offer within the learning engine.

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

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

The smart segments are mapped to cells, which are optionally linked with a campaign. You can edit the cell codes that are associated with each smart segment from the interaction.

To ensure that accurate report data is generated, you must select offers which are created from an offer template with **Allow offers created from this template to be used in real-time interactions** option enabled.

Offer eligibility

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

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

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

Before you create your treatment rules, you must confirm the offer eligibility features available to you with your Unica Interact administrator. For example, if you are using a score

override table to override the marketing score, it may not be required to change the default marketing score for your treatment rules.

An offer is only eligible if it is falling into effective period (between Effective and Expiration date) and/or an expression is evaluated true at runtime.

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

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

For more information about offer eligibility features, see the Unica Interact Administrator Guide.

Marketing score

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

Unica Interact uses the marketing score in determining the offer when multiple offers are available for a single request. For example, to choose between Offer A with the marketing score of 30 and Offer B with the marketing score of 80, Unica Interact presents Offer B.

If there are two or more offers that have the same score, Unica Interact breaks the tie among the offers by making random selection from the matching offers. This helps to ensure that a single visitor interacting in the same zone multiple times is more likely to see different offers on each interaction. If required, you can change this behavior by modifying the Unica Interact `|offerServing | offerTieBreakMethod` configuration property.

See the "Unica Interact Runtime Configuration Properties" Appendix of the Unica Interact Administrator's Guide for more details.

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

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

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

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

For details on working with Score Override table, see the Unica Interact Administrator's Guide.

Predicate and Expression builder

There are many expressions or predicates that are required in Interact offer arbitration logics. Interact Runtime uses a third party library to parse expressions and calculates their values in process of offer arbitrations.

To define an expression, Interact Design Time environment has an Expression Builder, a reusable UI widget, which is used to build expressions in many UI components, for example, score predicate, eligibility predicate, FlexOffers, and user expression action, etc.

The following screen shows the Expression Builder.
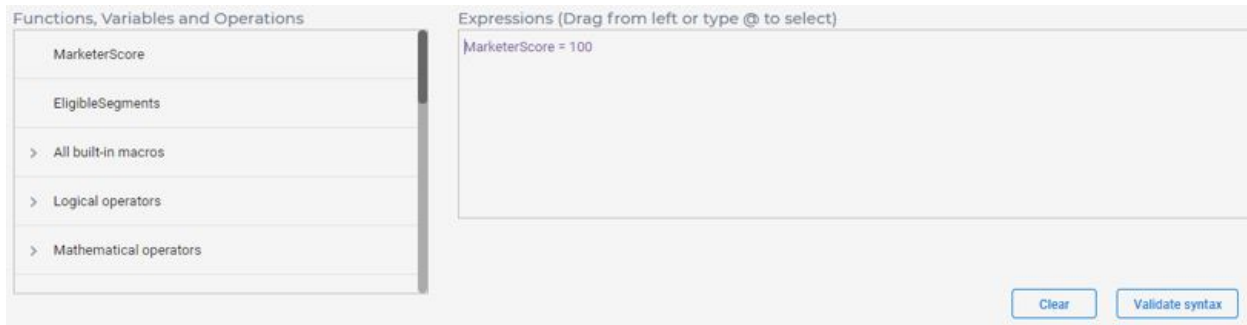
The left pane of Expression builder contains a list of building blocks including variables, operators, and macro functions, which can be used to build an expression.

For ease of look ups, the building blocks are categorized and displayed by folders. "All built-in macros" contains all functions and operators, which are further grouped into "Logical operators", "Mathematical operators", and other categories, which are functionally meaningful. See the HCL Macros Guide, "Using macros in Unica Interact" section to find the functions linked to it.

The possible variables in an expression, different types of attributes defined in Interact Design Time are listed as follows.

- MarketerScore
- EligibleSegments
- Offer attributes
- Mapped profile attributes
- Event patterns
- Real-time attributes
- Strategic segments
- Smart segments

where "MarketerScore" and "EligibleSegments" are special variables and must be used without a change in spelling.

If no data is defined in the system, some categories may not be listed. Also, not all variable categories are displayed at all times. Depending on the expression being built, only applicable categories are displayed in the left pane as building blocks.

> **Note:** All event patterns from the current interactive channel and its parents appear in the Event Patterns category.

The right pane of Expression builder is a free form text area to build a new expression or display an existing expression. You can build an expression using the following options.

- Select a item from left pane and drag and drop it to the curser position of your expression in right pane.
- Type @ in right pane. All items available in the left pane are displayed as a sorted flat list. You can type or scroll and select an item.

Since, the right pane is a free form text area, Expression Builder provides capability to **Validate syntax** to ensure that your expression is syntactically correct so that it can be processed correctly during offer arbitration in Runtime. The similar syntax check is also performed while deploying the interactive channel containing strategies. If syntax of any expression is not correct, the deployment fails. You must have the Interact Runtime server configured to perform syntax check as it uses same syntax check modules in Interact Runtime.

Suppression count and maximum score

For a rule that has the highest score, the suppression count set on this rule determines the maximum number of offers returned in getOffers API call from all eligible rules in a strategy. This is the suppressionCount property of a treatment rule.

A highest score can be set for a treatment rule so that within all eligible rules in a strategy, this rule's offer takes precedence over other rules - that is the maxScore property of a treatment rule. This can be used to stop hackers to get all the eligible offers, but only get response that marketer intends to send.

Using offer lists in treatment rules

Offer lists enable the marketers to group similar offers into offer lists and use them in a similar way as the offers used in the treatment rules. For more details, see the Offer lists (on page 10) section. In this way, the marketers can update the offers in the offer lists, while keeping all the arbitration logics defined in treatment rules intact. Only the offers directly belonging to an offer list are considered. In another words, nested offers lists are not supported.

An offer list used in a treatment rule can be static or dynamic (smart). The offers considered in Interact Runtime offer arbitration are those offers contained in the offer list at the time when the Interactive channel containing treatment rules is deployed. In another words, during the deploying time, Interact Design Time takes snapshot of the offers contained in the offer list and send them to Interact Runtime. Whenever offers in a offer list are changed, the treatment rules using that offer list are required to be re-deployed in order to have them into effect in Interact runtime.

The marketers can further define the number of offers from an offer list included in the candidate offers during arbitration in Runtime if the treatment rule itself is eligible.

During process of offer arbitration in runtime, the following is the evaluation procedure applied to a treatment rule if the rule has an offer list assigned.

1. The eligibility defined at the rule level is evaluated. If it returns false, this rule is excluded and as a result the referenced offer list is not considered as part of this rule.
2. The suppression rules defined at offer level, including offer constraints if enabled, are applied to each offer in the offer list. If any of suppression rules match, the offer is excluded.
3. An offer selection policy defined by marketers at the rule level is used to perform the selection, if the offers left in the offer list are more than the number of offers to be included as defined by marketers. The following are the supported policies.
   - Most recently updated offers: Selects top "x" number of offers sorted by last updated date time in the descending order when the strategy is deployed to the Runtime. This is the default policy.
   - Random: Selects "x" number of offers randomly.
   - By an offer attribute: Selects top "x" number of offers, which are sorted by specified attribute value in a specified order. The union of offer attributes of all

offers in the offer list are available to specify. In Runtime, if the attribute does not exist for an offer, the offer is excluded from selections.

- Custom: Selects top "x" number of offers based on marketers' defined logics for selection, thus giving the name of selection policy and configuring its details through Interact Configuration settings (see the Administrator Guide for configuration settings).

4. The selected number of offers from the offer list in Step 3 together with all other candidate offers are processed with the usual arbitration processes and are then sorted on the basis of the offers' calculated score. The top number of offers requested in getOffers API are returned.

The score, eligibility, and parametrized offer attributes can also be defined for an offer list similarly like for an offer. They work in the following way.

- The union of offer attributes from all offers in an offer list are available in Expression Builder, while defining score predicates, eligibility predicates, or parametrized offer attributes of a rule that has an offer list assigned,
- In Runtime, if the offer attribute used in Score predicate does not exist in an offer in the offer list, the marketer score defined in the rule level is used for that offer.
- In Runtime, if the offer attribute used in Eligibility predicate does not exist in an offer in the offer list, the offer is ineligible.
- In Runtime, if an offer's attribute is parametrized, the returned offer overrides the offer attribute values.

In Runtime, the returned offers have an attribute, UACIOfferListID, which is the ID of an offer list on which the arbitration is performed. This attribute is not included if no offer list is involved.

Grouping treatment rules

For some marketers, a strategy can have a large number of treatment rules. In order to organize them in a better way, the marketers can group rules into groups and view rules by groups. Rule groups are only used for organizing rules, with no extra functionality. A rule

group belongs to a strategy, whereas a treatment rule can belong to multiple rule groups in the strategy.

A/B testing of treatment rules

A/B testing, also known as 'split testing' is the process of comparing two versions of same scenario with just one varying parameter. It brings scientific methodology to marketing and removes the guesswork.

In Interact, A/B testing is the test done for a treatment rule with all properties fixed, except one varying parameter. In version 12.1 and higher releases, this parameter is the combination of offer and/or offer attributes. In an A/B testing of a rule, each variation of offer and/or offer attributes represents one A/B testing branch within same audience distribution and same zone. One treatment rule can only have one A/B Testing defined. One A/B testing can have multiple branches defined depending on the marketers testing requirements. But un-necessary branches can degrade performance in the runtime process.

An A/B testing is executed in Runtime in the period of time defined by effective date and expiration date. Both dates are optional. If the effective date is not defined, then A/B testing is in effect immediately after deployment. If expiration date is not defined, then it is in effect forever.

In the period of A/B testing, one of the offers from A/B testing branches is randomly served to visitors. Once A/B testing is completed, i.e., after its expiration date, the branch which remains in execution is determined by the Selection mode specified by marketers in A/B testing definition. The following three selection modes are supported.

- Default branch: User selects a branch from all branches in an A/B testing definition.
- Auto selection: It is based on the history of acceptance data. Interact runtime automatically selects the branch that has the highest acceptance rate.
- Use base: Base treatment rule is used so that arbitration logic is resumed as it was before the A/B testing.

In Interact runtime, all branches in an A/B testing are treated like treatment rules. The ultimate goal of an A/B testing is to find the treatment rule (combination of an offer and

offer attributes), which has the best acceptance rate from visitors. The acceptance rate is a ratio of number of an offers being accepted to number of the offers being contacted. When a contact or an accepted event is posted for a treatment rule and if this treatment is the result of one of the branches of an A/B test, Interact runtime inserts or updates the data in the UACI_ABTestPerformance table in Runtime database. At the end of the A/B testing period, the contents in UACI_ABTestPerformance table is used to calculate the acceptance rates of all the branches belonging to the A/B testing. The best performing branch within all branches can then be determined by selecting the highest accept to contact ratio.

Manage strategies

You can manage strategies for an Interactive Channel under the Strategy tab of the Interactive Channel screen.

To create a strategy, complete the following steps.

1. Under **All Interactive Channels**, select an Interactive Channel that you want to work on. This takes you to detail page of the Interactive channel with multi-tabs. Click the **Strategy** tab.
2. Click **Add Strategy**.
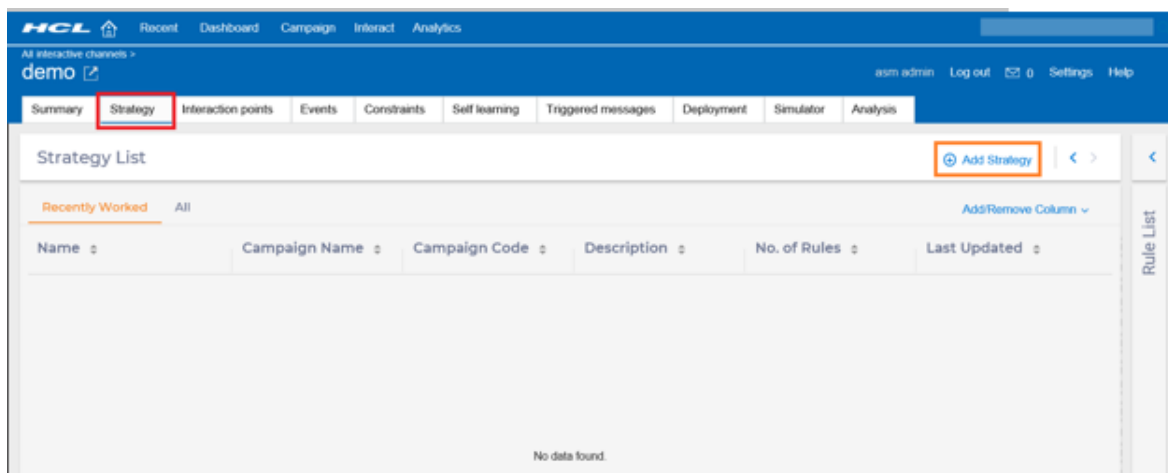
3. In the **Add Strategy** box, complete the following substeps.
   a. Under **Name**, provide a Strategy name.
   b. Optional. Under **Description**, provide an appropriate description.
   c. Select the associated campaign.

📝 **Note:** By default, a strategy is optionally linked to a campaign. You can enforce this linkage so that Campaign is a required field when defining a strategy in user interface by setting the following configuration setting to true.

```
Affinium|Campaign|partitions|partition1|Interact|
offerArbitration.isCampaignRequiredForStrategy
```

This setting applies to the entire Interact application

Once strategy object is created, you can directly add rules in the strategy. The screen for creating Smart Rules displays.

The list of strategies is displayed on the left pane of Strategy tab. The **Recently Worked** tab displays last five strategies in the order of their updated time. The **All** tab displays all strategies. The list of rules, for the strategy selected in left pane, is displayed on the right pane of **Strategy** tab. You can use the left arrow to collapse the Strategy List pane and right arrow to expand the full Strategy list, which displays more fields of strategies.

On full Strategy List, you can edit, copy, and delete individual strategy by hovering the cursor to the mini menus at the right of that row.
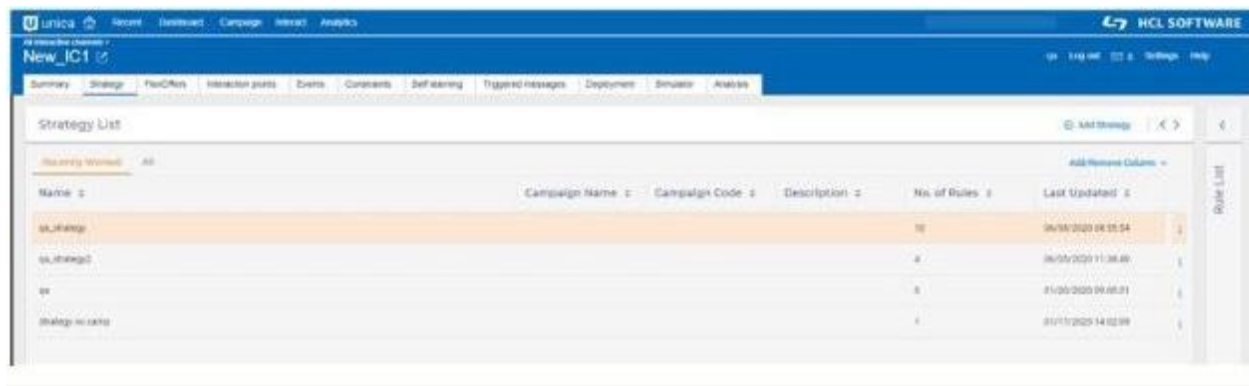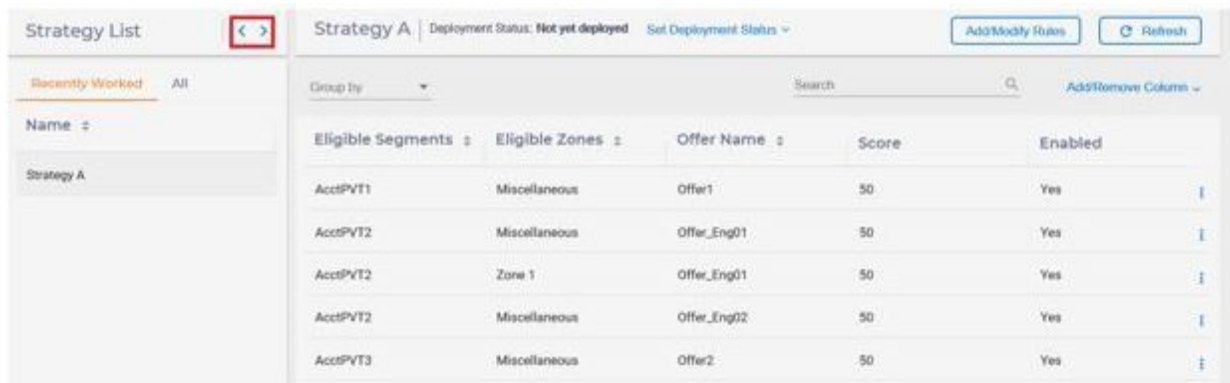
From version 12.1.3, the Strategy List page has a **Search** bar to search strategies based on:

- Strategy **Name**
- **Camapign Name**
- **Campaign Code**
- **Strategy Updated By**

> **Note:** The **Search** bar appears only for the **All** tab. The **Search** bar is not available in the **Recently Worked** tab.

Viewing Strategies from Campaign

From version 12.1.3, you can view the strategies associated with a Campaign from the Unica Campaign.

In Interact it is pretty cumbersome to view the number of strategies linked to a Campaign as you have to sort the list to view Campaigns having multiple strategies. From 12.1.3, Unica Campaign has a new tab named **Strategies** that lists all the strategies associated with a Campaign. To view the Strategies in Campaign, complete the following steps:

1. Access Unica Campaign and open an appropriate Campaign.
2. Access the **Strategies** tab to view all the strategies associated with the Campaign. The **Strategies** tab will contain data only if the Campaign is associated with a strategy or multiple strategies.
3. The **Strategies** tab lists the strategies with the following values:
   - **Name** - The name of the Strategy.
   - **Interactive Channel Name** - The name of the interactive channel.
   - **Description** - A description of the Strategy.
   - **Rule Count** - The number of rules associated with a Strategy.
4. In case of multiple strategies, you can use Search to locate the required Strategy.
5. Additionally, selecting the Strategy name takes you back to the Interactive Channel view, in Interact, with an expanded view of **Strategy List**.

Manage treatment rules

Treatment rules of a strategy can be managed on the right pane of Strategy tab. The pane has an Edit mode and View mode.

Define treatment rules in Edit mode

You require privileges to be able to add, delete, edit, and copy rules in the Edit mode. To go to the Edit mode, click "Add/Modify Rules" button. After performing the required changes, you must click "Save" or "Save and Exit" to save the changes to the database, otherwise, all changes are cached at client side in Edit mode.

In the Edit mode, the following panes are available.

- New rules pane on the top: You can add new rules.
- Existing rules pane in center: You can edit or copy from the existing rules.
- Tabbed pane at left: It displays available segments, zones, and offers or offer lists in tree view with folder structures. From version 12.1.3, the Offer List name succeeds with a tooltip icon. When you click the tooltip icon, it opens a side panel. The content displayed in the panel depends on the type of Offer List.
    - In case of Smart Offer List, the side panel displays:
        - The offer list type
        - The description
        - The query
    - In case of Static Offer List, the side panel displays:
        - The offer list type
        - The description
        - A table of offers with offer name and offer code

        The Static Offer List side panel also contains a Search bar to search the offers.

Search functionality is available on each tab on the left tabbed pane, where you can search for the segments, zones, and offers or offer lists by name.
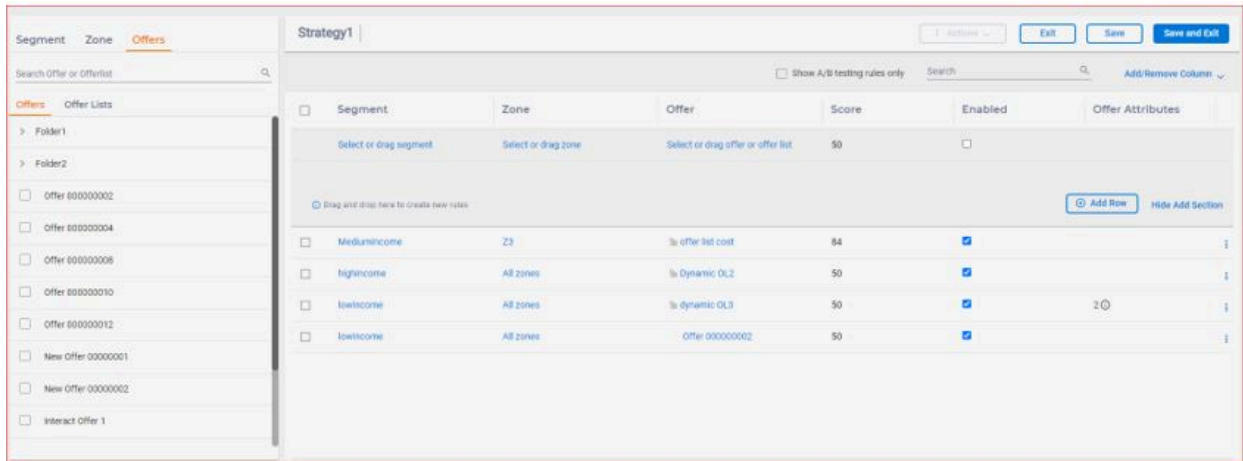
Add new rules

You can add new rules to New rules pane using the following options.

- Drag and drop: In the left pane, select one or multiple segments, zones, offers or offer lists from its tree, drag and drop to its cells to the top row in the **New rules** pane.
- Select from dropdown lists: You can define a rule by selecting segement, zone or offer/offer list from its dropdown list in the top row in New rules pane. Click Add row to add more rows. In the Offer dropdown list, the offers and offer lists are combined and displayed in a flat list with an "Offer list" icon in order to distinguish between an offer and an offer list.
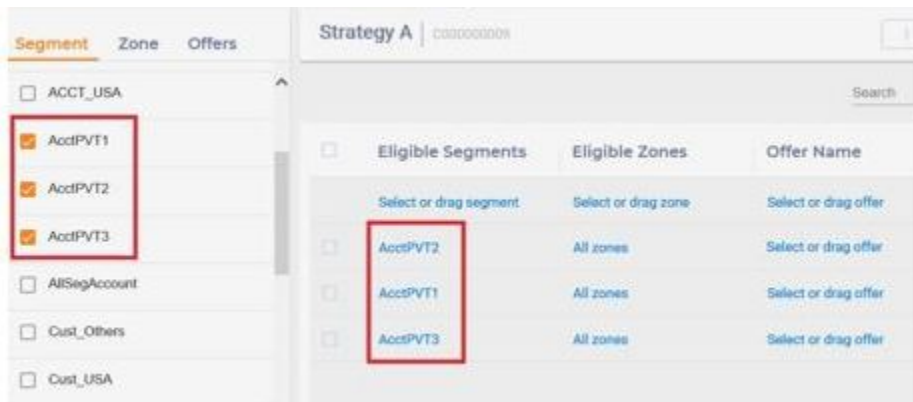
You can create new zones and their enclosing interaction points under the Strategy tab. To add zones and interaction point under the Strategy tab, see the topic.

Tree loading in Edit mode

In Edit mode, left panel displays all active offers, offer lists, and Segments as tree structures. Very often there are a large number of offers, offer lists, or segments defined in the Interact Design time. For better UI experiences, the trees are loaded on demand, only its children and first level sub-folders are loaded when clicking a folder. To further improve performance, only subset of the child nodes are loaded.

For offers, by default, if the number of offers in a folder is greater than 100, only first 100 offers are loaded. If total offers are greater than 1000, only first 1000 total offers are loaded. These two thresholds can be overridden by a JVM parameter `com.unicacorp.interact.maxTotalElementsInTree` and `com.unicacorp.interact.maxTotalElementsInTree`. If com.unicacorp.interact.maxTotalElementsInTree has a non-positive value, all offers in each folder are included.

This rule also applies to the tree on Offer list tab.

For segments, up to 100 segments can only be included in sub-folders if there are more than 100 segments in them for each folder. This threshold can be overridden by a JVM parameter `com.unicacorp.interact.maxFolderElementsInTree`. If this JVM parameter has a non-positive value, then all segments in each folder are included.

The above size limits apply only to the initial loading, not in search. If users cannot see the items they want, they can perform search. While performing search of offers, offer lists, or segments, all matching records are loaded into the trees, irrespective of the values of two thresholds. Therefore, improper search, resulting large number records can result in slow performance in Strategy tab. More refined search is always recommended.

Interact design time UI data cache

Interact Design Time, often, has a lot of offers, offer lists, and segments and it uses them for defining Interact arbitration logic in Interact Design Time. For a good user experience,

Interact Design Time builds a global data cache containing all offers, offer lists, offer attributes, and segments in the server memory, at the same time an Interactive Channel gets loaded on the user interface. This avoids performance issues of loading data elements from the database, each time.

Design Time User Interface is configured to retrieve data from the cache. By default, a background process refreshes the cache (reloads it from the database) every 10 minutes. So, when you add or update offers, offer lists, or segments, and immediately access the Strategy tab, you may not find the updated data.

You can customize the cache refresh interval using the JVM parameter `com.unicacorp.interact.cacheRefreshIntervalInMin`.

Clicking the Refresh session cache button in the Summary tab of Interactive Channel refreshes the cache on-demand and the data changes you made is immediately visible on screen.

Currently, the data cache mechanisim is used in User Interface of Strategies, FlexOffer, and Triggered Actions.

In version 12.1.5, a property **defaultUser** is added under node `Affinium|Campaign| partitions|<partition>|Interact`.

Its value is the username of Platform user that is used for loading the global data cache. Therefore, this user should have read access to segments, offers, and their related objects. There is no default value for this property. If it is left unconfigured, the first user opening Interact pages will be considered as the user to load the data cache.

Create new rules by copying existing rules

You can create new rules by copying existing rules in New rules pane or existing rules pane using following options.

- In the left pane, select a segment, zone, offer or offer list from its tree, drag and drop to its cells to the **Existing rules** pane. You will see a confirmation box. Clicking **Copy** creates a copy of the target rule for the selected segment, zone, offer or offer list but retains the configurations of the target rule.

- Create multiple rules from a source rule using "Copy to..." in dropdown list. For example, on row of a source rule, click its segment cell, a popup message displays. On "Copy to Segments" tab, to select one or multiple segments you want to copy this rule to, click **Duplicate** rules button. This creates one or multiple rules that have all properties as same the source rule, but only segment is different. You can perform same operation to offers and zones. This allows the marketers to quickly create multiple new rules from a source rule for different segments, zones, or offer/offer lists. The new rules are persisted to database only when you click **Save** or **Save and Exit** button.
- Create an identical rule similar to a source rule using Copy icon at the right of the rule. This creates an identical rule that is displayed right below the source rule. The new rule is persisted to database only when you click **Save** or **Save and Exit** button.

Edit rules

You can edit rules to the Existing rules pane using one of the following options:

- Drag and drop: In the left pane, select a segment, zone, offer or offer list from its tree, drag and drop to its cells to the **Existing rules** pane. You will see a confirmation box. Clicking **Edit** modifies the target rule.
- In the Existing rules pane of Edit mode, you can change the segments, zones, offers/ offer lists, scores inline and enable the flag by clicking the field to be edited. In the Offer dropdown list, all offers and offer lists are combined and displayed in a flat list with an "Offer list" icon to be able to distinguish between them. You can scroll down in Offer drop down lists to look for more.

Delete rules

To delete a single rule, to the right of the rule, click the Delete icon available in the mini menu.

Add zones and interaction points

To add new zones and interaction points under the Strategy tab, complete the following steps.

1. Click **Add/Modify Rules**.
2. In the **Zone** list, click **Select or drag zone**.
3. Click **Add Zone**.
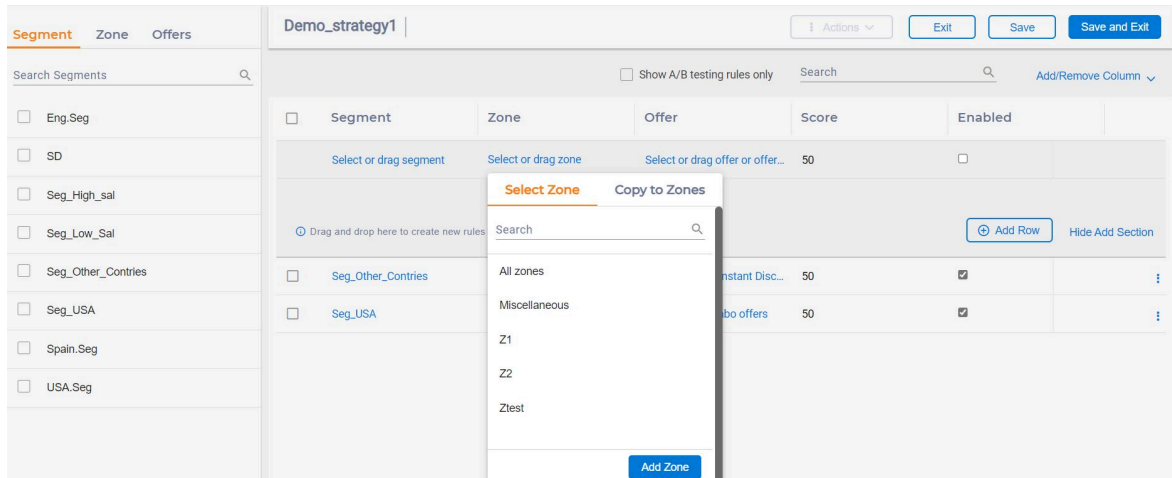
4. Under **Add Zone**, provide details for Zone Info, Interaction Point, and Learning Mode.
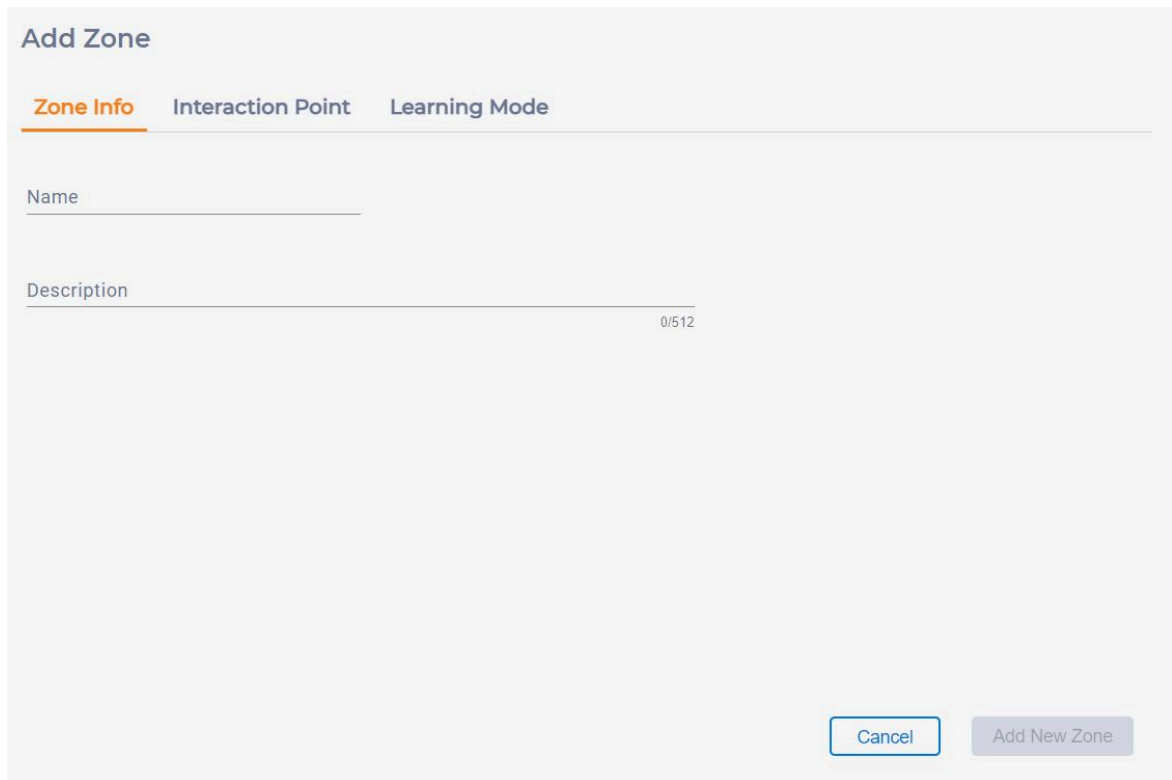
5. **Zone Info**, specify an appropriate zone name and description.

6. Under **Interaction Point**, perform the following substeps to add interaction points.

   a. Under **Interaction Point Name**, specify an appropriate name.

   b. Optional. Under **Interaction Point Description**, provide a description.

   c. Under **Default String to return**, specify a default string.

d. Click **Add.**

> ✏️ **Note:** You can edit or delete the newly added interaction point inline and save the changes.

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

There are many different levels in Unica Interact through which learning is enabled or disabled - globally for each interactive channel, for each zone, and for each treatment rule. There can be conflicts 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. This is because each zone and each treatment rule can define its own learning rule and the model defined for a treatment rule can be different from the model that is defined for the zone.

The following are the settings that determine how Unica Interact resolves conflicts in these situations.
   - Intermixing - Use Learning Mode for this zone (Default) indicates that the sequence of offers is selected based on the learning mode that is defined for this zone. This overrides the settings on individual rules.
   - Prioritizing non-learning offers indicates that the sequence of offers selects non-learning offers first, followed by learning-based offers.
   - Prioritizing learning offers indicates that the sequence of offers selects learning offers first, followed by non-learning-based offers.

- Prioritizing non-learning offers: dedupe provides the same results as the Prioritizing Non-learning Offers option, but with duplicate offers removed when the same offer is provided by learning and non-learning sources.
- Prioritizing learning offers: dedupe provides the same results as the Prioritizing Learning Offers option, but with duplicate offers removed when the same offer is provided by learning and non-learning sources.
- % Random specifies the chance that the returned offer is randomly selected, without considering scores. You can also use percentRandomSelection in Campaign | partitions | partition[n] | Interact | learning to globally configure the percent of the time the learning module presents a random offer. If you set % Random here, it overrides the global configuration.

8. Click **Add New Zone**.

Define advanced options

You can define the advanced properties of a rule, like offer scores, eligibilities, parameterized offer attributes, learning, and A/B Testing using the "Advanced Options" slider. Click the gear icon available in the mini menu to the right of rule.

From version 12.1.3, the Offer Attributes will have an information icon following the number for Offer Attributes. Click the icon to open a side panel. In case of Offers, the panel displays:

- The offer attribute
- Its parameterized value
- Its default value

In case of Offer Lists, the panel displays:

- The offer attribute
- Its parameterized value

In case of Offers and Offer Lists, the number displayed for the Offer Attributes column are only those attributes that are parameterized. For example, in case of Offers, if there are 15 attributes and only 10 attributes are parameterized, the Offer Attributes colum displays the value as 10. Since Offer Lists contain multiple Offers, you must go to settings and parameterize attributes for the Offer Attributes column to display a value. For more information on settings related to Offer Attributes, see Offer Attributes tab (on page 145).

The side panel also has a **Search** bar to find the offer attributes.

The Advanced Options slider displays the properties in multiple tabs. Click **Apply Changes** to save the changes performed on data for a rule cached on client side. Click Save or Save and Exit to ensure that all changes for the rule are saved in the database.

The following sections provide details of each tab on Advanced Options.

Summary tab

This tab is a read-only tab even in Edit mode. You get an overview of all the important properties defined of a rule.

General tab

Under the General tab, the following fields are available.

- RuleName: The name of the rule. It is optional. The default is `rule_<ruleId>`, which is generated by server. Its length cannot be more than 64 characters.
- Cell Code: The code of the target cell to which this rule is associated. An existing cell can be selected or a new cell can be created. A new cell is automatically generated by default, if an existing cell is not selected.
- Suppression Count: If the rule has the highest score within all eligible rules in the strategy, this count is the maximum number of offers returned in getOffers API call from all eligible rules in the strategy.
- Set rule to highest priority: A flag, as maxScore for a rule, indicates the offer in this rule which is returned first to the client, when getOffers request is invoked, regardless of its score. However, when two or more eligible offers have this flag set, they are prioritized based on their scores.

The following two fields are only displayed when a rule has an offer list assigned.

- Number of selected offers: The number of offers from an offer list, which are included in the candidate offers during arbitration in Runtime, if the rule itself is eligible.
- Offer selection policy: When there are more offers left in the offer list than the "Number of selected offers" defined above, the policy selected is used to perform the selection. The following are the supported policies.
    - Most recently updated offers: Offers are sorted on the basis of last updated date time in descending order when the strategy is deployed to the Runtime. This is the default policy.
    - Random: Random selection.
    - By a offer attribute: Offers are sorted on the basis of specified attribute value in either defined ascending or descending order. If the attribute does not exist for an offer, the offer is excluded from selection.
    - Custom: Offers are selected on the basis of defined logic of marketers. Specify custom policy name here and configure its details through Interact Runtime Configuration settings (`Affinium|interact|offerserving|Tie Breakers`)

Offer score tab

UnderOffer Score tab, the following fields are available.

- Set Score: The marketer score is in the range of 1 to 100.
- Use Expression: The score of this offer is calculated at runtime using the given expression, which generates a numeric value. For details on how to use Expression builder, see the Predicate and Expression builder *(on page 122)* topic.

Eligibility tab

Under the Eligibility tab, the following fields are available.

- Eligibility in time: It specifies the range of time for which this rule is effective. When left blank for "Effective Date", this rule is in effect immediately. When left blank for "Expiration Date", this rule is in effect for as long as this rule is in place. A past date cannot be set as the expiration date.
- Eligible if following conditions are met: The eligibility of this offer is calculated in Interact Runtime using the given expression, which has to generate a boolean value. To get more details on how use to Expression Builder to build an expression, see the Predicate and Expression builder *(on page 122)* topic.

Offer Attributes tab

Under the Offer Attributes tab, all the parameterizable attributes of the offer in the rule are listed. By clicking an individual value, it can be parameterized in the next window.

The parameterized value can either be a constant or an expression. If it is an expression, it requires to generate a value that has the same type as defined in the offer. See the Predicate and Expression builder (on page 122) topic, to get details on how to use an expression builder. After the value is edited, click **Apply** to save changes. Click **Reset to default** to reset to the value defined in the offer.

Learning tab

Under the Learning Mode tab, the following fields are available. On this tab, the learning mode is set.

- Inherit from zone: The learning setting in the applicable zone, corresponding to the interaction point in the getOffers request is used.
- No learning: Market score is used.
- Custom Learning Model: If built-in learning is enabled globally, self-learning with the specified learning model is used. A learning model defined in this interactive channel can be selected from the drop-down list.

Rule group tab
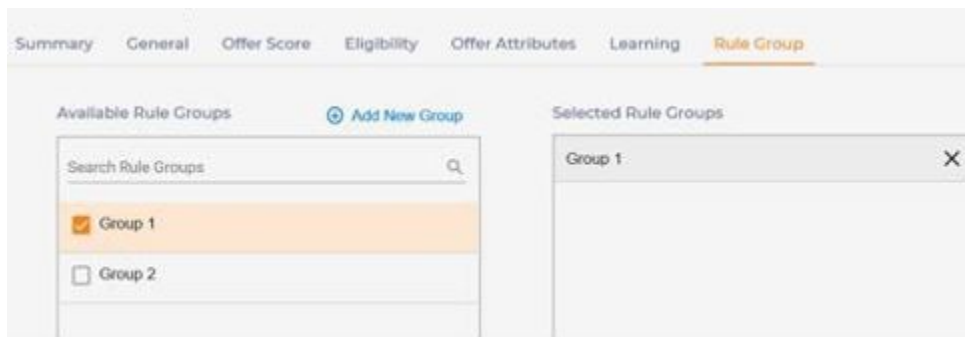
On this tab, this rule can be added into zero, one, or more rule groups. You can select a rule group by selecting the box to the left of its name. Click Add New Group to create a new rule group. Rule groups are used only for organizing rules, with no extra functionality.

A/B testing tab

A/B testing, also known 'split testing' is the process of comparing two versions of same scenario with just one varying parameter. It brings scientific methodology to marketing and removes the guesswork.

In Interact, A/B testing is the test done for a treatment rule with all its properties fixed, but only one parameter varies. This parameter is the combination of offer and offer attributes. In an A/B testing of a rule, each variation of offer and/or offer attributes represent one branch with specified audience distribution.

The testing period is defined with effective date and expiration date. Both dates are optional. If effective date is not defined, then A/B testing is in effect immediately after deployment. If expiration date is not defined, then it is in effect forever.

By default, A/B testing is disabled for a rule. To enable it, click _____ , the A/B icon to the right of a rule. The Advanced Options slider displays. Perform the following steps.

1. Select the **Enabled** checkbox. This adds base rule as first branch in Branch table.
2. Under **TestPeriod**, provide the Effective and Expiration dates.
3. Inthe **Selectionmode** list, select one of the following options.
   - Use Default: Select this option if you want the offer to be served from the default branch out of A/B test branches, regardless of the higher acceptance rate of any offer.
   - Use base: Select this option if you want the offer to be served from the treatment rule, regardless of the higher acceptance rate of any offer.
   - Auto Selection: Select this option if you want the offer to be served from one of the A/B test branches having highest acceptance rate. Acceptance rate is calculated as ratio of response count to contact count.

     Once "Auto Selection" or "Use Base" option is selected, then Default Branch column willbe hidden. If there is performance data in Acceptance Rate column, then branch information can be read only.
4. Click**Add Branch** to add more branches in Branch table.
5. Click **Apply changes**.

Branch Name is an unique identifier for a branch. It is a required field and must be unique within A/B testing. A branch can be enabled and disabled. Only enabled branches participate in A/B Testing at runtime. An A/B testing can be enabled or disabled. Only enabled A/B Testing is actually executed at runtime.

To save A/B testing data, click **Apply Changes** on Advanced Option slider.

A/B Testing data is saved to the database only when you click the "Save" or "Save and Exit" button on the upper right corner on Strategy rule list.
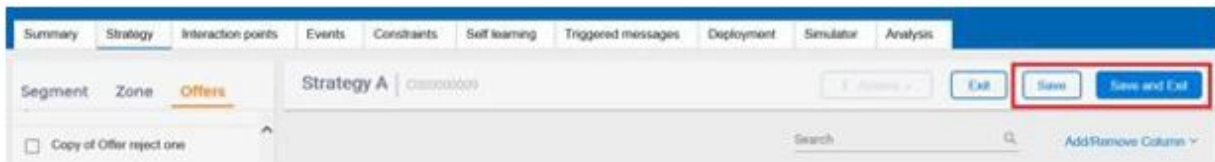
In the Strategy Rule list page, select the **ShowA/B testing rules only** checkbox to display the rules with A/B testing and acceptance rate column with ABT status and acceptance rate of each branch.

There can be four statuses for Acceptance Rate column for base rule including disabled, yet to start, in progress, and finished. In case, you select the "Use Default" or "Auto Selection" selection mode, a "check-mark" near the selected branch is displayed.

For any rule that has A/B testing data defined, there is "A/B Testing" icon located on the right. The orange color means it is active and grey color means it is disabled.

ABT Summary page displays the "ABT status" and "number of branches" for the A/B test.

To analyze A/B Testing results in case of "Auto Selection" mode, a column "ABTestBranchID" is added into audience specific detail contact history table (Example: UA_DTLContactHist

table) in Campaign database to record the ID of the selected branch when A/B testing is engaged in arbitrating the relevant smart rules. The information in this column, together with other treatment fields, enables users to create reports on the performance on A/B testing branches for individual smart rules. The "ABTestBranchID" column is used in rule based performance query for retrieving the branch details and calculate the accept rate of branches.

One of the offers from A/B testing branches is served based on the random selection approach if A/B testing is define but not completed. Once A/B testing is completed, i.e. after its expiration date, then an offer from A/B testing branches is served as per the option selected under the Selection Mode list.

If Mode is "Auto Selection", then UACI_ABTestPerformance table of runtime database will be used for serving the offer.

When a contact or an acceptance event is posted for the treatment and if this treatment is the result of anA/B test, then it inserts or updates the data in the UACI_ABTestPerformance table of runtime database.

> **Note:** The abTestBranchID column must be populated in dtlcontacthist table in order to display acceptance on ABT page. For this, ETL tables must be mapped on the previous version.

> **Note:** If offer codes are used while posting an event, this event may be mistakenly counted into A/B testing even it is meant to be posted against a treatment from a different source, and vice versa. In this case, the report may be erroneous.

During offer arbitration, when a rule has A/B testing enabled but expired, the UACI_ABTestPerformance table calculates the acceptance rate of all the branches belonging tothe rule and the best performance branch is calculated based on their highest accept to contact ratio.

The UACI_ABTestPerformance table is queried during offer arbitration and data of this table is stored in the read cache. An offer is severed based on the data that existsin the read cache. The data of the read cache is updated after 60 minutes as default value

of the JVM parameter com.unica.interact.abtPerformanceDataLoadFrequencyInMin
is 60 minutes. You can change the data update time of the read cache by using the
`Com.unica.interact.abtPerformanceDataLoadFrequencyInMin` JVM configuration
parameter.

If you have the same acceptance rate for multiple branches, then the offer of that branch is
selected during offer arbitration, which includes the current updateTime value.

Batch update and delete treatment rules

The Strategy tab provides the capability to delete or update treatment rules in a batch using
Actions dropdown menu on top of the right pane in Edit mode. The dropdown list is only
enabled when there are multiple rules selected in a Rule table.
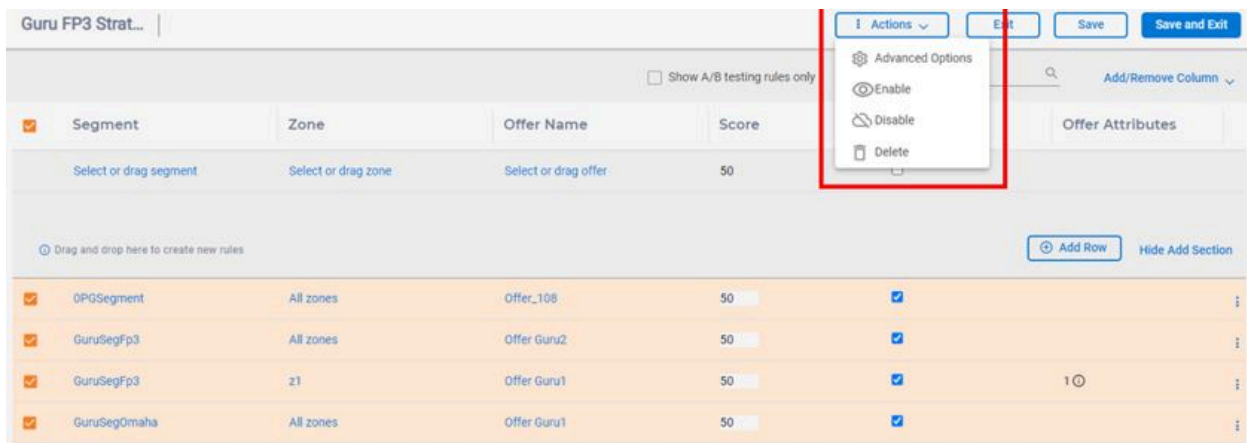
Multiple rules can be enabled, disabled, or deleted in a batch by selecting them in the Rules
table and then selecting its option in Actions dropdown menu.

You can also update the advanced properties of multiple rules to the same value using
Advanced Options menu in the **Actions** dropdown list. Perform the following steps.

1. In the Edit mode, select the rules that you want to update to the same value in the Rule
   table.
2. In the **Actions** list, select **Advanced Options** . This opens the Advanced Options slider.

3. Go to any tab and perform the changes in the fields for which you want to add multiple rules having same value, for example, to add all selected rules to same rule group. The A/B testing tab is disabled in this case as it is not applicable to multiple rules.

4. Click **Save**. This saves the field specified to the same value for all selected rules at the client side.

All changes made through **Actions** dropdown menus are saved in cached rule data at client side. Click Save or Save and exit button to save the changes in the database. The only exception is Delete functionality. When you select the **Delete** menu, a confirmation dialog displays. Once you confirm the deletion, the selected rules are deleted from the database. They cannot be recovered back.

View treatment rules in View mode

A strategy can contain a large number of treatment rules. The view mode of Strategy tab provides several different ways to view the rules easily and meaningfully.

By default, the right pane of Strategy tab displays rules of a strategy in a Rules table. There is a pagination bar at the bottom, which allows the users to browse through different pages.

The default column displayed in Rules table are Segment, Zone, Offer, Score and Enabled, where Offer column display either an offer or an offer list assigned to a rule, with an offer

list icon which is applicable.

All other properties of a rule on Advanced options can be viewed on a slider by hovering the cursor on the vertical ellipsis to the right of the rule row and then clicking the gear icon.
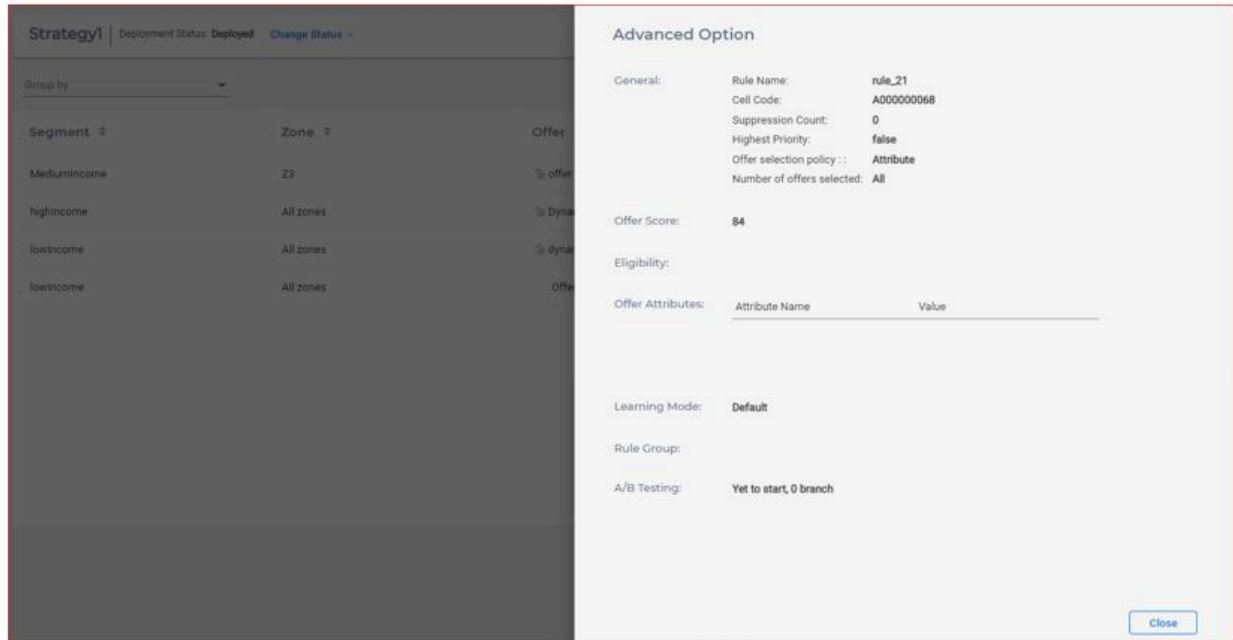
You can also sort Segment, Zone, or Offer column by clicking the up/down arrow provided next to each column header. The effective sorting column and the sorting order is identified by the highlighted arrow

The Refresh button lets you to reload all rules in the Strategy from the database and replace the current contents.
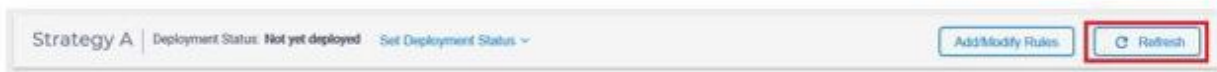
Configurable columns to display in Rules table

There are many properties of a treatment rule. You can view other properties that you require in Rules table by selecting the option in the "Add/Remove Column" dropdown list.
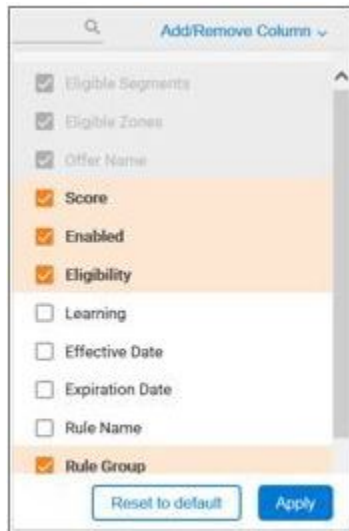
You can add or remove a number of columns, except that Segments, Zones, and Offers are the required columns in the Rules table. Click **Apply** to save the defined preference in database so that when you revisit this strategy, the Rules table displays like before.

Segment, zone, or offer centric views

Marketers have their own preferred ways to design and view treatment rules. The rules can be designed using segment centric views, for example, starting from segments, expanding to zones, and then assigning offers. It can also be designed using offer centric views, starting from offers, expanding to segments, and then to zones.

You can view rules in different perspective by **Group by** feature in View mode. You can change "Group by" in two ways:

- Select the options to group by **in Group by** dropdown menu. The rules can be grouped by Segment, Zone, Offer or Rule group.
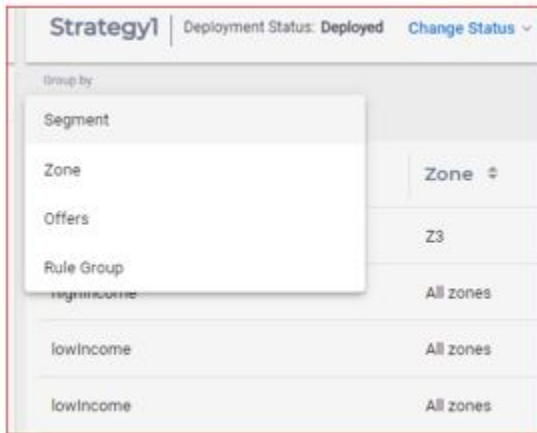
- In Rules table, select the column you want to group by, for example Offer. Drag it to the first column position. This displays Offer in the first columns and rules are grouped by Offer. The same action applies to the column "Segment" and "Zone".

  "Group by" Offer view groups all offers and offer lists by their names with no distinction in the types.

  In the "Group by" view, you can collapse or independently expand the groups and see rules in the groups.
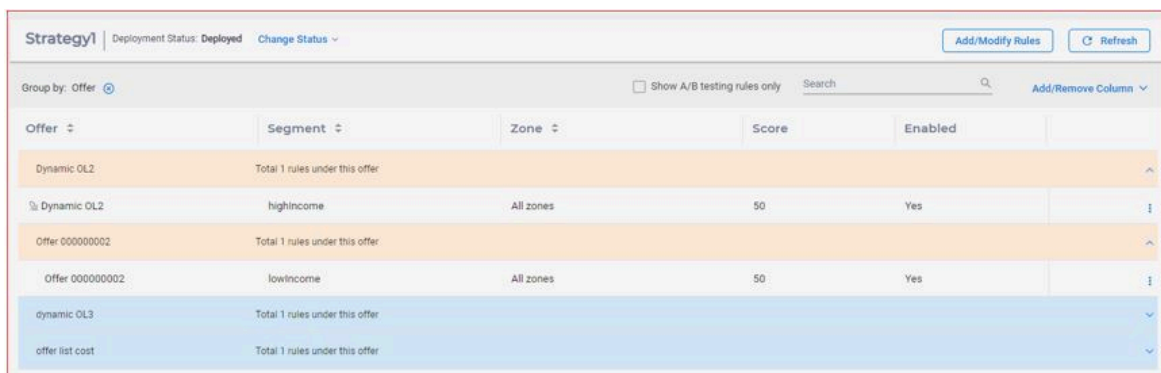
Search treatment rules

You can search for the treatment rules using the "Search" box located on the top of Rules table and search for a specific field.. You can achieve this by typing the text to be searched and then choosing the field from the search dropdown menu. You can search for "Segment",

"Zone", "Offer", "Rule group", "Cell code" and "Offer code". When searching for "Offer", all matching rules with same offer name or offer list name are returned. For all searches, all matching rules are returned in a pageable Rules table.

Deploy interaction strategy

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

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

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

Marking an interact strategy for deployment

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

You can mark a strategy for deployment on Strategy tab using **Change status** dropdown menu

When the strategy .is marked for deployment, it is added to the list of items that are waiting to be deployed on the interactive channel Deployment tab

> **Note:**
>
> You cannot edit a strategy that is marked for deployment.
>
> Once you deploy the interactive channel with strategies that are marked for deployment, the changes to the strategies are included in Interact Runtime.
>
> If you have reports installed, click **View deployment history** at the top of the Interactive Channel **Summary** tab. You can view the Interactive Channel Deployment History report to view the results of the deployments.

Cancelling a deployment

You can cancel a deployment request for a strategy on the Strategy tab using **Change status** dropdown menu.

When the request is cancelled, the strategy is removed from the list of items that are waiting to be deployed on the interactive channel Deployment tab. You can now edit the strategy.

Marking an interaction strategy for undeployment

If you no long require the smart segments that are created by an interaction strategy, you can undeploy the strategy. This removes all references of the strategy from the runtime server. This option is available only if you previously deployed the interaction strategy. You do this on Strategy tab using Change status dropdown menu.

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

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

Click **View deployment history** to view the Interactive Channel Deployment History report if you have reports installed.

Chapter 6. FlexOffers

FlexOffers is a big personalized flexoffers mapping table. It combines data and functionality from Interact flowchart and smart rules. The FlexOffers user interface brings the offers, zones, cells, segments, customer profiles, and real time visitor activity data into a Windows spreadsheet, which resembles a mapping table. It helps the marketers to easily map offers to the best targeted customers.

Marketers can use the tools to import or reimport pre-defined delimited file or database table, drawing the basic mapping data and integrate with system data such as offers, zones, cells and build to a big FlexOffers mapping table. It can be manually or automatically publish to interact RT server groups. Users can create FlexOffers mapping filters and deploy them to runtime Interact nodes for treatments.

FlexOffers Interact DT includes the main area for creation and configuration.

- You can create, view, and publish FlexOffers mapping table to different server groups You can also delete FlexOffers mapping table.
- You can add FlexOffers mapping rules, add new criteria, search and modify the mapping data using an inline editing tool.
- You can create FlexOffers mapping filter, add, update and delete FlexOffers mapping filters, and deploy the FlexOffers mapping filters to different server groups.
- You can automatically reimport FlexOffers from delimited file or existing database table.

This following sections describe details on how to create FlexOffers, edit and modify the FlexOffers rules, create FlexOffers filter, deploy the FlexOffers and FlexOffers filters to Interact RT, and automatically reimport Flexoffers from delimited file or database table.

FlexOffers mapping tables

The FlexOffers located in Interact channel is a core sub-component of Interact channel. You can perform the following actions.

Create FlexOffers mapping table

To create a FlexOffers mapping table, complete the following steps.

1. Under **Interactive channels**, navigate to **FlexOffers > Create new FlexOffer Mapping**.
2. Provide a mapping name and description.
3. You can choose either one of the three options available to create FlexOffer mapping tables.

   • Using an existing database table. Perform the following steps.

   a. Select the **Select from Table** option.

   b. In the **Server Group** list, select the server group and in the **Select Table** list select the table.

   c. Select **Preview** to view the table and click **Save**.

   > ✎ **Note:** You can re-import the same selected table by repeating the above procedure.

   • Using an imported CSV file. Perform the following steps.

   a. Select the **Select Delimited** option and select **Browse** to select the delimited file.

   b. Set Custom Delimiter of CSV file. The maximum length is 5 characters and the default delimiter is a comma. A special character η is not supported.

   c. Select **Preview** to view the file and click **Save**.

   > ✎ **Note:** You can re-import the delimited file by repeating the above procedure.

   • Using an empty FlexOffers mapping table. Perform the following steps.

   a. Select **Create New Input/Source Table** option.

   b. Provide a table name and click **Save**.

> ✏️ **Note:** To create FlexOffers, system request in source table or delimited file includes atleast one of the following fields: OfferID or OfferName or OfferCode or (OfferCode1, OfferCode2 ..)

Sample flexofferfile1.csv with OfferID

OFFER ID	SALARY	CITY	BooleanData
2	10000	New York	1
4	20000	Pune	0

Sample flexofferfile2.csv with Offer Name

OFFER NAME	SALARY	CITY	BooleanData
Offer 000000001	10000	New York	1
Offer 000000003	20000	Pune	0

Sample flexofferfile3.csv with OfferCode1

OFFERCODE1	SALARY	CITY	BooleanData
1	10000	New York	1
3	20000	Pune	0

> **Note:** For import special cell code, users can set cell id as following.
>
> - If set cellid = 0, the cellcode = new cell, system will generate new cell.
> - If set cellid = -1 or empty or null, the cell code = default cell

Edit, copy, and delete FlexOffer mapping tables

Click ⋮ to navigate through the options to edit, copy, and delete the FlexOffers mapping tables.

Edit offer mapping

You can only change the FlexOffers name and description. You cannot edit the source in case you have used an existing database table or an empty FlexOffers table to create the mapping table.

Manually copy or publish offer mapping to server group

Complete the following steps.

1. Select **Duplicate FlexOffers**.
2. In the **Select target server group** list, select the target server group and click **Save**. The FlexOffers is copied to the selected server group. If the selected FlexOffers mapping already exists in the server group, system overrides the existing FlexOffers mapping table.

Delete offer mapping

Complete the following step.

- Click the Delete icon and click **Confirm** to delete the FlexOffers. The selected FlexOffers is deleted from Interact design time and from each copy to the server groups.

Edit FlexOffers mapping table contents

After creating the FlexOffers mapping table, using powerful build in tools you can search the data, edit data, add dynamic columns to the table, and modify advanced settings. In the list of FlexOffers window, select the FlexOffers mapping table that you want to apply FlexOfferRule (table row) or FlexOffers criteria (table column). You can perform the following actions.

Search FlexOffer rules

To search for FlexOffer rules, complete the following steps.

1. Click **Search FlexOffer Rules**. box. You can expand and collapse the Search FlexOffer Criteria box using "**<**".
2. Click **Add Rule Attribute**.
3. Under **Column Name**, **Operator**, and **Value** lists, select the appropriate value.
4. Click **Apply**. The detailed search results immediately display on the right panel of the page.

Hide/Display columns

You can click Add/Remove Columns to select the columns you want to display on the table.

Add FlexOffers rules/criteria

FlexOfers rule is mapping record. It includes offer, zone, cell, user profile data, user activity data and user defined columns data. In FlexOffers table each row data represents one FlexOffers rule.

For example: FlexOffers Rule.

Offer Name ≑	Offer Code ≑	Zone Name ≑	Cell Code ≑	salary ≑	city ≑
Offer 000000001	000000001	All zones	A000000003	10000	INDIA

FlexOffers criteria is the mapping field. For example, marketers want to map offer, zone with customer credit score. Marketers can add credit score criteria (or column) to FlexOffers table.

Offer Name	Zone Name	Credit Score
Offer 000000001	All zones	76
Offer 000000003	All zones	90

To add new rules add new data rows to FlexOffers table, complete the following steps.

1. Click **Add/Edit Offers**.
2. In the **Add Rule/Criteria** list, click **Add Rule**.
3. Provide **Offer Name** and **Offer Code**.
4. Click **Add** and then click **Save**.
5. Click each value to change if the value is required.

> 🖊️ **Note:** There are two special values for CellCode.
>
> - Default cell: When selected, the setting in `Affinium|Campaign|` `partitions|<partition>|Interact|whiteList|<audience level>|` `offersBySQL:defaultCellCode` is used.
> - New cell: When selected, a new target cell is created when saving this rule.

To add new criteria, complete the following steps.

1. Provide Column Name and Column Type.
2. Provide Size and click **Add**.
3. Click **Save**.
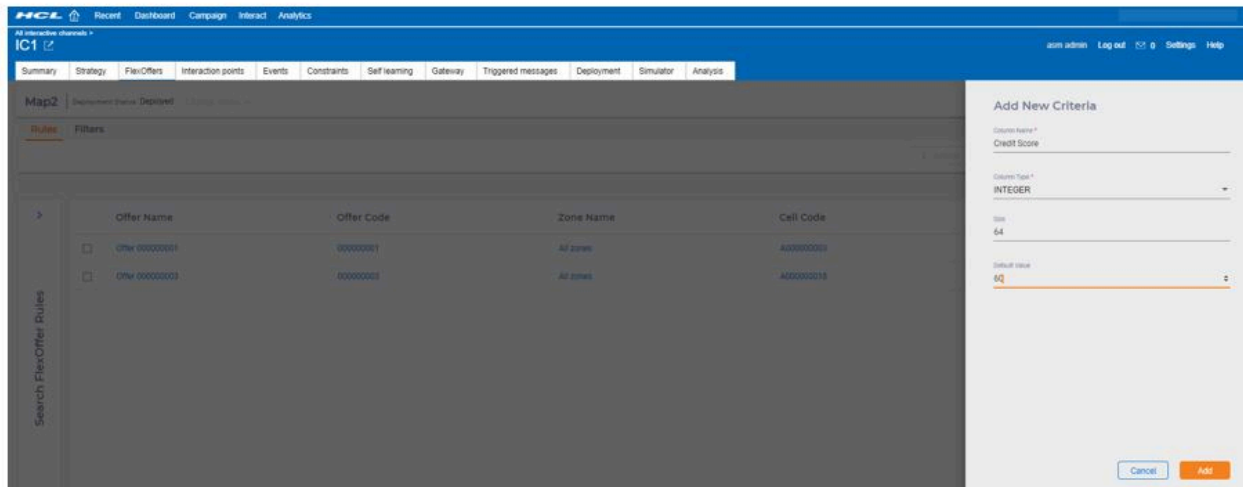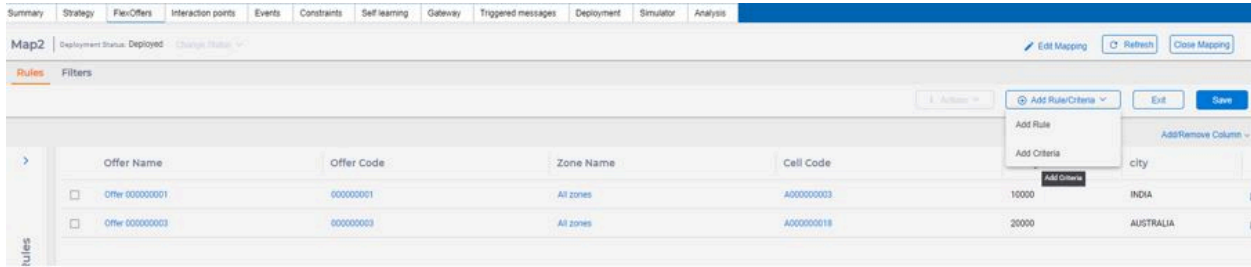
Copy, Delete, and use Advanced Options

Click ⋮ to navigate through the options to copy, delete, and use the advanced options. You can use advanced settings to set Eligibilty related parameters, set Offer Score, set Offer Attributes, and Learning data. For details, see the Update smart strategies (on page   ) section.

Offer attributes in Advanced Options

In FlexOffer or SmartRule, offer attribute can be of SSDB (Single Select DataBase) type offer attribute.

For example: in the following sample FlexOffer, SSDB Offer Attribute = Guru_SSDB and value=1
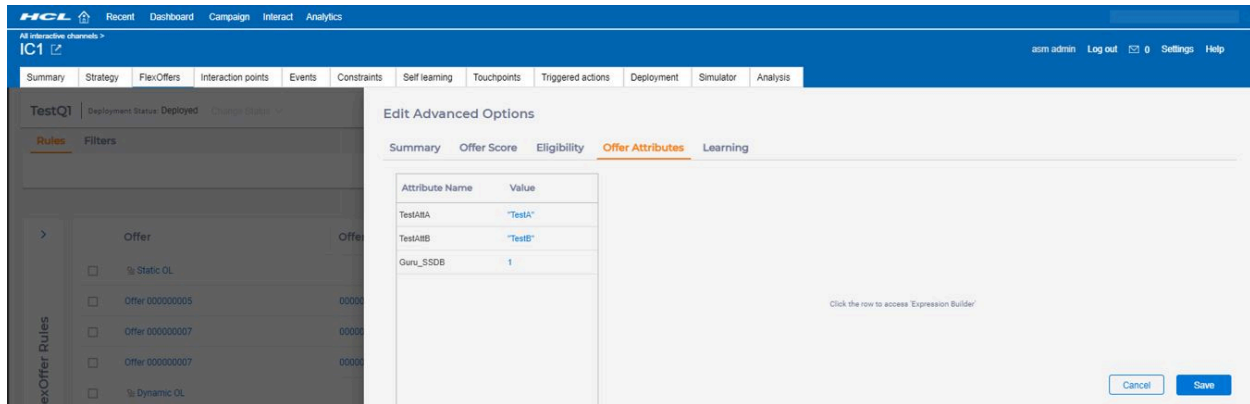
From ua_attributedef table, you can get the details of SSDB attribute "Guru_SSDB" value=1.

The Guru_SSDB attribute look up table is customer_profle, lookup column id is customerid, and lookup display column is country. Value=1 means the customerid=1.

In version 12.1.2, Interact treats SSDB just like any other offer attribute. The SSDB Attribute value is the lookup column id value.

Create FlexOffers filters

You can perform the following actions on filters.

Create filter

To create a filter, complete the following steps.

1. Select **Create Filter**.
2. In the **Create Filter** box, provide the name of the filter and description.
3. Click **Add Condition** and select the appropriate value from the **Column Name**, **Operator**, and **Value** lists.

> **Note:** Value can either be a constant value or you can select from the list of predefined real-time attributes and mapped profile attributes.

4. Click **Save**. The filter is added under the Filter pane. Select the **Default** checkbox to set the filter as a default filter. Default filters are always applied to get offers at runtime.

To preview the FlexOffers data, click **Preview Data**.

> **Note:** Preview Data is disabled when filter created using real-time attributes or profile attributes

Edit, copy, and delete filter

Click to navigate through the options to edit, copy, and delete filters.

Deploy FlexOffers mapping with filters

You must copy the latest mapping to the target server group before deployment. Complete the following steps.

1. In the **Change Status** list, select **Mark for Deployment.**
2. Click the **Deployment** tab.
3. Click **Deploy interactive channel changes**.

After FlexOffers mapping along with the filter is deployed to the Interact runtime node, get offers treatment processes the FlexOffers mapping filter and returns correct offers back to the users.

FlexOffers with segment and event patterns

Segment: While creating big FlexOffers mapping tables, you can add segment as a user-defined field (with name "Segment" with datatype as string) and assign value of Segment for each FlexOffers. After big FlexOffers mapping tables are deployed to Interact RT and offer API is called, the system filters FlexOffers with Login Session associated segments.

Event Pattern: In big FlexOffers mapping tables, there are two ways to use event pattern.

- You can use event pattern as a FlexOffers filter condition to filter the FlexOffers.

  For example, you can add user-defined field EPTest (datatype integer) and set EPTest value in big FlexOffers mappings. From FlexOffers filter, you can add condition EPTest = EventPattern.pattern1. After the deployment of FlexOffers to Interact RT, when you invoke get offer API call, system is based on the EventPattern.pattern1 state to filter FlexOffers. Only the FlexOffer EPTest with value meets the EventPattern.pattern1 state value and return to getOffer API call.

- Under FlexOffers Advanced Options, under Offer Score and Eligibility tab, you can configure or define event pattern expression. If you configure the event pattern expression, the offer score is calculated based on that or the FlexOffers eligibility is based on whether the event pattern expression state is met.

Optimize FlexOffers deployment process

FlexOffers and FlexOffer filters as part of Interact Channel are deployed on Interact RT with Interact channel. Marketers often modify the FlexOffers mapping table. During the Interact Channel deployment, if system detects that FlexOffer data is not in sync between DT and RT server groups, the system displays a warning message and asks the marketers to manually publish the FlexOffers to RT server group.

This enhancement removes the manual publish step, making the FlexOffers deployment more automated and user friendly. If FlexOffers is out of sync with RT server group, the system automatically publishes the FlexOffers to RT server group, synchronizing it again. Administrators can also use JVM parameter `com.unicacorp.Campaign.interact.offermapping.service.synctimeout` to control the timeout of publishing FlexOffers. The default value is 300 seconds.

Automatically reimport customer FlexOffers delimited file or database table through platform scripts scheduling or linux cronjob

Reimport customer data from database table or csv files to FlexOffers in DT. There are two types of customer data that can be re-imported to FlexOffers.

- Reimport from delimited file
- Reimport from database table

To manually reimport delimited file or database table, see the FlexOffers mapping tables *(on page 160)* section. This section provides details on how to run `reimportFlexOffers.bat/sh` script from Platform scheduling or cronjob to invoke automatic reimporting process.

The system provides two scripts.

- For Windows: `reimportFlexOffers.bat`
- For Linux: `reimportFlexOffers.sh`

Users can execute the scripts using command lines or using Unica Platform scheduler management user interface.

The reimportFlexOffers scripts are located at `UnicaInstall\Interact\interactDT\tools\others\reimportFlexOffers.bat/sh`

The scripts are based on java class `ReImportFlexOffer.class`. It calls the FlexOffers Restful APIs to execute reimport, system request reimportFlexOffer.jar under `UnicaInstall\Interact\interactDT\tools\others\lib\` directory.

Use the command line to run `reimportFlexOffers.bat/sh`. Pass the reimport.properties file:

```
C:\UnicaInstall\Interact\interactDT\tools\others
\reimportFlexOffers.bat .\conf\reimportflexoffer.properties
-p<Unica password>
```

Request parameters to reimport table with sample data

S.NO.	Parameter name	Parameter value
1	platformurl	http://<ip>:<port>/ If Platform API Auth - Secure API access over HTTPS is enabled, https://<ip>:<port>/
2	url	http://<ip>:<port>/ If Platform API Auth - Secure API access over HTTPS is enabled, https://<ip>:<port>/

3	interactchannelId-OrName	18
		If name has white space
		Example: interactchannelIdOrName=Test IC
		Replace one white space with %20
		interactchannelIdOrName=Test%20IC
		After setting locale, ensure that your value is same as displayed in Unica UI.
4	Flexoffername	testReimportTable
		After setting locale, ensure that your value is same as displayed in Unica UI.
		Note: You must have the locale set up at the OS level.
5	sourceType	table
6	sourceFileName	UACI_OfferMapping1978
7	Username	Asm_admin

Sample reimportflexoffer.properties file

```
# Request parameters for reimporting flex offer from file
#
# platformurl - the Platform URL (host:port) of the Platform instance.
# url - the URL (host:port) of the Interact design time instance.
# interactchannelidorname - the ID or name of the interactive channel containing the target FlexOffers.
# flexoffername - Flex Offer Name.
# sourcetype - type of the data source, valid values are file and table, here for example sourcetype=file
# sourcename - Source Name is the reimport delimited file name with full path, for example sourcename=C:\\MyTestData\\mytestdata.txt
# username -  is the user name currently logged in to the Interact design time.
# delimiter - Delimiter used in the reimport file, The maximum length is 5 characters and the default delimiter is a comma.
# locale   - using for processing data
# fields   - is Json string, it represent the columns metadata of reimport files
#
#           for example: reimport file select 6 columns for reimport, each columns metadata in json string shows here:
#
#           column1 is offerid with type of LONG:
#           column2 is customdate with type of DATE:
#           column3 is testint with type of LONG:
#           column4 is testfloat with type of FLOAT:
#           column5 is testb with type of BIT:
#           column6 is teststring with type of STRING:
#
#           "fields" = [
#                              {"name":"offerid","type":"LONG","value":null,"dateFormat":null,"size":19},
#                              {"name":"customdate","type":"DATE","value":null,"dateFormat":"MM/DD/YYYY","size":null},
#                              {"name":"testint","type":"LONG","value":null,"dateFormat":null,"size":32},
#                              {"name":"testfloat","type":"FLOAT","value":null,"dateFormat":null,"size":64},
#                              {"name":"testb","type":"BIT","value":null,"dateFormat":null,"size":null},
#                              {"name":"teststring","type":"STRING","value":null,"dateFormat":null,"size":32}
#                    ]
#
# The following Data Type support in Reimport: LONG, STRING, BIT, DATE, FLOAT
#
########################################################################################################################
#
########################################################################################################################
#
# Sample Data for reimport file
#
#################################################################################
platformurl=http://localhost:7005/
url=http://localhost:7005/
interactchannelidorname=23
flexoffername=TestMapU
sourcetype=file
sourcename=C:\\MyTestData\\omfile.txt
username=
```

Request parameters to reimport file with sample data

S.NO.	Parameter name	Parameter value
1	platformurl	http://<ip>:<port>/ If Platform API Auth - Secure API access over HTTPS is enabled, https://<ip>:<port>/
2	url	http://<ip>:<port>/ If Platform API Auth - Secure API access over HTTPS is enabled, https://<ip>:<port>/
3	interactchannelId-OrName	18 If name has white space Example: interactchannelIdOrName=Test IC

		Replace one white space with %20 interactchannelIdOrName=Test%20IC After setting locale, ensure that your value is same as displayed in Unica UI.
4	flexoffername	testReimportFile After set locale, ensure that your value is same as displayed in Unica UI. 📝 **Note:** You must have the locale set up at the OS level.
5	sourceType	File
6	sourceFileName	`C:\MyTestData\MyBigCSVData.csv`
7	userName	Asm_admin
8	delimiter	,
9	fields	[{"name":"offerid","type":"LONG","value":null,"dateFormat":null,"size":20}]

```
Request parameters for reimporting flex offer from file

url - the URL (host:port) of the Interact design time instance.
interactchannelidorname - the ID or name of the interactive channel containing the target FlexOffers.
flexoffername - Flex Offer Name.
sourcetype - type of the data source, valid values are file and table, here for example sourcetype=file
sourcename - Source Name is the reimport delimited file name with full path, for example sourcename=C:\\MyTestData\\mytestdata.txt
username - is the user name currently logged in to the Interact design time.
delimiter - Delimiter used in the reimport file, The maximum length is 5 characters and the default delimiter is a comma.
locale   - using for processing data
fields   - is Json string, it represent the columns metadata of reimport files

        for example: reimport file select 6 columns for reimport, each columns metadata in json string shows here:

        column1 is offerid with type of LONG:
        column2 is customdate with type of DATE:
        column3 is testint with type of LONG:
        column4 is testfloat with type of FLOAT:
        column5 is testb with type of BIT:
        column6 is teststring with type of STRING:

        "fields" = [
                {"name":"offerid","type":"LONG","value":null,"dateFormat":null,"size":19},
                {"name":"customdate","type":"DATE","value":null,"dateFormat":"MM/DD/YYYY","size":null},
                {"name":"testint","type":"LONG","value":null,"dateFormat":null,"size":32},
                {"name":"testfloat","type":"FLOAT","value":null,"dateFormat":null,"size":64},
                {"name":"testb","type":"BIT","value":null,"dateFormat":null,"size":null},
                {"name":"teststring","type":"STRING","value":null,"dateFormat":null,"size":32}
            ]

The following Data Type support in Reimport: LONG, STRING, BIT, DATE, FLOAT
```

The execution results display in the command window.

Using Platform schedule management UI, schedule to run reimport.bat/sh. Complete the following steps.

1. Update Platform config file `Platform\conf\Platform_Admin_Scheduler_Scripts`.

   For example, update with the following line:

   `C:\UnicaInstall\Interact\interactDT\tools\others`
   `\reimportFlexOffers.bat`

2. In Platform scheduler user interface, pass the following content to run parameter.

   `C:\UnicaInstall\Interact\interactDT\tools\others`
   `\reimportFlexOffers.bat`

```
##C:\HCL12\IMSMain\Interact\interactDT\conf
\reimportflexoffer.proerties## ##-pPassword##
```


Before starting the schedule request, perform a small update in reimportFlexOffers.bat/sh file, example -jar.
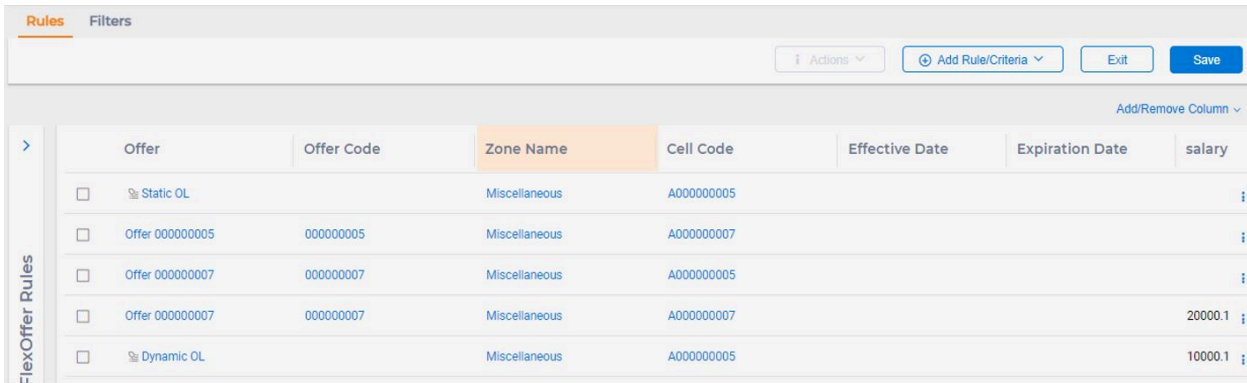
```
"C:\HCL12\IMSMain\Interact\interactDT\tools\others
\lib\reimportflexoffer.jar" pass entire path of the
reimportflexoffer.jar.
```

The reimportFlexOffers.bat/sh file will run based on the configuration of schedule. The execution result can be viewed in the Platform log.

Using offer lists in Flex Offers

You can add offers or offer lists to Flex Offer rules. For more details on offer lists, see the Offer lists (on page 10) topic. In FlexOffers table, you are required to add the following configuration. `add OfferType INT NOT NULL DEFAULT 0`. The OfferType=0 for Offer, OfferType=1 for OfferList.
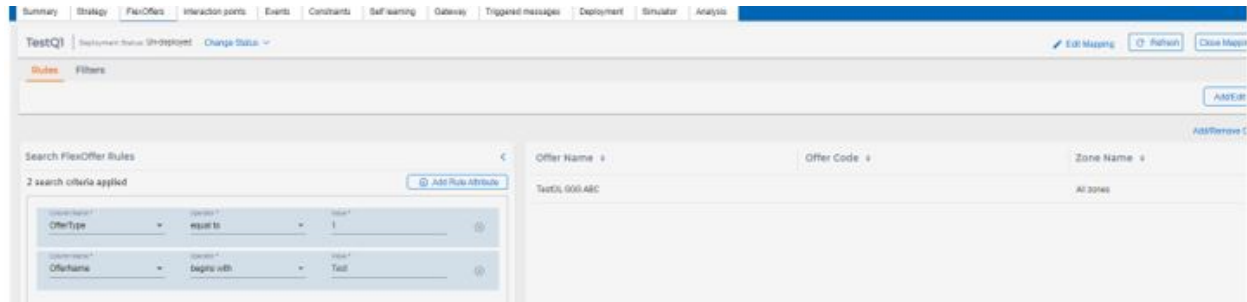
In the Offer column, a ⬚ icon besides the offer specifies an offer list.

Search offerList from FlexOffers

In Search FlexOffer rules, under the first column, select OfferType, under the Operator column, select equal to, and in the third column, select Offer list. The relevant offer lists are returned.

Filter offerList from FlexOffers

You can also create and deploy a filter for offer list from FlexOffers. The procedure is similar to creating and deploying FlexOffers filters. For details, see the Create FlexOffers filters (on page 169) and Deploy FlexOffers mapping with filters (on page 170) topics.

Like smart rules, you can also configure the selection policy for FlexOffers under the Advanced tab.
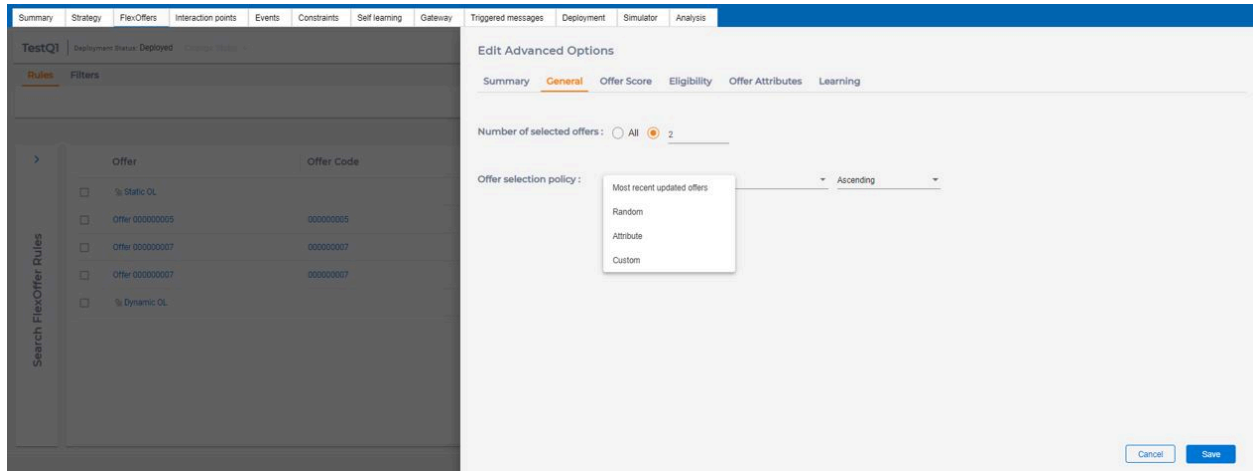
Most recent updated offers is the default offer selection policy. When you create FlexOffer from import delimited files, the OfferType is request to import the OfferList.

The following is the sample data of inport file.

```
OFFERID,OFFERNAME,OfferType,selectionPolicy,city
2,Offer List1,1,{"num":2,"opt":1,"param":"","sort":"asc"},New York
3,Offer1,0,,Boston
```

For SelectionPolicy:

Opt=0 means MostRecentUpdated,

Opt=1 means Random,

Opt=2 means OfferAttribute,

Opt=3 means Custom;

For details, see the topic.

Chapter 7. Events and Event Patterns

This section provides details on Events and Event Patterns for an interactive channel. This component provides the marketers a flexible way to act based on the occurrences of visitor activities or personalize offers on the basis of the patterns of visitor activities.

To get more details on the concepts of Event and Event Pattern, see the Event and event patterns (on page 17) section.

The following sections provides details on the following functions.

- Manage events
- Manage event patterns
- Manage actions for events or events patterns
- Organize event or event pattern to categories
- Reset event patterns
- Use event patterns
- Monitor events

Events tab in the Design time environment

The Events tab displays all events and event patterns defined for an Interactive Channel in list view. You can also view the main information of each record.

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

Icon Name	Description
Add events	Click to add an event to this interactive channel.
Add event patterns	Click to define a new event pattern to this interactive channel.
Manage categories	Click to open a dialog box in which you can create, delete, and edit categories in this interactive channel.

Icon Name	Description
Move ⤷	Select one or more events or event patterns, and then click this icon to move the selected items to a new category.
Copy 🗎	Select one or more events or event patterns, and then click this icon to duplicate the selected items. Unica Interact automatically adds a numeric suffix to the names of each copy.
Delete 🗑	Select events or event patterns, and then click this icon to delete them.

Define events that are triggered by visitor activity

An event represents a user activity occurred that can trigger actions in runtime environment. Events are first created in Interactive Channels through Interact Design Time UI and then posted to Interact runtime environment by calling runtime API postEvent.

Examples of events

For example, you may create any of the following events.

- User opened an marketing email.
- User accepted an offer.
- User rejected an offer.
- User added an item to shopping cart.

Adding an event and actions in the Design Time UI

To add an event and take the actions when the visitor triggers the event, perform the following steps.

1. Click the **Add events** icon on the **Events** tab.

   The **Add event** dialog is diaplayed.

2. On the **General** tab, provide a name and description for this event that helps you identify it.

   > **Note:** Event name must start with alphabetic letters and can only contain ASCII letters, numbers and underscores. Event name must be unique within an Interactive Channel. The event name that is passed into the Unica Interact API postEvent at your touch point must match with the event name defined here.
   >
   > The description appears on the Events tab and is intended for your reference only.

3. **Optional:** Choose a category in which you want to organize this event.

   Categories are for your organizational purposes only, and do not affect the operation or use of the event. You can move events to other categories after they are created.

4. On the **Actions** tab, specify the actions to trigger when this event occurs. See the Define Actions for Events or Event Patterns *(on page 192)* section to add actions.

5. Click **Save and return** to save event and its action data to database and return to the **Events** tab. "Save and add another" option enables you to save data and add more 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** icon.

   You can delete one or multiple events by selecting the event and clicking the **Delete** icon.

Define event patterns to personalize offers to the visitor

An event pattern is a flexible way to personalize offers that are based on patterns of visitor activities. When the visitor's behavior matches the defined event pattern, it triggers specific

actions or places visitors in pre-defined segments to some eligible offers defined by Interact strategies. Event patterns are also sometimes referred to as behavior triggers.

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

Examples of event patterns

Here are some examples of events that you may use in event patterns resulting in the offering of relevant offers to your customers.

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

Event pattern types

An event pattern consists of a series of events that occur in a particular way.

Interact supports the following 11 types of event patterns. For more details on the event patterns, see the Event and event patterns *(on page 17)* topic.

- Match all
- Counter
- Weighted Counter
- Match all (time bound)
- Counter (time bound)
- Weighted counter (time bound)
- Sequence (time bound)
- Match all (rolling time)
- Counter (rolling time)
- Weighted counter (rolling time)
- Sequence (rolling time)

Marketers can use event patterns to track and record pattern of customers' activities in real-time and act accordingly. By posting events to Interact at selected stages of customers' activities, the pattern's state is updated. When the pattern's condition is met, the configured actions will be triggered, which can be used in segmentation and offer arbitration logic.

Events that make a pattern

An event pattern is composed of series of events. The events that make the pattern's state change to "condition-met" are called Qualifying Events, while the events that make the pattern pausing for evaluation are called Suspending Events. For example, "Pattern A" has two events, "open_bank_account", "ATM_activity" and "offer_credit_card", all must occurs in 2 months. If a customer has already applied and got bank's credit card at the time of 1 month from time opening account, marketers would not want bother the customer again by offering card. Therefore, marketers can define a suspending event "got_card" in the pattern which will pause the pattern for evaluation. The marketers can also use setting "Effective duration" to set if the pattern is suspended forever (when not set) or just for a period of time.

Besides events that are defined by the customers, Interact also supports six event macros that can participate in pattern definition, as either Qualifying Events or Suspending Events. The following are the six macros.

- offerAccepted
- offerContacted
- offerRejected
- offerAcceptedInCategory
- offerContactedInCategory
- offerRejectedInCategory

offerAccepted, offerContacted or offerRejected for an offer can serve as an event in a pattern.

offerAcceptedInCategory, offerContactedInCategory, or offerRejectedInCategory groups offers that have the same attribute value can serve as an event in a pattern.

Conditions of pattern events

For both Qualifying and Suspending events, you can define conditions for an event. Although, an event is selected for a pattern, but it is only eligible to participate into the pattern evaluation when all event conditions are met. A condition is a Name/Value pair which can be passed into postEvent API as parameters in runtime environment. This provides marketers another flexibility to control event patterns at runtime. The conditions can be defined for macros as well.

> **Note:** From Unica Interact 12.1.2 onwards, a same event can be selected for a pattern multiple times. The pattern conditions can be used to differentiate them. For example, one event can be event "addToCart" with condition of "product = 'iPhone'", while another event can be event "addToCart" with condition of "product = 'iPad'".

Tracking in-activity using event pattern

An event pattern can not only be evaluated for "condition-met", but can also be evaluated for "condition-not-met". Marketers can use this feature to track customers' in-activities. For example, a pattern has two events, "add_item_to_cart" and "checkout", all must occur in seven days. Marketers can add check point on third day, if customer has not checked out the item yet, that is, pattern's state is "condition-not-met", then an action of "send_reminder_email" would be executed for the customer.

How Unica Interact processes event pattern states and statuses

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

Unica Interact loads, tracks, and stores event pattern information:

- At the start of the session, Unica Interact tries to load any previous event pattern states that are associated with the current visitor's audience identifier, if event pattern states exist.

- During the session, as an event is posted, Unica Interact updates the states and statuses of any event patterns that use the event. If an event pattern is used during the session, such as during execution of an interactive flowchart, the status of the event pattern is retrieved and updated.

- At the end of the session, the statuses are either stored or discarded. If the audience identifier is found in the profile data source, the statuses of all the updated event patterns that are associated with the visitor's audience identifier are stored. Otherwise, the event pattern states are discarded.

Store states for unknown audience identifiers

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

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

When the audience identifier changes in a session

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

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

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

Event pattern states and statues are session independent

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

Adding an event pattern and actions in Design Time UI

To add an event pattern to identify pattern of visitor activities and behaviors, and actions when the pattern fires, perform the following steps.

1. On the **Events** tab, click the **Add event pattern** icon . The Add/Edit event pattern dialog box is displayed.
2. On the **General** tab, specify a pattern name, description, and start and end dates. Specify whether it is enabled.

   > **Note:** Your event pattern name can only contain ASCII letters, numerals and underscores. Event Pattern name must be unique within the application (this is applicable from version 11.1). If you have upgraded to version 11.1, you must have multiple patterns with same name in different ICs on base setup, and if you edit the patterns, it is required to change the pattern name. If not edited, it will work as it is.

3. On the **Pattern** tab, specify the pattern type and select events that make the event pattern. See Table 7 for the details of fields available on this tab.
4. On the **Actions** tab, specify the actions that must occur when the event pattern criteria are met. For details on adding actions to event patterns, see the Define Actions for Events or Event Patterns *(on page 192)*.
5. **Optional:** On the **Reset criteria** page, specify the reset criteria for the event pattern. See the Reset event patterns *(on page 209)* section for details.
6. Click **Save and return** to close the Event Pattern dialog, or click **Save and add another** to save the event pattern and create an event pattern.

Fields you use to define event patterns

This table lists and describes the details of fields on the **Add/Edit event pattern** dialog box.

Table 9. Fields in the Add event pattern dialog box

Fields	Description
General tab	
Name	Provide a descriptive name for the event pattern. This name appears in the **Event patterns** list on the **Events** tab.
Enable checkbox	Select this checkbox when the event pattern is ready to be used.
Category	Optionally, enter a category for this event pattern. The category has no effect on how the event pattern operates; it is used solely for your organizational purposes. This category appears in the **Event patterns** list on the **Events** tab.
Description	Optionally, enter a description for this event pattern. This description appears in the **Event patterns** list on the **Events** tab.
Start date/time and **End date/time**	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 while it is deployed. • If you specify only a start date, the event pattern is valid from that date and time until it is no longer deployed. • If you specify only an end date, the event pattern is valid from the time it is deployed until the end date and time. • If you specify both a start and end date, the event pattern is valid only during the specified range.

Table 9. Fields in the Add event pattern dialog box (continued)

Fields	Description
Pattern tab	
Pattern type	Select one of the 11 pattern types, which determine how the pattern be evaluated.
Available events	List of events you defined in the Interactive channel and its parent interactive channels.
	The events are grouped by their interactive channel, with the interactive channels' hierarchy from top to bottom.
	The six event macros are also listed in Available events.
	If you add `offerAccepted`, `offerContacted`, or `offerRejected`, a popup dialog prompts you to select an offer that triggers the macro.
	If you add `offerAcceptedInCategory`, `offerContactedInCategory`, or `offerRejectedInCategory`, a popup dialog prompts you to set attribute values of the offers that triggered the macros.
	You can add each of these macros multiple times with different offers or offer attributes and values for each event pattern.
Qualifying events tab	Select events from left to right as qualifying events of pattern, these events participate in pattern state evaluation.
Score	Applicable only to qualifying events of Weighted pattern types, define score of each event.
Min/unit **Max/unit**	Applicable only to qualifying events of Sequence Pattern types. In order to be eligible for a pattern evaluation, a subsequent event (depending event) has to be posted in time frame defined by Min and Max from the time when previous event (depended event) occurred. Both properties are optional.

Table 9. Fields in the Add event pattern dialog box (continued)

Fields	Description
Suspending events tab	Select events from left to right as suspending events of pattern, these events suspend pattern being evaluated.
Effective duration	Applicable only for suspending events, define how long the pattern be suspended. If not set, it means pattern being suspended forever.
Conditions	Click Edit icon in Condition column in either Quantifying events list or Suspending events list to open **Define event conditions** dialog where the conditions of an event can be added, edited and deleted. Clicking **Ok** button in the dialog will save conditions defined for the event pattern at client side, only when clicking **Save and return** button on Add/Edit event pattern dialog, all data for the pattern is persisted to database.
Events must occur within *time span*	Specify time span in which pattern events must occur. This field only applies to six time bounded pattern types.
Extend true state for additional: *time span*	Optionally, use this field to specify how long the pattern state remains true after its conditions are met. After the specified time span is over, the pattern status is set to false and the pattern begins evaluating events again. This field does not apply to Rolling Time patterns.
Actions tab	
Specify one or more actions for pattern.	See .
Reset criteria tab	

Table 9. Fields in the Add event pattern dialog box (continued)

Fields	Description
Select a reset criteria for this event pattern	Specify the reset criteria for event patterns which is used to reset a pattern after a visitor starts a session.
	For more information, see Reset event patterns (on page 209).

Define Actions for Events or Event Patterns

An action can be triggered when an event occurs or when event pattern's conditions are met or not met.

Actions for an event or an event pattern can be defined, while defining the event or the event pattern.

Action types

Interact supports the following eight types of actions:

- Trigger re-segmentation
- Log offer contact
- Log offer acceptance
- Log offer rejection
- Trigger userexpression
- Trigger events
- Suppress offers
- Qualify segments

For details on the types of actions, see the Event and event patterns *(on page 17)* section.

Delay of invoking an action

Interact supports the delay of invoking actions. This feature provides marketers the ability to control when to invoke actions.

An action can be invoked in three ways:

- Immediately
- After a duration
- At the scheduled date and time

Conditions for invoking an action

Adding conditions to an action gives marketers another control on whether an action is invoked. Only when specified set of conditions are met, then the action will be invoked. Conditions are optional settings for an action. This applies to all types of actions.

Actions tab in Design Time UI

Actions tab in **Add/Edit event** dialog or **Add/Edit event pattern** dialog is the user interface where actions are created and managed.

Actions tab in Add/Edit event dialog
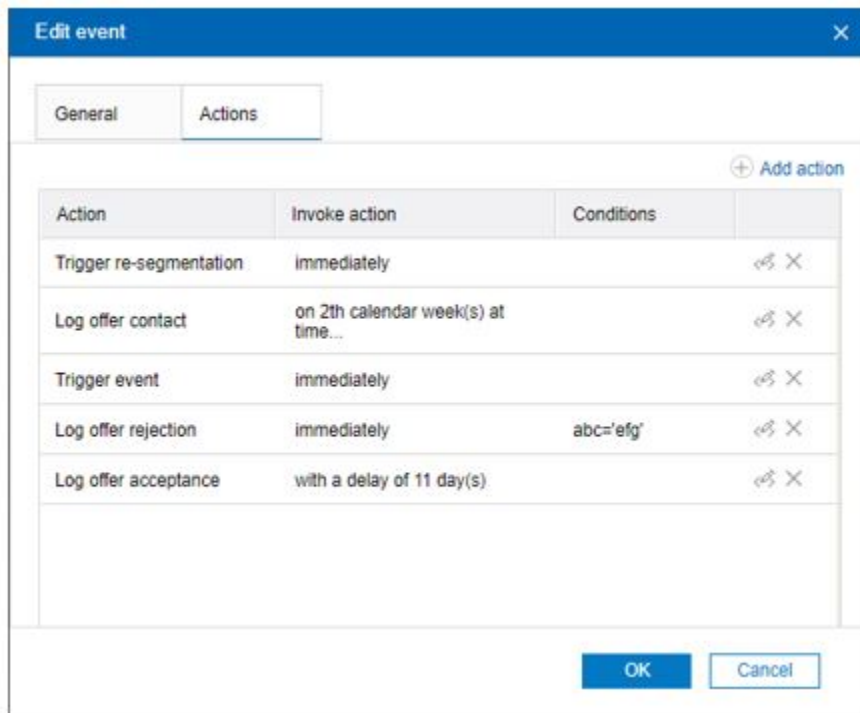
Actions tab in event pattern dialog

You can edit an action by clicking the Edit icon located in the row on the **Actions** tab.

You can delete an action by clicking the **Delete** icon located in the row on the **Actions** tab.

You can save the Action data with the event or event pattern definition by clicking OK.

Events, logging, and the Unica Interact API

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

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

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

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

For example, create an event with the Log Offer Acceptance action for each type of response. You define the following custom responses in the `UA_UsrResponseType` table [as Name (code)]: Explore (EXP), Consider (CON), and Commit (CMT). You then create three events and name them LogAccept_Explore, LogAccept_Consider, and LogAccept_Commit. All three events are the same (have the Log Offer Acceptance action), but the names are different so that the person who works with the Unica 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 Unica Interact API, there is no functional difference between the events, but the naming conventions can make the code clearer. Also, if you give each custom response a separate name, the Channel Event Activity Summary report displays more accurate information.

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

Example:

You have added a custom entry in Campaign System Table UA_ContactStatus for contact status code as "OPEN" and "1" in CountasContact column. On UI, under configuration settings Interact | services | contactHist | contactStatusCodes, if you add code as "OPEN"

and action as "None", when "OPEN" contact status code is used in postEvent call, it will not be considered as true Contact. Thus, preference is given to what action you have set on UI than what action you have set in the UA_ContactStatus table.

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

Adding an action in Design Time UI

To add an action for an event or an event pattern, perform the following steps.

1. On the **Events** page, click **Add events** or **Add event patterns**.

   Add/Edit event or Add/Edit event pattern dialog is displayed.

2. Click the **Actions** tab and click **Add action**.

   Add/Edit action dialog is displayed.

   Add/Edit action dialog for an event

Add/Edit action dialog for an event pattern
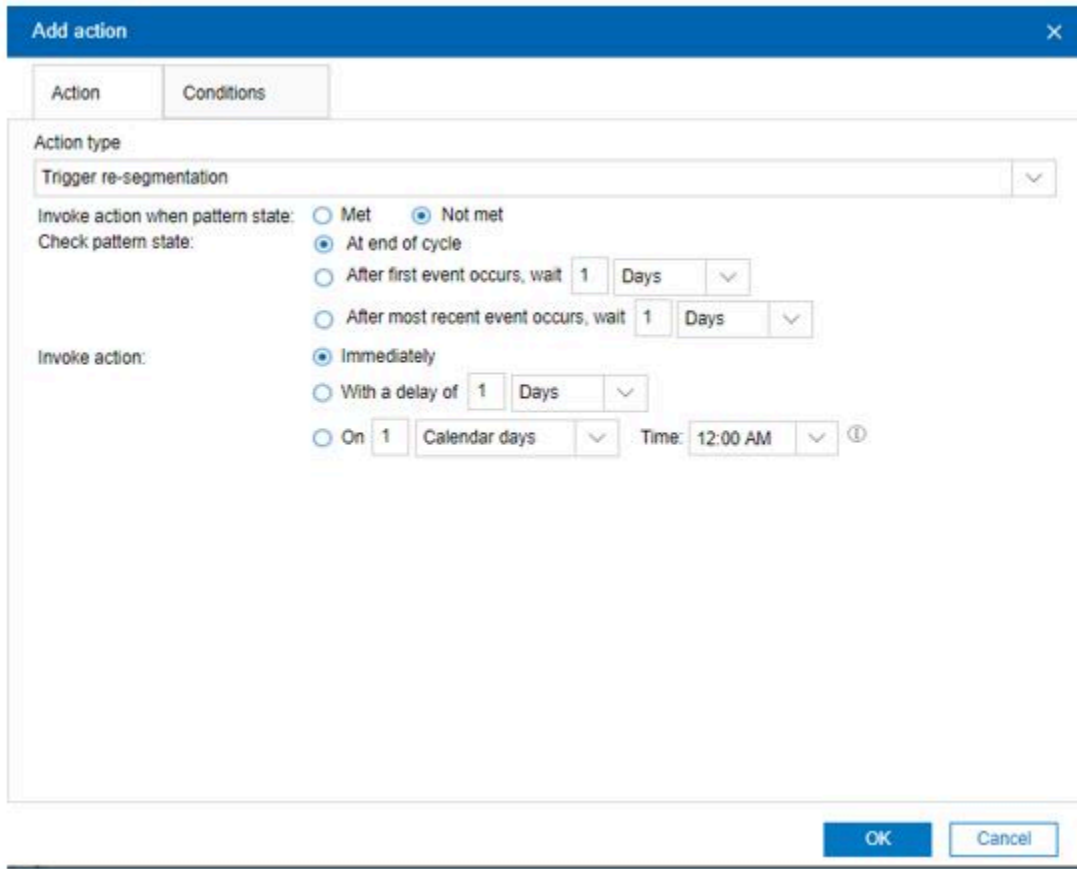
Common fields you use to define all types of actions

Interact supports eight different types of actions. There are common fields in **Add/Edit action** dialog that apply to all types of actions, and some fields that are only applicable to specific types of actions.

This table lists and describes common fields in the **Add/Edit action** dialog.

Common fields in the Add/Edit action dialog

Fields	Description
Action tab	
Action type	Select one of the eight action types, which is invoked when an event occurs or when the conditions of an event pattern is met:

	• Trigger re-segmentation • Log offer contact • Log offer acceptance • Log offer rejection • Trigger userexpression • Trigger events • Suppress offers • Qualify segments For the first four action types, an event or event pattern can have atmost one of each. For remaining four action types, an event or event pattern can have as many as actions of each type.
Invoke action when pattern state	Only applicable and visible to Event Patterns. • Met, invoke action when conditions of event pattern are met • Not met, invoke action when conditions of event pattern are not met. Use this option to track visitors' in-activities.

Check pattern state	It is only applicable to Event Pattern and is visible when "Invoke action when pattern state not met" option is selected.
	
	Specify the following when pattern state is evaluated for in-activities:
	
	• At the end of cycle
	
	  Evaluate at the end of pattern time span
	
	• After first event occurs, wait X Days/Hours/Minutes/Weeks
	
	  Evaluate after specified duration since the first event occurs
	
	• After most recent event occurs, wait X Days/Hours/Minutes/Weeks
	
	  Evaluate after specified duration since the most recent event occurs

Invoke action	Specify when action is invoked:

• Immediately

  Invoke action immediately

• With a delay of X Days/Hours/Minutes/Weeks

  When an event occurs or pattern conditions are met or not met, action is invoked after specified duration.

• On X Calendar days/Calendar weeks/Calendar months on at the time

  When an event occurs or pattern conditions are met or not met, action is invoked at a scheduled date and time

> **Note:** For a "Trigger re-segmentation" or a "Trigger user expression" action, although delayed option can be defined in UI, but invoking action in delay mode is irrelevant because "re-segmentation" or "calculate expression" must happen in session.

> **Note:** A "Suppress offer" or a "Enable segment" action can also only be invoked in "Immediately" mode, therefore no option of "Delayed" invoke is available in UI.

Conditions tab	
Parameter name	Specify name of Name/Value pair as condition if an action is invoked or not. The Name/Value pair can be passed into postEvent API in Unica runtime environment.
Parameter value	Specify value of Name/Value pair as condition if an action is invoked or not. The Name/Value pair can be passed into postEvent API in Unica runtime environment.

Fields you use to define Trigger user expression action

In section of **Define an expression to calculate,** provide the following information:

1. Select an **Audience level**, the profile attributes will be updated for the selected audience level.
2. Optional. Under **Field name to assign the result of expression**, specify the field name.
3. Define an expression using functions, variables, operators and various attributes by selecting them from the list at right, and click **Use**.
   a. Click **Check Syntax** to check the syntax of the expression you have created.
   b. Click **Clear** to clear the expression.

Fields you use to define Trigger event action

Define events to trigger for an action in the section of **Specify the events to trigger.** You can either select from list of existing events in the Interactive Channel or create a new event.

• Select **Create new events** option to create new events and trigger this action.

• Select the option Select from existing events to pick the existing events to trigger this action. The events are grouped by their interactive channel, with the interactive channels' hierarchy from top to bottom.

1. Under **Available events**, select events and click **>>** button, the selected events is
   displayed in **Selected events** list.

Fields you use to define Suppress offer action

Define offers to suppress in the section of **Select offers to suppress**. You can suppress a
single offer or all offers that have a same offer attribute value.

- Select the **Individual offer** option to suppress a single offer.

1. Optional. In the **Find/filter offers** box, type to search offer by offer name.
2. Select the offer and offer is displayed in the **Selected offer** box.

- Select the **Offers with same attribute value** option to suppress all offers with same offer attribute value.

1. Optional. In the **Find/filter attributes** box, type to search offer attribute by name.
2. Select an attribute. It is displayed in the **Selected attribute** box.
3. Provide value of the attribute.

Fields you use to define Qualify segment action

Define segment to enable in the section of **Select segment to enable**.

1. Select an audience level from **Audience level** list, the segment will be loaded for selected audience level.
2. Optional.In the **Find/filter segments** box, type to search by segment name.
3. Select a segment and the segment is displayed in the **Selected segment** box.

Manage events or event patterns on Events tab

If the event pattern consists of events from its parents, and the parent for the current interactive channel has been removed or changed to another interactive channel, those events will be suffixed to `(obsolete)` in **Qualifying events** or **Suspending events** list and a warning icon will be displayed after the event pattern name in event pattern list section.

Edit event pattern

| General | Pattern | Actions | Reset criteria |

Pattern type

| Match all | ⌄ |

Pattern fires when all of the selected events occur.

Find/filter available events (optional)

| Qualifying events | Suspending events |

Available events		Name	Conditions
offerRejectedInCategory ()...	▲	contact (obsolete)	🖉
offerRejected ()...		click	🖉
offerAccepted ()...	>>		
MobileApp IC	<<		
reset			
click	▼		

Extend true state for additional: | 1 | | Days | ⌄ |

OK   Cancel

> ✏️ **Note:** We strongly discourage defining events or event patterns in an interactive channel with a name that also exists in its parent interactive channels.

Use categories to group events or event patterns

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

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

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

Adding a category in Design Time UI

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

1. Click the **Manage categories** icon on the **Events** tab.

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

   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**.

   ⚠️ **Warning:** 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.

Reset event patterns

It can be used to reset patterns of three pattern types that have no time constraints. You can specify the reset criteria for event patterns which is used to reset a pattern after a visitor starts a session. When the event pattern is reset, the status is set to `False` and all counters are set to zero.

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

Reset criteria for event patterns

Reset criteria	Input	Description
None		No reset criteria is specified.
Inactivity	Specify time in `Hours`,`Days`, or`Weeks`.	Reset the event pattern if the visitor is inactive for the specified time.
Periodic	Specify the following: • Number of days • Time of the day • Starting date	Reset every x number of days at the specified time of day, starting from the specified date.
When an event occurs	Select the event.	When the selected event occurs, the event pattern is reset. The events available for selection are events other than the ones that are selected for the event pattern definition on the **Pattern** tab. Multiphase events are not supported. Only the events from the current interactive channel can be used as Event Pattern Reset events.

The reset criteria is applicable only when the event pattern is active and the event pattern status is not set to `True`. If the status for the event pattern is set to `True`, the reset criteria

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

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

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

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

Use event patterns

After you define the event patterns that are available for an Interactive Channel, you can use them while defining Interact offer arbitration logic.

Event patterns are made available in Expression Builder so that they can be used wherever an expression is defined using Expression Builder.

Use event patterns in interactive flowcharts

You can define process boxes in a flowchart so that when an event pattern conditions are met for a visitor, the visitor is included in a predefined segment to which specific offers are then presented. All event patterns from the current interactive channel and its parents are displayed.

Use event patterns in strategies

When defining advanced options of treatment rules in a strategy, you can use event patterns to calculate offer scores of the rule, determine eligibility of the rule, or specify an expression that overrides default value of an offer attribute. All event patterns from the current interactive channel and its parents are displayed.

Use event patterns in FlexOffers

While defining advanced options of offer rules in a FlexOffer mapping, you can use event patterns to calculate offer scores of the rule, determine eligibility of the rule, and specify an expression that overrides default value of an offer attribute. All event patterns from the current interactive channel and its parents are displayed.

Use event patterns in Action

You can use event patterns to define expression in Trigger user expression action.

Monitor events

To monitor how often all of these events occur on your touchpoint, see Channel Event Activity Summary report (on page 286).

Chapter 8. Gateways

This section provides details on the new user interface developed for Gateways.

The following capabilities are provided in gateways:

- The gateways defined in the parent interactive channel can be viewed from the child interactive channel and will be suffixed to (Inherited).
- An inherited gateway can only be viewed or copied. It cannot be modified or deleted.
- The gateway from the child interactive channel will take precedence if the gateway from the parent and child interactive channels has the same name, priority, and type.
- While creating or updating the gateway group, gateways defined in the parent interactive channels will be available in the Available Gateways section. There will be an info icon for each gateway to show the names of the interactive channels where it is defined in the hierarchy.
- While creating or updating the triggered action, gateways defined in the parent interactive channels will be available in the Touchpoint Name drop-down. There will be an info icon for each gateway to show the names of the interactive channels where it is defined in the hierarchy.

This component provides an option for the users to define the field mappings for the following:

- Journey Outbound Gateway
- Deliver Outbound Gateway.
- Generic Outbound Gateway
- Generic Inbound Gateway

Create Journey Outbound Gateway Mappings

To create Journey Outbound Gateway mappings, complete the following steps. Access the Gateway tab under the Interactive Channel screen.

1. Under **All Interactive Channels**, select an Interactive Channel that you want to work on. This redirects you to the detail page of the Interactive channel with multi-tabs. Click the **Gateway** tab.

2. Click **Gateway** and then click **Journey Outbound**.
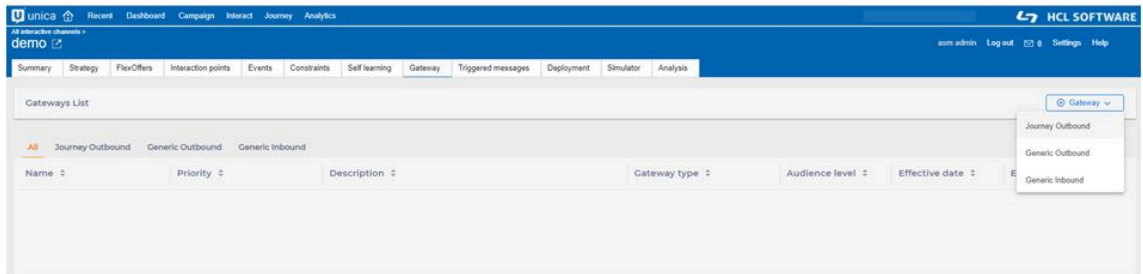
You must possess "Edit Gateways" permission granted in order to edit, add, and delete Gateway mappings.

3. In the **Add Gateway - Journey Outbound**, complete the following substeps.

   On General Tab

   a. Under **Gateway Name**, provide a Gateway Name.

   > 📝 **Note:** This name must be same as the one present under for Journey type at Affinium|interact|triggeredMessage|gateways.

   b. Optional. Under **Description**, provide an appropriate description.

   c. Provide the priority for this Gateway.

   > 📝 **Note:** You can create multiple Gateway mappings with same name but they must have different priorities. The Gateway mapping with the lowest priority value will be deployed to Interact Runtime.
   >
   > Example. If there are two Gateway mappings created with name Journey, one with priority 10 and other with priority 20. In this case Gateway mappings with priority 10 will be deployed to Interact Runtime.

   d. Select the Audience level from the dropdown list. The list displays the Audience levels for which profile tables are mapped.

   e. Optional. Specify the Effective and Expiration Date.

Note: This is the range of time this Gateway mappings are effective. When left blank for "Effective Date", this mapping is effective immediately once deployed to Interact Runtime. When left blank for "Expiration Date", this mapping is effective as long as its deployed on Interact Runtime. A past date cannot be set as the expiration date.

After the Gateway mappings are deployed to Interact Runtime with some Expiration Date specified, the mappings are effective till the expiration date only.

On Mapping tab
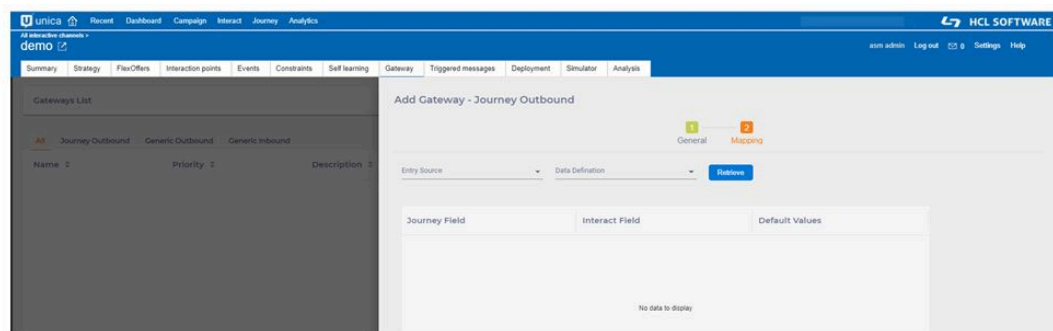
f. Select the Entry Source and Data Definition from the available options.

Note: Entry source and data definition details are fetched by calling Journey Rest APIs. It is required that Journey application must be configured and running.

All the entry sources of type "Interact" created in Journey Application are listed.

g. Click on Retrive button, All Journey fields are listed under Journey Field. You can map the corresponding Interact Field. The Interact Field is either Profile Attribute, Real Time Attribute or Offer Attribute. In case, the Journey field is mandatory, the default value is required.

h. Click on Save button to save the Gateway mappings.

Create Deliver Outbound Gateway Mappings

To create Deliver Outbound Gateway mappings, complete the following steps. Access the Gateway tab under the Interactive Channel screen.

1. Under **All Interactive Channels**, select an Interactive Channel that you want to work on. This redirects you to the detail page of the Interactive channel with multi-tabs. Click the **Gateway** tab.

2. Click **Gateway** and then click **Deliver Outbound**.
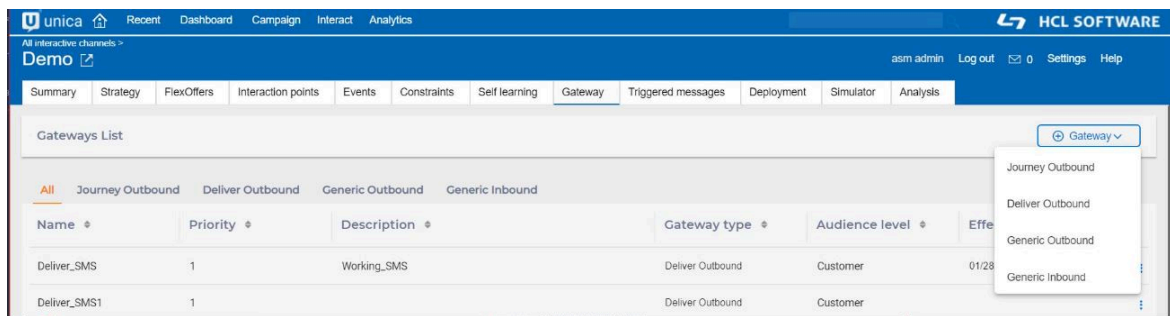
   You must possess "Edit Gateways" permission granted in order to edit, add, and delete Gateway mappings.

3. In the **Add Gateway - Deliver Outbound** page, complete the following substeps.

   On General Tab

   a. Under **Gateway Name**, provide a Gateway Name.

      Note: This name must be same as the one present under for Journey type at `Affinium|interact|triggeredMessage|gateways`.

   b. Optional. Under **Description**, provide an appropriate description.

   c. Provide the priority for this Gateway.

      Note: You can create multiple Gateway mappings with same name but they must have different priorities. The Gateway mapping with the lowest priority value will be deployed to Interact Runtime.

Example. If there are two Gateway mappings created with name Deliver, one with priority 10 and other with priority 20. In this case Gateway mappings with priority 10 will be deployed to Interact Runtime.

d. Select the Audience level from the dropdown list. The list displays the Audience levels for which profile tables are mapped.

e. Optional. Specify the Effective and Expiration Date.

Note: This is the range of time this Gateway mappings are effective. When left blank for "Effective Date", this mapping is effective immediately once deployed to Interact Runtime. When left blank for "Expiration Date", this mapping is effective as long as its deployed on Interact Runtime. A past date cannot be set as the expiration date.

After the Gateway mappings are deployed to Interact Runtime with some Expiration Date specified, the mappings are effective till the expiration date only.

On Source tab

f. Under **Template List**, select the source from the **Source Type** list.

g. Click **Retrieve** to fetch the template list for the selected source type.

h. In the **Search** bar, you can search for the templates to select the appropriate template.

i. Click **Next**.

Note: If the selected source type is MobileApp, you are required to specify Mobile application from dropdown list and mapping for xid field (device-id) on Mapping tab.
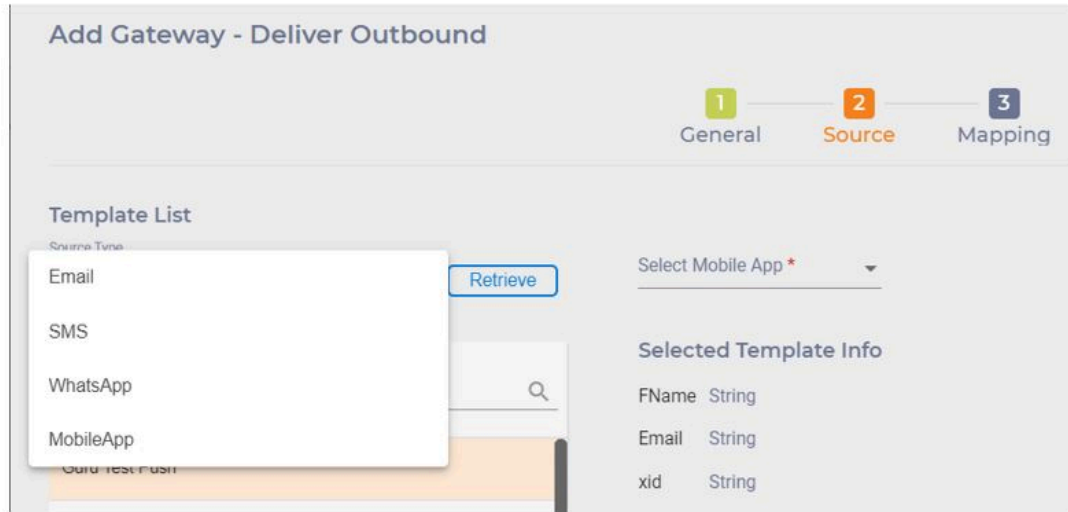
On Mapping tab
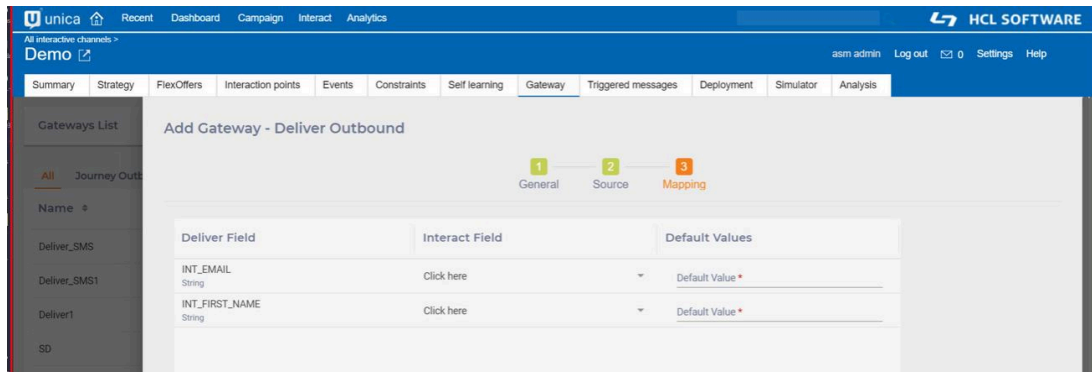
j. All the selected template fields are listed under Deliver Field. You can map the corresponding Interact Field. The Interact Field is either Profile Attribute, Real Time Attribute or Offer Attribute. All the fields are mandatory and the default value is required.

k. Click **Save** to save the Gateway mappings.

Create Generic Outbound Gateway Mappings

To create Generic Outbound Gateway Mappings, complete the following steps. Access the Gateway tab under the Interactive Channel screen.

1. Under **All Interactive Channels**, select an Interactive Channel that you want to work on. This redirects you to the detail page of the Interactive channel with multi-tabs.
2. Click the **Gateway** tab.
3. Click **Gateway** and then click **Generic Outbound**.
4. On **General tab**, provide the required details.

   > ✎ **Note:** See the General tab section of the Create Journey Outbound Gateway Mappings *(on page 213)* topic for details.

5. On the **Channel Properties** tab, specify if any additional channel property mapping is required.
6. On the **Mapping** tab, you can specify the mappings between Interact and endpoint applications.

Mapping

   a. Under the **Type** list, select the OFFER or PROFILE for mapping. Interact fields lists the corresponding attributes

   Example: When OFFER type is selected the "Interact Field" lists the Offer Attributes for mapping.
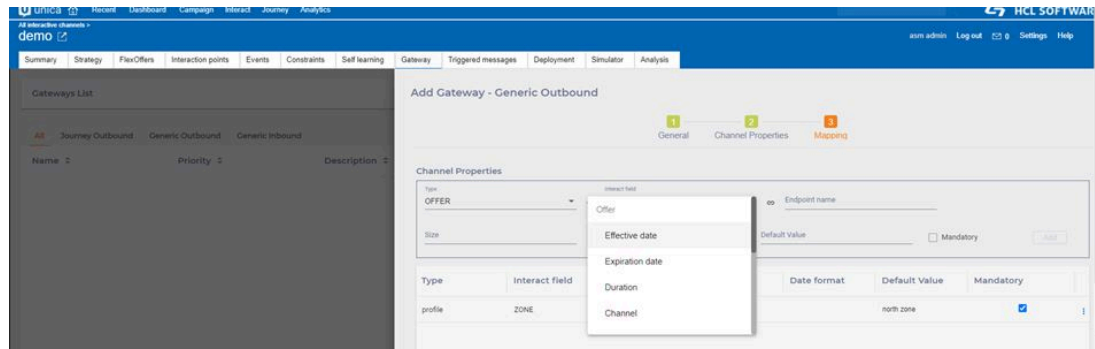
b. Specify the **Endpoint name**.

c. If the selected "Interact Field" is of string type, "Size" field is enabled, you can specify the maximum size.

If the selected Interact Field is of Date type, "Date format" field is enabled. You can provide the "Date format" which is specified on the endpoint application for the attribute specified in "Endpoint name" field.

d. Select the **Mandatory** checkbox, if the field is required on the Endpoint application. In this case, the Default Value is required.

e. Click on Save button to save the Gateway mappings.

Create Generic Inbound Gateway Mappings

To create Generic Inbound Gateway Mappings, complete the following steps. Access the Gateway tab under the Interactive Channel screen.

1. Under **All Interactive Channels**, select an Interactive Channel that you want to work on. This redirects you to the detail page of the Interactive channel with multi-tabs.

2. Click the **Gateway** tab.

3. Click **Gateway** and then click **Generic Outbound**.

4. On **General tab**, provide the required details.

> ✎ **Note:** See the General tab section of the Create Journey Outbound Gateway Mappings *(on page 213)* topic for details.
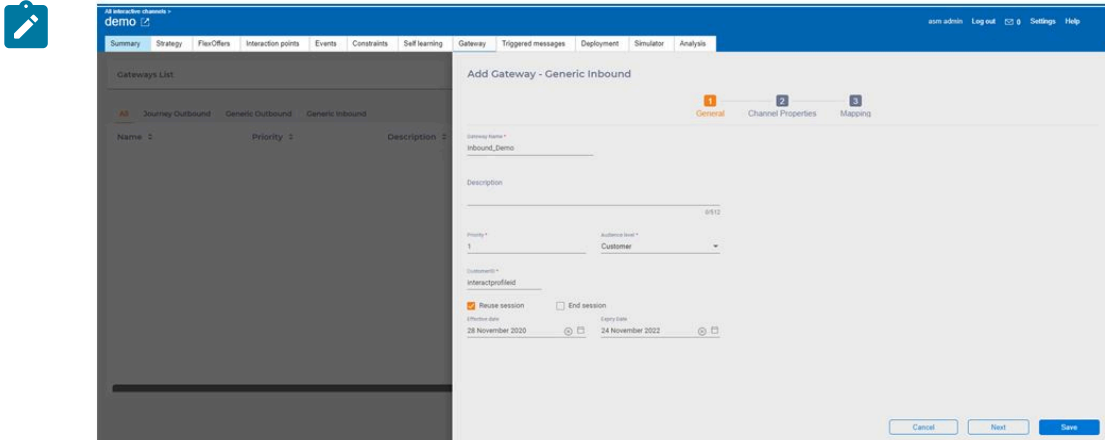
5. On the **Channel Properties** tab, you can specify the parameters required for startSession API call.
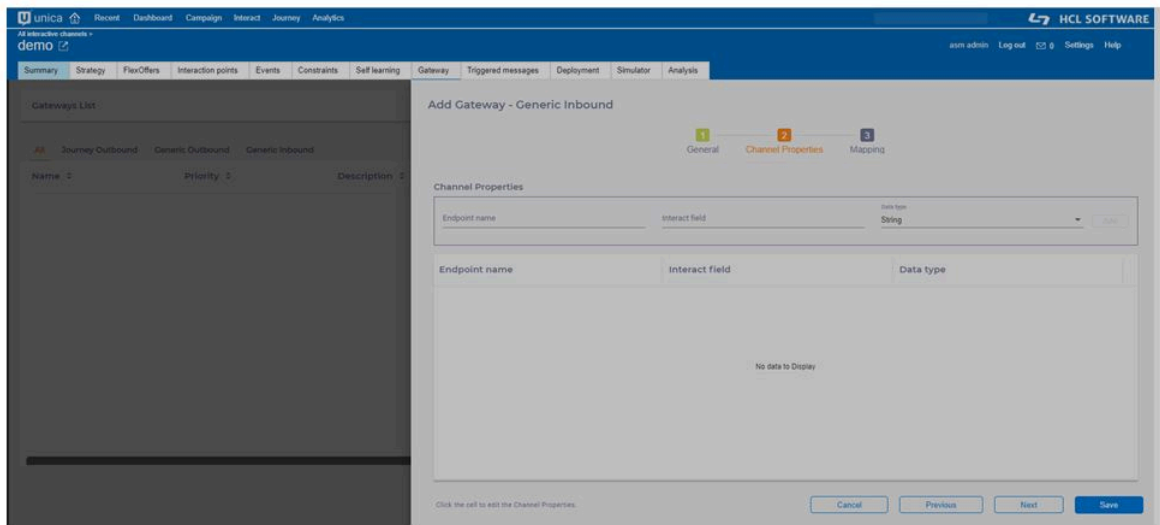
6. On the **Mapping** tab, you can specify the event mappings.
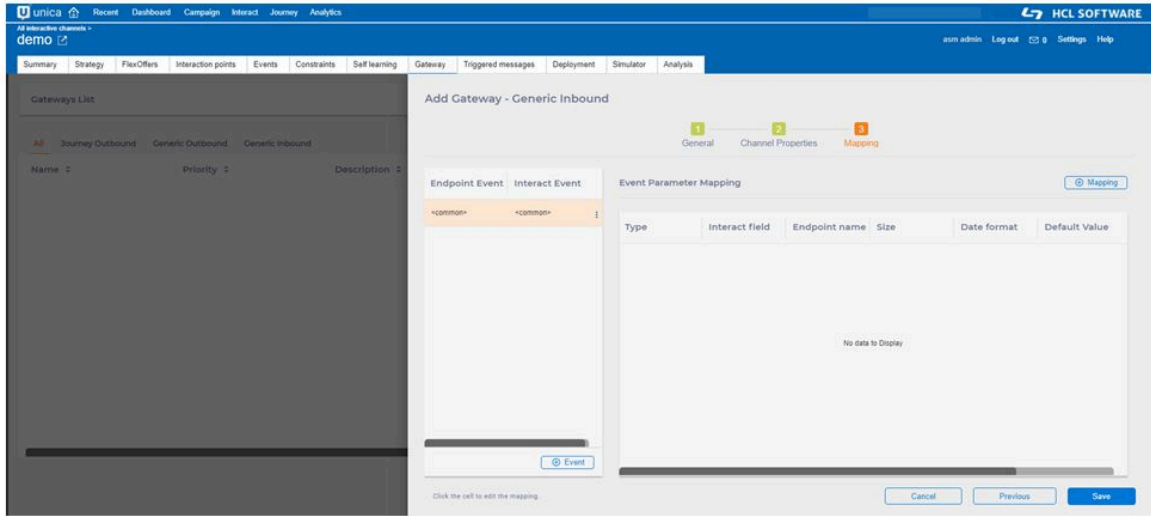
Mapping tab

a. Mappings defined under `<common>` are used for all events. To defined specific event mappings, click **Event** and map the Endpoint Event with the Interact Event.
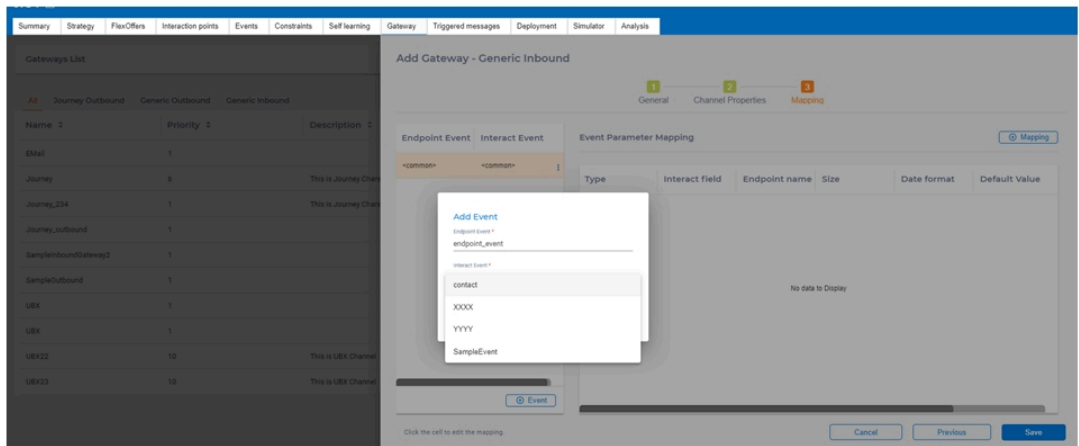
b. Click the Mapping button to define the event parameter mappings. These event mappings are passed in postEvent API call.
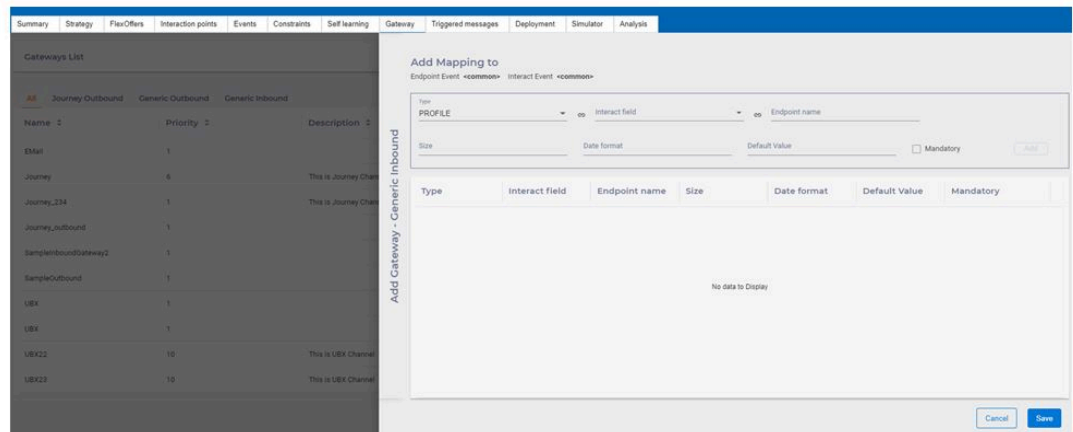
Update Gateway mappings

Click on Edit icon and similar Add Gateway box will open for user to edit the Gateway
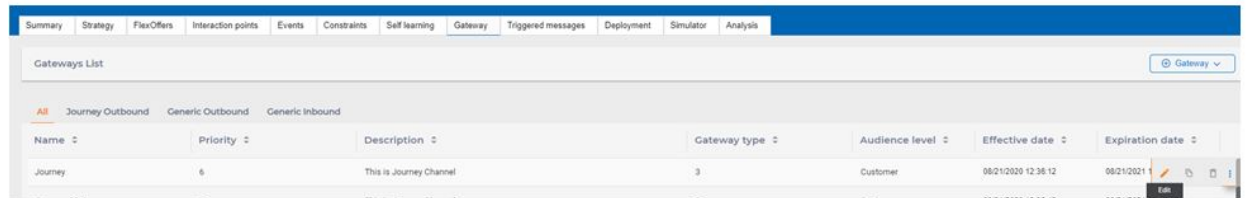
mappings.

Delete Gateway mappings

Click the Delete icon. Once you confirm, clicked OK button. The Gateway will be deleted.
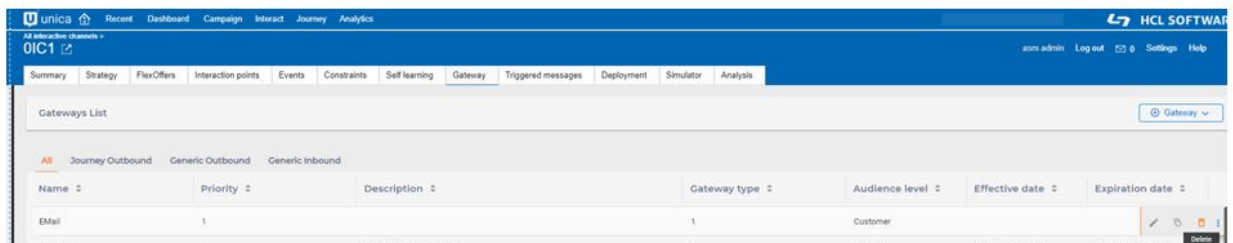
> 📝 **Note:** The interactive channel reload process deletes all the gateways from existing version and deployed gateway with high priority is reloaded as it is available in the deployed version.

Contact Central integration with Gateway

Marketers can select Contact Central channel and preferred (time zone) to manage the Interact real time outgoing messages or offers, It helps in marketing the messages or offers and send them to the right people in right time and avoid unnecessary message traffic.

Perform the following steps to complete the integration of Contact Central with Gateway.

1. Under **Add Gateway - Generic Outbound**, under the **General** tab, in the **Contact Central Integration Behavior** list, select one of the following options.
   - Discard when Unavailable: You can select your preferred time in any time zone, for example, US Eastern time zone from Monday to Friday. If Interact triggers message offer on Sunday, for Behavior = "Discard when Unavailable", system will not send offers to customer and log a information message for discard offer in interact.log
   - Always send: System sends offers to customer and also log a information message in interact.log.
   - No Integration: System functions without Contact Central integration.
2. Under **Channel** list, select a channel name, such as Email, SMS, Push, WhatsApp.
3. Under **Preferences** list, select your preferred time zone or All Preferences-All TimeZones.
4. If the marketer wants to use the user consent data, select the **Use Consent** checkbox. If the marketer uses only the user consent data, only the customers for whom `optedIn=true` will receive the trigged message.
5. During Interact and Contact Central synchronization of Consent Data, if the system detects that the user consent data has been deleted, the system will log the deleted data to a file in the `<Interact_Home>\failedData\CCSync` directory.

Deployment of Gateways

If the parent and child interactive channel have the same gateway name (difference in priority), the highest priority gateway will have precedence in deployment.

Example 1

```
IC: Parent-IC

     Gateway name: Email, priority: 1, audience: Customer

IC: Child-IC

     Gateway name: Email, priority: 2, audience: Customer
```

Email gateway from the Parent-IC will be considered in case of the same name.

Example 2

```
IC: Parent-IC

     Gateway name: Email, priority: 2, audience: Customer

IC: Child-IC

     Gateway name: Email, priority: 1, audience: Customer
```

Email gateway from the Child-IC will be considered in case of the same name.

If the gateway defined in the parent interactive channel has been deployed against the child interactive channels, then the gateway should be locked to modify or delete. This is applicable to Deliver Gateway type.

The gateway defined in the parent interactive channels will not be available to run-time if the parent interactive channel is not deployed.

Chapter 9. Triggered Actions

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

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

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

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

From the **Triggered action** tab, you can set offer criteria. You can choose between automatically selecting the next best offer and selecting the best offer from a list of offers. If you choose **Automatically select the next best offer**, you can choose a zone for offer. If you choose all zones, only strategic rules that apply to all zones are used. If you chose a specific zone, only the strategic rules that match that zone are used. If you choose **Select the best offer from the list**, you must add offers for Interact to choose from when the offer is triggered.

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

Triggered actions runtime workflow

The following triggered actions workflow occurs at Unica Interact runtime.

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

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

If an error occurs in step 6, the handling depends on the implementation of the consumer and/or the gateway. However, if the consumer also runs in the same application server, an error is logged.
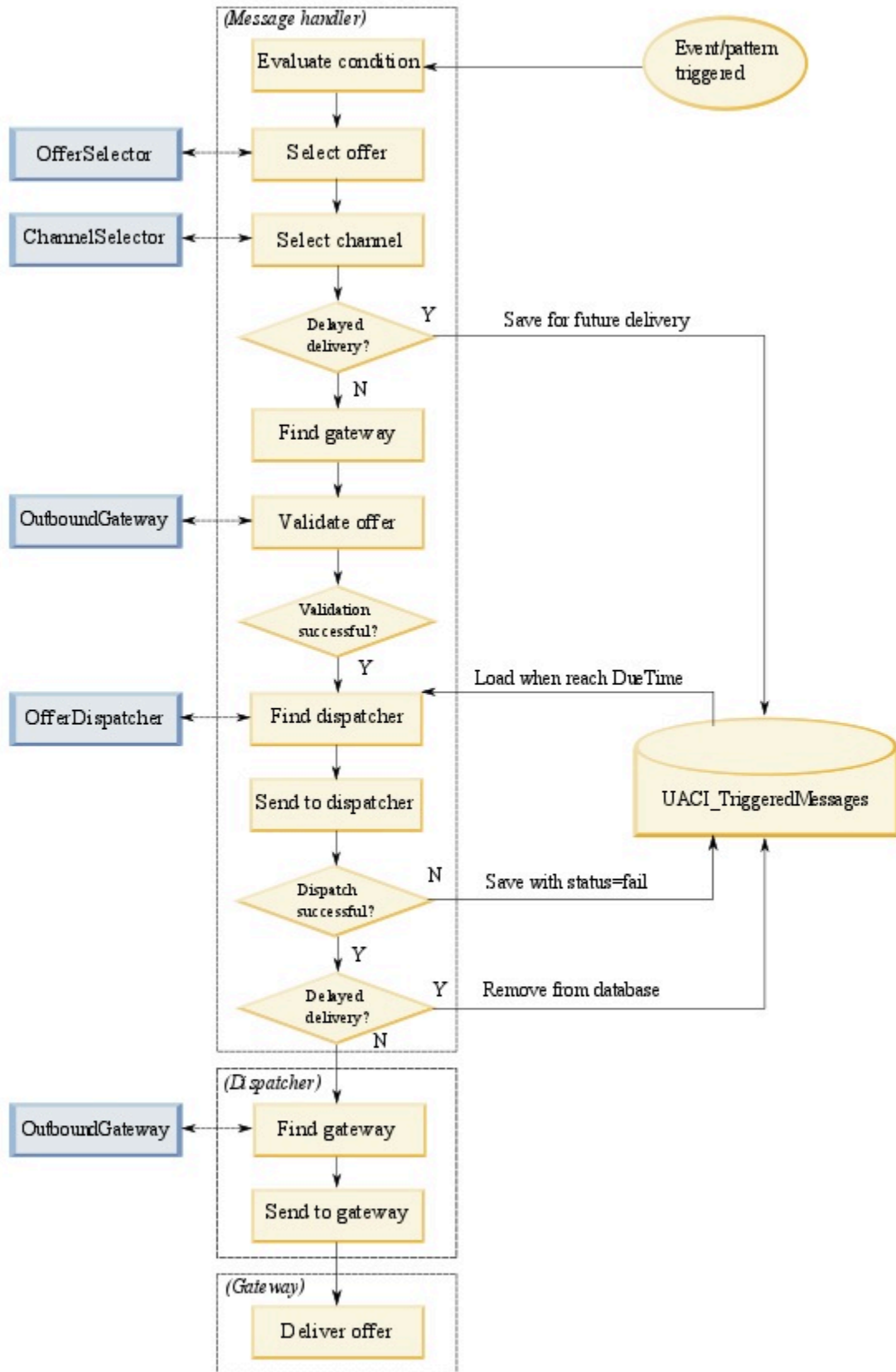
Chapter 10. Understanding deployment to runtime servers

Deployment is how you transfer all the configuration that you define in the design environment to the runtime server groups. Deployment is grouped by interactive channel. When you deploy an interactive channel, you are sending all the data that is associated with an interactive channel to the selected runtime server group. This is why, when you are creating interactive channels, you must define the production runtime servers and the non-production (testing) runtime servers.

> ⚠️ **Important:** You must have the `InteractAdminRole` role to deploy an Interactive channel.

The first deployment contains the following data:

- All interactive flowcharts that are associated with the interactive channel that are marked for deployment.

  This includes the smart segments.
- All interaction strategies that are associated with the interactive channel that are marked for deployment.

  This includes the treatment rules, which also include offers.
- All events, zones, and interaction points that are defined in the interactive channel.
- Other required data not specific to interactive channels including audience level definitions, built-in learning configuration, offer attribute definitions, custom macro definitions, contact and response history mapping information, and campaign start and end dates.

On all subsequent deployments of the interactive channel, Unica Interact sends the following to the selected runtime server.

- All data that is associated with the interactive channel including interaction points and events.
- All edited interactive flowcharts and interaction strategies that are associated with the interactive channel that are marked for deployment.
- The last deployed version of all interactive flowcharts and interaction strategies that are contained in previous deployments which are not marked for undeployment.
- All other required data not specific to interactive channels.

If an interactive flowchart or interaction strategy is marked for undeployment, Unica Interact disables all data and references to the undeployed flowcharts and strategies from the runtime server.

Note: After you deploy an interactive channel to a Unica Interact runtime server, the runtime server is now associated with that particular design environment, including the Unica Campaign partition. If you attempt to reuse the same runtime server by associating it with a new design environment, deployment fails. This scenario might occur if you have a staging Unica Campaign installation and a production Unica Campaign installation.

Deployment is a four-step process.

1. Configure and mark all interactive flowcharts that are associated with an interactive channel for deployment.
2. Configure and mark all strategies that are associated with an interactive channel for deployment.
3. Configure the events and interaction points tab of the interactive channel.
4. Deploy the data from the interactive channel deployment tab.

When you mark an interactive flowchart or interaction strategy for deployment or undeployment, it remains marked and locked against editing until you deploy to a production server. The following table shows the marked for deployment status of an interaction strategy as you take actions in the design environment.

Step	Marked status	Action in design environment
1	Marked for deployment and locked for edit.	Mark an interaction strategy for deployment.
2	Marked for deployment and locked for edit	Deploy elsewhere to a staging server group. Testing on the staging server shows that your treatment rules need changes.
3	Available for edit	Cancel the deployment request for the interaction strategy to make your changes.
4	Marked for deployment and locked for edit	After you make your changes to the interaction strategy, mark it for deployment again.
5	Marked for deployment and locked for edit	Deploy elsewhere to a staging server group again. Testing with your revised treatment rules is successful and you determine the interactive channel is ready for production.
6	Available for edit	Deploy to the production server group.

When to deploy

You must deploy your interactive channel when you change any of the following data.

- Interactive flowcharts
- Interactive channels
- Interaction strategies
- Audience level definitions
- Built-in learning configuration
- Offer attribute definitions
- Custom macro definitions
- Contact and response history mapping information
- Campaign start and end dates
- Retiring offers

If you change any of the other required data not specific to interactive channels, you must redeploy all the interactive channels that are associated with the server group for the changes to take effect.

> **Note:** While using the Offers from 'Centralized Offer Management' into Interact's Strategy or Flex Offers, ensure that there are no duplicate attribute names or offer names present.

Understanding runtime servers

Runtime servers are the workhorses of your Unica Interact implementation. The runtime servers listen and respond to requests from the touchpoint through the Unica Interact API. When your touchpoint requests an offer, it is the runtime server that responds with the offer.

Unica 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 Unica 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 Unica Interact.

Deployment and delete

To ensure that you do not accidentally remove data that is required for a Unica Interact runtime server to run correctly, deploying an interaction configuration locks Unica Interact objects so you cannot delete them. After you deploy an interaction configuration, you cannot delete any interaction strategy, interactive flowchart, or interactive channel that is

associated with the interaction configuration until you remove the object from all server groups.

If you mark an interaction strategy or an interactive flowchart to be removed, and then deploy the interactive channel to all server groups which contained the interaction strategy or interactive flowchart, you can delete the interaction strategy or interactive flowchart.

If you remove an interactive channel from all server groups to which you deployed the interactive channel, you can delete any of the interaction strategies, interactive flowcharts, or interactive channels.

For example, you have interactive channel A which contains interactive flowchart A and interaction strategy A. You deploy interactive channel A to the server group Test and the server group Production. You realize that interactive flowchart A is inadequate, so you make interactive flowchart B. You mark interactive flowchart A to be removed, and mark interactive flowchart B for deployment. You deploy the flowchart to server group Test. You cannot delete interactive flowchart A because it is still deployed to server group Production. After you deploy to server group Production, you can delete interactive flowchart A. Over time, you realize you must restructure your interaction configuration. You create interactive channel B, interaction strategy B, and interactive flowchart C. You deploy this interaction configuration to server group Test and server group Production. You also remove interactive channel A, interaction strategy A, and interactive flowchart B from server group Production. You cannot delete any objects because all objects are deployed somewhere. After you remove interactive channel A, interaction strategy A, and interactive flowchart B from server group Test, you can delete interactive channel A, interaction strategy A, and interactive flowchart B.

Deleting an interactive channel

After you deploy an interaction configuration, you cannot delete an interactive channel that is associated with the interaction configuration until you remove the object from all server groups to ensure that you do not accidentally remove required data from the runtime server.

Therefore, before you can delete an interactive channel, you must undeploy any associated objects.

1. Click the associated strategy on the interactive channel summary tab. Mark the associated interaction strategy for undeployment.

2. Click the associated flowchart on the interactive channel summary tab. Mark the associated Unica Interact flowchart for undeployment.

3. Click **View deployment history** on the interactive channel summary tab. If all pending changes are marked with an **X**, click **Redeploy**. Continue to the next step when the redeploy is successful.

4. Highlight the server group, click **Undeploy**. **Undeploy** is only enabled if the previous steps were completed successfully. Continue to the next step when the undeploy is successful.

5. Delete the associated interactive channel.

6. Delete the associated flowchart.

7. From the **All interactive channels** list, highlight the interactive channel and delete it.

Deployment versioning

Unica 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, Unica Interact preserves the state of the deployment to ensure that it is available in the future for redeployment or for loading back into the design time to use as the basis for further modifications.

Information about each version

When you deploy an interactive channel or settings, you are required to name the version you are deploying, such as SalesPortal_1, SalesPortal_2, and so on. A sequential version number is also assigned automatically. You can also optionally provide a description of the deployment. All of this information, along with more status information such as the type of deployment and its status, are all available in the Deployment History section of the interactive channel deployment tab.

At any point, you can select a deployment version in the Deployment History section and either redeploy it as-is (which allows you to revert to an earlier deployment if necessary), or

to reload elements from that deployment to the design time environment as a starting point for further modifications.

> **Note:** Redeploying a version (rolling back to a deployment version) must be used with care. For example, campaign objects or offers that existed at the time of the original deployment might no longer exist, or might no longer be valid. Test the behavior of the previous version of the deployment before using it in a production environment.

Versioning actions

In addition to viewing the historical information about each deployment, there are two actions you can take on past deployment versions:

Table 10. Version actions on the deployment tab

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	Allow you to reload the specified flowcharts and interactive strategies to the design time, so you can use them as the basis for more changes. You can select individual flowcharts or strategies to reload, or reload the entire interactive channel.
Cleanup	Allows you to delete the deployment history from the specific date. It includes the deletion of deployment history data from design time and run time. You can also archive design time data into separate tables. No data has been archived at run time.

Table 10. Version actions on the deployment tab

Version actions on the deployment tab

(continued)

Action	Description
	✏️ **Note:** Deployment data for the specific server group will not be deleted if its name is changed in the Platform configuration.

Deploying to a runtime server group

This procedure deploys to a runtime development, test, or production server group for the Interactive Channel.

Before deploying to a live, customer-facing production runtime server group, you must confirm that all interactive offers, interactive flowcharts, interaction strategies, interaction points, zones, and events are tested and approved.

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

If you have any new or modified flowcharts or sessions, you have to navigate to those flowcharts or sessions and manually mark them for deployment before deploying the rest of the channel. If you do not, your modifications will not be included in this deployment.

1. Navigate to the **Deployment** tab of the interactive channel that you want to deploy.

   The **Deployment** tab is displayed.
2. Click **Deploy interactive channel changes**.

   The **Deploy interactive channel changes** dialog is displayed.

3. Use the **Select a server group where changes will be deployed** drop-down list to specify the development, test, or production server group on which you want to deploy.

4. Enter a version name for this deployment version, such as `Portal_CustomerCheck_6` or another value that is meaningful to you in the deployment history and other reports.

5. **Optional:** Enter a description for this deployment that is meaningful to you in the deployment history and other reports to help track the decisions and purpose behind this deployment.

6. **Optional:** Select or clear the **Also deploy current global settings** check box.
   This check box is selected by default, and deploys global settings that include learning configuration settings, offer attribute definitions, audience level mappings, and custom macros. Because deploying these settings might affect other interactive channels that are already deployed in the same server group, you might want to clear this check box to leave existing settings in server group as they already are configured.

7. Confirm that you verified the prerequisites by selecting the check boxes.

   The **Deploy the changes** button does not become active until you confirm all the prerequisites.

8. Click **Deploy the changes**.

9. Enter the user name and password for the Unica Interact user on the runtime server and click **Log in to server**.

   If you complete multiple deployments during the same Unica user session, the login data for the runtime server is cached, so you do not have to enter it again.

   Also, be aware that the credentials you enter here must be defined within Unica Platform, even if Windows™ Integrated Login is enabled for your installation. Windows™ Integrated Login credentials are not used to authorize deployments.

The data is deployed to the selected runtime server group. You can view the results in the **Deployment history** section of the **Deployment** tab and with the Channel Deployment History report.

🖊 **Note:**

When deployment starts, the data is sent to one of the run time instances in the target server group. After all the deployment data is successfully transferred to that instance and persisted into the run time database, the design time sends a notification to all the run time instances registered with the design time for loading this new deployment.

When the managed Ignite cache is configured as "Distributed", all run time instances will be registered with one another, regardless whether InteractCache or PatternStateCache uses Ignite or not.

When one runtime instance receives the notification of reloading deployment, this instance notifies all other runtime instances to reload deployment. It returns to the design time when all run time instances finish reloading.

This process is automatic; no extra setting is required.

Undeploying

Use the following steps to undeploy a deployment.

If you are bringing an interactive channel or touchpoint offline, you can undeploy a deployment.

When you undeploy, Unica Interact disables the data from the previous deployment from the selected runtime server.

Note: In most cases, avoid undeploying from a production server because undeploying effectively turns off the rules for the interactive channel. Instead, correct the data and deploy your changes, or use the **Redeploy** feature in the **Deployment history** section to replace the deployed settings with a prior version.

1. Navigate to the **Deployment** tab of the interactive channel you want to undeploy.
2. In the **Active deployments** section, select a deployment to a specific server group and click **Undeploy**.

Clicking **Undeploy** starts the process to remove the interaction configuration from the runtime server group. If the deployment was to a production server group, there are safeguards to confirm that you are ready to send the changes to a production server because this is a customer-facing system. A red warning icon on this button indicates that there are changes that have not been deployed to the production server group.

3. **Optional:** Provide an explanation of the reasons for undeploying in the **Deployment description** field.

4. Confirm that you verified the consequences by selecting the check box.

   The **Undeploy the interactive channel** button does not become active until you confirm the consequences.

5. Click **Undeploy the interactive channel**.

6. Enter the user name and password for a valid Unica Interact user on the Unica Interact runtime and click **Log in to server**.

   If you complete multiple deployments during the same Unica Campaign user session, the login data for the Unica Interact run time is cached, so you do not have to enter it again.

The data is disabled on the selected Unica Interact runtime server group. You can view the results in the Deployment History section of the deployment tab, or in the Interactive channel deployment history report. Undeploy does not remove data that is used in reports. In Campaign and Interact, if you deploy an Interactive Strategy to an Interact Runtime server, then all the offers referenced in the Strategy cannot be deleted, even if the Strategy is undeployed and the offers removed from that Strategy. Also, once an offer has been deployed, all the contents may be audited in the future, and hence you will not be able to change it any more.

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

Viewing the Deployment tab

Each interactive channel includes a tab where you can see detailed information about any active deployments of this interactive channel, view any pending changes to the deployment

status of the interactive channel, and see the history of past deployments. You can also use the Deployment tab to deploy, redeploy, and undeploy interactive channel settings. This section describes what you can view on the Deployment tab.

Active deployments

This section contains information about which deployments are active in each server group you defined. For example, you might have one version of the interactive channel that is deployed to your test server group, while another, fully tested version of the interactive channel is deployed on your production servers group.

Pending changes

These are the components that are marked for deployment but are not deployed yet. The title of the **Pending changes** section indicates how many objects are changed by the pending deployments.

This section only lists pending flowcharts and strategies, and does not include entries for interaction points or other settings pending deployment. You can deploy here, or deploy the global settings only. This table includes the following information:

Type

> Indicates the type of change that this entry in the table represents, such as flowchart, interactive strategy, and so on.

Change waiting for deployment

> A link to the interactive flowchart or interaction strategy that contains the change.

Source of change

> A link to the session or campaign that contains the change.

Change type

> Whether the change is new (Addition/Update) or a retraction (Undeployment).

Date requested

> The date and time the change was marked for deployment.

Wait time

The time that passed since the change was marked for deployment. This value does not refresh automatically, but is updated when you reload the page or click the **Refresh** button.

Requester

The user name of the Unica Interact user who marked the change for deployment.

If the item is disabled, the item was in the previous deployment but is not marked for deployment. For example, your original deployment contained interactive flowcharts A and B, and interaction strategies C and D. You can change interaction strategy C and mark it for deployment. The **Change aiting for deployment** list displays A, B, C, and D, but only C is black. A, B, and D are disabled. You change interactive flowchart B, but do not mark it for deployment. If you deploy now, Unica Interact deploys the original A, B, and D, and the new version of C. Unica Interact does not use the new version of flowchart B because it was not marked for deployment.

Deployment history

All of the deployment history that is captured in Unica Interact can be viewed here and sorted by any of the column types shown. You can also filter the information that is shown here by server group and by status. For example, you might use the column filter to show only the interactive channels that are deployed to your production server group.

The **Deployment history** section contains the following information:

Version name

The name that you assigned to this version of the deployment, in the **Deploy interactive channel changes** or **Deploy global settings only** dialogs.

Version number

The number assigned to this version of the deployment.

Operation

The type of deployment, such as deploying the interactive channel with all global settings, deploying only the global settings, and so on.

Global settings

Whether global settings were included in the deployment or not (a check mark indicates that they were). Note that you cannot sort on the **Global settings** status.

Deployment description

The description that you entered into the deployment dialog at the time of deployment.

Date

The date and time of the deployment.

Server Group

The name of the server group to which the deployment was sent.

User

The name of the user account that requested the deployment.

Status

Whether the deployment was successful or failed. Deployments with a status of "Failed" cannot be redeployed or reloaded to the design time.

Interactive channel name

The name of the interactive channel at the time it was deployed. If you have renamed the interactive channel since the deployment, this name is not updated.

There are also page controls that determine the maximum number of rows to show per page of this list (5, 10, 20, and so on), and links to go to the start of the list, previous and next pages of the list, and the end of the list.

Related information

Filtering tables in products

When you are viewing a table of information in products, features might be available that allow you to include or omit specific information (filter) the table view, based on one column value or based on combinations of column values. This section describes how to identify and use filtering options, when they are available in a table.

The steps described here apply only to tables where filtering by column heading is supported. To identify a table where this feature is supported, look for the following icon in any column heading:

When this icon is gray, it indicates that filtering is available but not currently in use for this column. The following table describes the different states of this icon:

Table 11. Column filter status icons

Filter status icons

Filter icon	Description
	When this icon is displayed next to a column heading, it indicates that no filter that uses that column or its values is active on the table. Click the icon to begin filtering.

Table 11. Column filter status icons

Filter status icons

(continued)

Filter icon	Description
🔽	When this icon is displayed next to a column heading, it indicates that a filter that uses that column or its values is active on the table. Click the icon to view, modify, or remove the filter.

1. To filter a table by using a single column, click the filter icon in the column heading. When you click the icon, the filter dialog is displayed with all of the values on which you can filter the table. By default, all of the values are selected, indicating that no information that is based on this filter criterion is omitted from the table .
2. Use this dialog box to select the values that you want to display in this table, and clear the check box next to the values you want to omit from the display.
   For example, if you were filtering the **Status** column, you might select the **Failed** check box, and clear the remaining check boxes, to display only items with a status of "Failed" in the table.
3. To select all of the values to show in the table at one time, select the **Filter By** check box at the top of the dialog.
4. To clear all of the values available to display in the table, clear the **Filter By** check box.

   This is useful if you want to display only a small number from a long list of possible values; you can clear all of the check boxes at once, then select only those you want to display.
5. To accept the changes you made and see the table that is filtered as specified, click **Filter**.
6. To remove the column's filter from the table completely, click **Remove Filter**.
   This has the same effect as selecting all of the check boxes.

When you filter on more than one column, the filters are combined. For example, if you were to filter out some server groups and also filter out some status values, the results would be combined to show only the server groups that you chose to display that have the specified status values.

Chapter 11. Simulator and Coverage analysis

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

Simulation supports three scenarios. They are:

- Basic scenario for quick getOffer test of single audience *(on page 248)* (in the Simulator tab)
- Advanced scenario to test API combination for a single audience *(on page 250)* (in the Simulator tab)
- Coverage scenario for coverage analysis of defined audience groups *(on page 253)* (in the Coverage tab)

Interact has a new permission `INTERACT_CHANNEL_SIMULATOR`. Unica Interact assigns this permission to the following roles:

- Policy Folder Owner
- Owner
- Admin
- Execute
- Design
- Review

Users with the `INTERACT_CHANNEL_SIMULATOR` permission can view, edit, update, and execute Interact Simulator.

To access Simulator tab and the Coverage tab, you must have these permissions granted for your role. If theses permissions are not granted, contact your Unica administrator.

Basic scenario for quick getOffer test of single audience

Creating a basic scenario

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

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

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

   a. To use the search option to search your profile table for the audience ID, click ⌕ . By default, only the first 10 records and 20 columns of a table are displayed.

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

   b. Click **Add condition** to specify search criteria. If you add more than one condition, your conditions are treated as AND conditions in your search results.

c. Click **Find** to populate the results for your search criteria.

d. From the **Select display column** tab, you can choose specific columns to see in your search results by selecting **Show all**, **Show selected**, or **Show unselected** from the drop-down list. Use **Search attributes** to search within your filtered list. When you select or deselect an attribute, the search results table is updated immediately.

e. Highlight the record that matches your criteria and click **Select**. This audience ID is added to your scenario.

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

6. Select a **Zone** from the drop-down list. Since all interact points in a zone behave the same, Unica Interact picks the first IP in the selected zone and sets it as the IP parameter in the `getOffers` API. Only zones that have IPs defined are displayed in the drop-down list.

7. Enter the **Number of offers** for the scenario to return. If you do not enter the number of offers, Unica Interact returns all offers assigned in the strategy.

8. Click **Save** to add this scenario to your saved scenarios. From **Saved scenarios** you can also edit, copy, or delete previously saved scenarios.

Running the basic scenario

After saving the created scenario, you can test it by running the scenario.

- When a scenario is running, you can still browse or edit simulation scenarios, but you cannot run another scenario till the previous run is completed.
- You cannot run an unsaved scenario. If you create or edit a scenario, save the updates before you run the scenario. If you run an unsaved scenario, the system runs the previously saved scenario.

To run a scenrio, complete the following steps:

1. Open a scenario.
2. Click **Run**.

Viewing the results after running the basic scenario

1. After the run completed, to view the returned offers from the `getOffers` method, select the **Simulation results** tab.
   You can view the offer name, description, offer code, treatment code, and score.
2. To view the additional attributes, click the icon in the **View attribute** column.
   By default, the results are displayed by highest score.
3. To view the log results for your scenario run, select the **Log** tab.
   Only the log entries for the last scenario run is displayed. The logs displayed on this tab are the as same as those logged in `interact.log`, but this tab filters the logs by the session ID and the start timestamp of your simulation run. The level of logging is determined by `interact_log4j.properties`.

Advanced scenario to test API combination for a single audience

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

Creating an advanced scenario

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

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

   a. Select an audience level from the drop-down list.

   b. Select an audience ID.

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

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

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

      The simulator uses the server and profile database defined in **Campaign | partitions | partition[n] | Interact | serverGroups | [serverGroup set for Simulator] | prodUserDataSource** property to load profile records and perform audience ID searches. This prodUserDataSource should be configured the same as **Interact | general | serverGroups | prodUseDataSource**, so the audience ID that is set during scenario definition exists when the simulation runs. The

profile table mapped in the **Interactive Channel Summary** tab from design time database should be a subset of the profile table in runtime database.

c. Select the check box to rely on an existing session or to turn the debug flag on if you want to enable either of these options for the `startSession` method.

d. Add parameters for the API. Enter a name and value for the parameter. You can also select predefined parameters from the **Name** drop-down list. Choose a type from the drop-down list. Click the check mark to add this parameter.

6. Add a `getOffers` method. Select a **Zone** from the drop-down list and add the **Number of offers**. If you do not add **Number of offers**, by default all offers assigned in strategy are returned.

7. Add a `postEvent` method. Add an event name and parameters for this method. You can also select predefined parameters from the **Name** drop-down list.

8. Add a `getProfile` method. You do not need to configure this API.

9. Add a `endSession` method. You do not need to configure this API.

10. You can arrange the order of the APIs using the up and down arrows. You can add `getOffers` and `postEvent` more than once in a scenario and arrange them accordingly. You can also delete an API if you decide you do not want to include it in the scenario simulation.

11. Click **Save** to add this scenario to your saved scenarios. From **Saved scenarios** you can also edit, copy, or delete previously saved scenarios.

Running the advanced scenario

After saving the created scenario, you can test it by running the scenario.

- When a scenario is running, you can still browse or edit simulation scenarios, but you cannot run another scenario till the previous run is completed.
- You cannot run an unsaved scenario. If you create or edit a scenario, save the updates before you run the scenario. If you run an unsaved scenario, the system runs the previously saved scenario.

To run a scenrio, complete the following steps:

1. Open a scenario.
2. Click **Run**.

Viewing the results after running the advanced scenario

1. To view the results, select the **Simulation results**.

   The results are shown in the same order as your APIs on the **Scenario definition** tab.
2. To view the log results for your scenario run, select the **Log** tab.

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

Coverage Analysis of defined audience groups

Interact introduced a new tab named Coverage, following the Simulator tab.

The Simulator tab contains only Basic and Advanced scenarios. All existing and new Coverage scenarios are displayed and managed from the Coverage tab.

Coverage Scenario

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

Adding a new Coverage scenario

To add a new Coverage scenario, complete the following steps:

1. In the **Coverage** tab, click **+ Scenario**.

   A panel appears containing three tabs: **General**, **Parameters**, and **Zone**.
2. In the **General** tab:

   a. Provide appropriate values for **Name** and **Description**.

   b. Select the **Audience level**.

By default, the new coverage scenario is run for all audiences in the mapped profile table. Optionally, you can define filtering conditions that select sub-set of audiences to do coverage analysis.

c. Select **Filter** to define filtering conditions. The Audience ID panel opens.

d. Set the desired conditions and click **Find**.
The audiences that match conditions appear in the table that follows. If the result is a large number, the table only displays 100 results. By default, first 10 profile attributes in mapped profile table appears in the audience table.

e. Select the required profile attributes in **Add/Remove Columns** dropdown.
The attributes displayed in the table are also the profile attributes included in results of Runtime simulation when **SimSaveProfileAttr** set to 1 in `startSession`.

f. In the **DB table name for storing results** field, define the table name to store the simulation results. This table is created in the Design time database. By default, this field is populated with a default value `[DEFAULT]`. Leaving it as is, the application forms the result table name in form of `UACI_SimResults_<scenarioID>`. You can change the default value, but this field is required.

g. There are two checkboxes:
  - **Warn to export previous run results**: If you select this option, a reminder message will be shown to the user to export the previous run results, in case the user re-runs the scenario. If you do not select this option, no reminder message will be shown.
  - **Using existing event Pattern states and offer suppression rules**: If you select this option, Interact will consider the event pattern and offer suppression states for those audience IDs. This means that the existing event pattern or offer suppression rules will be applied to the simulation

results. If you do not select this option, Interact will ignore the existing event pattern states or offer suppression rules while displaying the simulation results.

3. In the **Parameters** tab:

   a. Define parameters for a coverage scenario, which are parameters passed into Interact Runtime API startSession call, the first API called in a coverage simulation. The **Select Parameters** dropdown lists all system defined parameters for startSession API. Users can either select from the dropdown or define new session parameter by typing in **Name** textbox. If the system parameters **SimSaveProfileAttr** (in the dropdown) is selected and set to `1`, the profile attributes will be included in results of scenario simulation.

4. In the **Zone** tab:

   a. Optional. Specify parameters for each selected zone, which are parameters passed into `getOffers`. The **Select Parameters** dropdown lists all system defined parameters for `getOffers` API. Users can either select from the dropdown or define new session parameter by typing in **Name** textbox. If the system parameters **SimSaveOfferAttr** (in the dropdown) is selected and set to `1`, the offer attributes will be included in results of scenario simulation.

   b. Click **Add/Edit Zones**.
   The **Zones** panel opens.

   c. Drag-and-drop the required number of configured zones from **Available Zones** to **Selected Zones**. You must select at least one configured zone.

   d. In the **Selected Zones** section, select a zone.
   The Parameters section appears.

   e. Select the required parameter in **Select Parameter**, provide values for **Name**, **Type**, and **Value**, and click **Add**.

   f. Repeat *Step e* to add more parameters.

g. If you have added more than one zone, repeat *Step d* and *Step e* to configure
the remaining zones.

h. Click **Save**.

5. Click **Save** button to save the scenario.

> ✎ **Note:** You must save the unsaved changes before running the scenario. If you
> run the scenario without saving, the last saved scenario will get executed.

After saving the scenario, the system creates the following tabs in view mode:

- **General**
- **Parameter**
- **Zone**
- **Simulation results**
- **Run history**

Running the Coverage scenario

After saving the created coverage scenario, you can test it by running the scenario.

1. Open a scenario.
2. Click **Run**

   The **Select Server Group dialog** appears.
3. Perform the following steps:

   a. Select the required server group from the **Server Group List** dropdown.

   b. Select the required instance from the **Instance** dropdown. If you do not select an
   instance, the system automatically assigns the value `Any Instance`.

   c. Click **Run**.

   In earlier Interact versions, scenarios always run on server group defined in
   Configuration setting (`Affinium|Campaign|partitions|partition1|Interact|`

`simulator`) and the first instance of that server group. From this version, you can run coverage scenarios against selected server group and runtime instance. This gives you more control on where you can run coverage scenarios.

4. Click the **Refresh** button to check the status.

   Interact UI does not automatically refresh the **History** tab to show its progress. Sometimes a coverage scenario can take long time to run due to large number of audiences that need to be processed. From this version, the UI request to Interact Design time to run a scenario is an asynchronous call. If the response from Runtime side is not received within the specified timeout time (default 30 second), the request from Design time will come back with run status as `Running`. Users can click **Refresh** button to check running process. We have introduced Reporting running progress so that you can export successful run results to a CSV file. Similar to run scenario, you can check exporting progress as percentage in **Status** column of run history record that is exporting.

5. **Cancel running**: This icon is available only for the Simulator Coverage Scenario when a run starts or when the status is `Running`. When user clicks on this icon, the running of the Simulator Coverage Scenario is stopped.

Viewing the Simulation Results

After running the Coverage scenario you will see the following results:

Simulation Results tab

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

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

Section 1: 'Run Summary', which displays:

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

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

Section 2: It displays a table with columns of

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

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

Viewing the Run History

This tab displays all run history records in pagination. By default 10 run results are displayed on one page.

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

It has following columns:

- **Run ID**: The application will generate a unique RUNID for every run of Simulator Coverage Analysis scenario. This will be displayed on screen after the run is completed.
- **Start time**: It store the run start time of the Coverage Scenario run. By default it displays the start time in the 'MMM DD, YYYY hh:mm:ss' format.
- **Run duration (sec)**: This column display the time taken by the Simulator Coverage Scenario takes to run.
- **Run on**: Interact Runtime URL on which the simulation run is executed.
- **Status:** : This column, display the status of the Simulator Coverage Scenario run.

The different status are as follows:

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

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

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

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

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

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

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

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

- **Delete history record**: This is available for every Simulator coverage scenario Run. By clicking on this icon the corresponding history record can be deleted.
- **Download CSV**: This icon appears only when the run result of the Simulator Coverage Scenario is exported into CSV. When it is clicked, the system retrieve CVS file saved on the DT server and download it to user's browser.

On the **Run history** tab there are three buttons:

- **Refresh**: Checks the run status.
- **Delete all histories**: Deletes all the run history
- **Export to CSV**: When user clicks on this link, latest run of the Simulator Coverage Scenario is exported to CSV and the status of this run is changed to **Exported to CSV**.

Export to CSV

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

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

> 📝 **Note:** When you export to CSV, Interact UI does not automatically refresh the History tab to show its progress. Click the Refresh button to check the status.

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

Scheduling coverage scenario

You can schedule Interact Simulation execution through operating system cron job.

- System creates simple standalone java application to invoke execution service through Restful API.
- System provides operating system based scripts to execute simple java application.
- Set operating system-level cron job to invoke execution scripts.

1. The main class support run Coverage Scenario from OS based scripts: System-created simple SimulatorMain class is located in Interact Design Time. It covers the following main functions:
    - Read execution config file (`simulator.properties`).
    - Communicate with Interact DT Simulation Execution Server through Platform security authentication.

- Send request to invoke Simulator Execution Restful API to execute coverage scenario. Receive the response of execution results.
- Logging all request/response message.
- Support internationalization of display message.

2. The system provides two scripts:

   The scripts are available in the `/InteractDT/tools/simulator` directory.
   - The script for Microsoft Windows is `runSimulator.bat`.
   - The script for Linux is `runSimulators.sh`.

3. How to execute `runSimulator.sh/runSimulator.bat`:

   We will take the example of `runSimulator.sh`

   a. Command for executing Coverage Scenario:

   ```
   $ ./runSimulator.sh -conf ./conf/simulator.properties -p test123
    -action execution
   ```

   b. Command to get running status:

   ```
   $ ./runSimulator.sh -conf ./conf/simulator.properties -p test123
    -action status
   ```

   c. Command for canceling running Coverage Scenario:

   ```
   $ ./runSimulator.sh -conf ./conf/simulator.properties -p test123
    -action cancel
   ```

4. Requested `./conf/simulator.properties`:

   ```
   ######################################################################
   ##################
   The following properties request by runSimulator scripts.
   # Request parameters for run Simulator:
   #
   #  platformUrl - the Platform URL (host:port) of the Platform
    instance.
   #  designTimeUrl - the URL (host:port) of the Interact design time
    instance.
   ```

```
#  interactChannelIdOrName -  the Id or Name of the interactive
 channel containing the simulator.
#  scenarioIdOrName - Simulation Scenario Id or Name
#  serverGroupName - Name of Server Group where interact instance
 running
#              request for action=execution, status , cancel
#  rtInstanceName - Interact Instance Name, for example
 rtInstanceName=interact1
#  rtInstanceUrl - Interact Instance URL, for example =
 http://localhost:7005/Interact
#    request of configuration of rtInstanceName and rtInstanceUrl:
#       1) not need set value to both parameters - rtInstanceName,
 rtInstanceUrl
        ( system will find ServerGroup associated interact instance,
 and run coverage simulation. )
#       2) set value to one parameter - either rtInstanceName or
 rtInstanceUrl
#       3) set value to both parameters - rtInstanceName,
 rtInstanceUrl
#  resultTableOverWrite - if set false, system will check if already
 has data in simulation result table,
#                       than system will skip the execution of
 coverage simulation.
#  userName - is the user name currently logged in to the Interact
 design time.
#  locale   - using for processing data (optional)
#
######################################################################
###############
# Sample Data for run Simulator: action=execution
# $./runSimulator.sh -conf ./conf/simulator.properties -p asm_admin
 -action execution
```

```
#################################################################
###############
#platformUrl=http://localhost:7005/unica
#designTimeUrl=http://localhost:7005/Campaign
#interactChannelIdOrName=20
#scenarioIdOrName=testsim3
#serverGroupName=defaultServerGroup
#rtInstanceName=instanceA
#rtInstanceUrl=http://localhost:7005/Interact
#resultTableOverWrite=false
#userName=asm_admin
#locale=en
##################################################################
##############
```

5. Set OS level cron job to invoke execution scripts:

```
#Run a simulatorException.sh every 6 hour
0 */6 * * *  /…/InteractDT/tools/simulator/runSimulator.sh
```

Example 1: `runSimulator.sh` missing parameter

```
$ ./runSimulator.sh
Start Run Simulator
2022-11-15 08:29:32,093 INFO  service.SimulatorMain [432] -
Run Simulator Script, Missing pass arguments:
USAGE: runSimulator.sh\bat -conf <propertiesFile> -p <password>
 -action <Execution>
COMMANDLINE PARAMETERS:
<propertiesFile> Properties file to read simulator execution
 parameters from.
<Execution> execution - Execution of coverage simulation.
```

```
<Execution> status - Get coverage simulation running status.

<Execution> cancel - Cancel coverage simulation.



2022-11-15 08:29:32,095 ERROR service.SimulatorMain [132] - Run

 Simulator script, Missing arguments : -conf <propertiesFile> -p

 <Password> -action <Execution>

End Run Simulator
```

Example 2: runSimulator.sh missing properties file:

```
$ ./runSimulator.sh -conf abc -p test -action execution

Start Run Simulator

2022-11-15 08:31:02,284 INFO  service.SimulatorMain [432] - Run

 Simulator, Missing pass arguments: <propertiesFile>.

2022-11-15 08:31:02,286 ERROR service.SimulatorMain [158] - Run

 Simulator script, Missing arguments : <propertiesFile>

End Run Simulator
```

Example 3: Execute and Get Response

```
$ ./runSimulator.sh -conf ./conf/simulator.properties -p test123 -action execution
Example run execution: ./runSimulator.sh ./conf/simulator.properties -p asm_admin -action execution
Start Running Simulator
2023-01-17 16:32:58,271 INFO  service.SimulatorMain [437] - The PropertyFileName : ./conf/simulator.properties.
2023-01-17 16:32:58,278 INFO  service.SimulatorMain [661] - In getURLConnection for http with url: http://localhost:7005/unica/api/manager/authentication/login
2023-01-17 16:32:58,453 INFO  service.SimulatorMain [437] - Platform URL : http://localhost:7005/unica.
2023-01-17 16:32:58,454 INFO  service.SimulatorMain [437] - Interact Design Time URL : http://localhost:7005/Campaign.
2023-01-17 16:32:58,454 INFO  service.SimulatorMain [437] - Channel Id Or Name : 23.
2023-01-17 16:32:58,454 INFO  service.SimulatorMain [437] - Simulation Scenario Id Or Name: 2.
2023-01-17 16:32:58,454 INFO  service.SimulatorMain [437] - Server Group Name : defaultServerGroup.
2023-01-17 16:32:58,454 INFO  service.SimulatorMain [437] - Runtime Instance Name : defaultinstanceURL.
2023-01-17 16:32:58,454 INFO  service.SimulatorMain [437] - Runtime Instance URL : .
2023-01-17 16:32:58,455 INFO  service.SimulatorMain [437] - User Name : asm_admin.
2023-01-17 16:32:58,455 INFO  service.SimulatorMain [437] - User Token : 1673991178431-2-TG3Gu1cS-HbM7-Bcmm4OxU-ig2u-L2IzTUQK.
2023-01-17 16:32:58,455 INFO  service.SimulatorMain [437] - Run Simulator Action : execution.
2023-01-17 16:32:58,455 INFO  service.SimulatorMain [437] - Start Simulator Execution.
2023-01-17 16:32:58,456 INFO  service.SimulatorMain [437] - Payload : http://localhost:7005/Campaign/api/interact/rest/v2/channels/23/simulationscenarios/2/resultTableStatus.
2023-01-17 16:32:58,456 INFO  service.SimulatorMain [661] - In getURLConnection for http with url: http://localhost:7005/Campaign/api/interact/rest/v2/channels/23/simulations
cenarios/2/resultTableStatus
2023-01-17 16:32:58,661 INFO  service.SimulatorMain [437] - Get Response with response Code : 200 and Message : {"type":"coverage","logData":null,"msg":"1","statusCode":0} .
2023-01-17 16:32:58,663 INFO  service.SimulatorMain [437] - Request body : {"name": "defaultServerGroup", "instances":[ {  "name":"defaultinstanceURL",  "url":"" } ] }.
2023-01-17 16:32:58,664 INFO  service.SimulatorMain [437] - Payload : http://localhost:7005/Campaign/api/interact/rest/v2/channels/23/simulationscenarios/2/execution.
2023-01-17 16:32:58,664 INFO  service.SimulatorMain [661] - In getURLConnection for http with url: http://localhost:7005/Campaign/api/interact/rest/v2/channels/23/simulations
cenarios/2/execution
2023-01-17 16:32:59,510 INFO  service.SimulatorMain [437] - Get Response with response Code : 200 and Message : {"type":"coverage","logData":null,"msg":"Requested","statusCod
e":6} .
```

Chapter 12. Personalization Playback

Marketers can use Personalization Playback to review activities that are the outcome of existing campaigns. Personalization Playback shows the aggregated user activities grouped by audience, offers, and segments. It also includes capabilities to drill-down for activity details such as profile attributes, session attributes, API history, event patterns status, delivered and disqualified offers for Interact APIs.

> ✏️ **Note:**
>
> - You must activate API logging in Interact RT to capture and present API information on screen.
> - In the **offerserving** node, set the **includeArbitrationInfo** parameter to `True`. The Segment view in Personalization Playback will work only if you set the **includeArbitrationInfo** parameter to `True`. It enables the system to log segment information.
>
> For more information, see the Unica Interact V12.1.4 Administrator's Guide.

The following are the features of Personalization Playback:

- Aggregated view of session activities grouped by time, specifically, the number of active sessions and audiences during a given period.
- Aggregation can be filtered by audience profile, offer properties, and segment properties for corresponding view types.
- When you select start time and end time the system aggregates the data between the seleted times and displays the data as a graph. The system automatically calculates aggregation unit based on the selected timeframe.
- You can drill-down each aggregated data point to view the list of active sessions for the data point.

- You can further expand each session to view all API requests, together with the profile attributes / offer attributes / segment attributes, session parameters, and event pattern states at that point.
- Playback data is retrieved from the production server group.

Using Playback to review the outcomes of existing Campaigns

Use Playback to review activities that are the outcome of existing campaigns. In version 12.1.3, you could only filter the views for Audience. From version 12.1.4, you can filter the views for Offers and Segments.

1. Access an Interactive channel, select the **Playback** tab.

    The **Personalization Playback** page appears.
2. For **View Type**, perform one of the following actions:
    a. To filter views based on Audience, select the **Audience** tab.
    b. To filter views based on Offers, select the **Offers** tab.
    c. To filter views based on Segments, select the **Segments** tab.
3. In case of Audience view, select the **Audience level**. The **Audience level** is not applicable for Offers view or Segments view.
4. Select the available filters. If there are no filters, you can create and save a filter. You can also modify existing filters and delete existing filters.

    a. **Creating Filters**
        i. In the **Criteria** section, click **+ Add**.
        ii. Set filters by providing the required and appropriate values for the following fields:
            - **Column Name** - Contains the following options based on your selection:
                ◦ Profile attributes if you select the **Audience** tab.
                ◦ Offer properties if you select the **Offers** tab.
                ◦ Segment properties if you select the **Segment** tab.
            - **Operator** - Contains conditional values.
            - **Value** - Enter an appropriate value.

iii. Click **+ Add** to add more filters or click **X** to remove existing filters.

iv. To view the results after adding the filters, click **Show Results**. To save a new filter, click **Save As**.

b. **Modifying existing Filters**

i. Select a filter from the available filters.

ii. Make the required changes to the filters.

iii. To view the results after updating the filters, click **Show Results**. To save the changes to the filter, click **Save**.

c. **Deleting Filters**

i. From the list of available filters, select the delete icon succeeding the filter name.

> **Note:** A filter can be marked as a default filter, using the default filter icon, so that the system presents the default view when the user returns to the Playback tab.

5. Based on the selections, the right panel displays the graph containing the **Session count** and the **Audience count**. You can filter the results in the graph, using predefined options, as follows:

- **Day** - Displays the daily view grouped by hour.
- **Week** - Displays the weekly view grouped by day.
- **Month** - Displays the monthly view grouped by day.
- **Year** - Displays the yearly view grouped by month.

You can also filter the results to a **Custom** timeline. Click **Custom** and select the required date range.

Select both the **Start** date and thw **End** date on the Calendar control. The custom date range does not work if only one of the dates are selected.

> **Note:**

> • A UI-based approach is also available below the graph that you can use to customize the date or time range. Just move the bars on either side to the required range.
>
> • From version 12.1.4, in case of Offers view and Segments view, the tooltip displays the top three offers or the top three segments, along with number of audiences and number of sessions. In case of Audience view, the tooltip displays only the number of audiences and number of sessions.

6. Click the line on the graph that represents **Sessions**.

The **Audience Sessions** side panel appears. The **Audience Sessions** side panel lists all the sessions and the following information related to the sessions:

   • **Session ID**

   • **Audience ID**

   • **Session Start**

   • **Session End**

Use **Search** to search for a session. You can also also customize the number of **Rows** that can be displayed in each page.

7. Additionally, in the **Audience Sessions** side panel, click any session to view more details.

The **Session Insights** side panel opens. The **Session Insights** side panel lists all the details for a session listed in the **Audience Sessions** side panel and additionally provides the following information under **Session Details**:

   • **Audience Profile** - Lists the audience details for the session.

   • **Audience Context** - Lists the session parameters for the session.

   • **Interaction History (API Trace)** - Lists the API History for the session.

   • **Event Pattern States** - Lists the event pattern states for the sessions.

   • **Presented Offers** - Lists the offers presented during the session.

   • **Suppressed Offers** - Lists the offers suppressed during the session.

Click each tile to know more.

Chapter 13. Profile data governance

Profile data may contain sensitive information. It was expected that Interact systems needed a mechanism so that the admins could configure the columns that are sensitive, and the level of data protection required. Admin users can choose to hide or mask the sensitive columns.

In 12.1.5, Interact introduced a functionality so that admins, during profile table mapping on Interactive Channel, can set the sensitivity of the data being exposed. During profile table mapping, a new column named **Sensitivity** is adde so that the admins can set one of the following options to the fields containing sensitive data:

- `HIDE` - Is not displayed or printed anywhere but is available for internal processing.
- `MASK` - Is displayed but the actual values shall be masked with a configurable replacement text.
- `PUBLIC` - Data is not sensitive and can be viewed by all.

A new configuration node has been introduced so that the admins can configure the replacement text for the masked data. For more information, see the topic "Campaign | partitions | partition[n] | Interact | dataGovernance" in Unica Interact 12.1.5 Administrator's Guide.

The impacted features in Interact are as follows:

Profile Table Mapping	Profile table mapping screen displays an additional column Sensitivity for every table field. Every field is classified as: • `Hide` • `Mask` • `Public` 📝 **Note:**

	📝 Fields that are marked as `Key` fields must be public. For the existing table mappings, the sensitivity is defaulted to Public.
Simulator	Simulator displays the profile data during Audience ID selection. The profile attributes will be hidden/masked as per the sensitivity configuration of the profile attribute. Profile attributes that are marked as `Hide`, are not displayed in the list of columns as well as the data table, but they are available for the search criteria.
Flex Offers	When defining Flex Offers mapping, system has a Preview functionality for input table or source table. The preview screen displays the profile data. The profile attributes are hidden/masked as per the sensitivity configuration of the profile attribute.
Playback Session Details API	On the playback session details tab, profile attributes are displayed for the session. These are masked/hidden as per the Sensitivity configuration.
getProfile API	getProfile API response adheres to the profile data sensitivity and hide/mask the profile attributes in the API response.

Logs	Profile attributes printed to logs are processed so that the sensitive data is hidden or masked. All instances where the profile attributes are logged in any form, like session attributes, outbound message JSON, treatment processing etc, are sensitized based on the configuration.
Outbound Gateways	Outbound gateways carry profile attributes as per the gateway configuration. Changes are required to all outbound gateways before sending out the message. The profile attributes marked as HIDE are not part of outbound message and are masked properly if the sensitivity is set as MASK. Some gateways might require Interact to send the attributes without masking or hiding and need to override the sensitivity configuration of the mapped tables. A new Boolean parameter `UACISkip-DataGovernance` allows gateways to skip masking/hiding process. If a gateway is required to skip data governance, add this parameter as a **Channel Property** on the gateway configuration screen or this property can be added as parameter data in gateway configuration.

Chapter 14. Interact List process in batch flowcharts

When Unica Interact is installed, the Interact List process is available in batch flowcharts. Similar to the Call List and Offer List processes, the Interact List process allows you to specify which offers are served to which visitors to your interactive site. This provides you with the ability to target offers to entire audience levels, target specific individual audience members, or suppress offers from specific audience members by using table-driven features.

You use batch flowcharts in Unica Campaign to complete a sequence of actions on your data for executing your campaigns. Batch flowcharts are made up of processes, which you configure to perform the actual data manipulation that is required for your campaign. Unica Interact provides integration with Unica Campaign batch flowcharts to help determine the list of offers that might be served to a specific audience or type of audience.

Interact List process box

The Interact List process box is a batch flowchart process that is available only when Unica Interact is installed on your Unica Campaign server.

Use the Interact List process box on a batch flowchart to determine the offers that are served to customers by the Unica Interact runtime server, including the following choices:

- Offer suppression at an individual level (a "black list")
- Offer assignment at an individual level (a "white list," or score override)
- Offer assignment at an audience level (global, or default, offers)
- Offer assignment by custom SQL query

The runtime server has access to the output from this process when you deploy the interactive campaign. A batch flowchart might contain multiple instances of the Interact List process box. When you are using Interact List process box in a batch flowchart, and using multiple server groups with different production data sources that are pointing to different production database, you have to export the tables to all the production database

that is configured in all the server groups. However, if the Interact list process box exports or creates the table to only one production database of one server group, then the deployment of interactive channel fails on other server group in which the table was not exported or created.

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

- Interact List process in batch flowcharts *(on page 272)*

Tasks that you can complete from this page:

- Configuring the Interact List process *(on page 273)*

Configuring the Interact List process

Use a batch flowchart to add an Interact List process to the flowchart workspace.

1. Open a batch flowchart for editing (click **Edit** ✐ in the flowchart toolbar).

2. Drag the Interact List process from the palette to your flowchart.

   The Interact List process is available on a batch flowchart if Unica Interact is installed on your Unica Campaign server.

3. Provide input to the Interact List process by connecting it to one or more data manipulation processes, such as Sample or Select.

4. Double-click the Interact List process in the flowchart.

   The process configuration dialog is displayed.

5. On the **Fulfillment** tab, specify the fulfillment details of your list output.

a. Use the **OfferList type** drop-down list to specify the type of offer filter you are configuring this process to use:

- **Black list (offer suppression)** - indicates offers to suppress from being served to a specific audience. This allows you to prevent offers from appearing for specific visitors, based on the segment of the audience into which the visitor falls.

- **White list (score override)** - indicates that Unica Interact must always serve an offer to a particular audience regardless of whether the marketing score would otherwise cause Unica Interact to make the offer available.

- **Global Offers (default offers)** - defines offers that can be offered (similar to White list) for an entire audience type; that is, a default offer that every visitor in a specified audience can see, regardless of the segment of which they might otherwise be a part.

- **Offer Filters (offers by SQL)** - Allows you to provide an SQL query to determine which offers are served to the specified visitors. This option allows you, for example, to serve up an offer that is based on a specific visitor preference.

  If you select this OfferList type, the input for this process is determined by your SQL query and the **Input/Audience** drop-down list is dimmed and cannot be selected.

The **OfferList type** you specify here determines the behavior of the Interact List process, and the options available to you in this configuration dialog, as noted below:

b. From the **Interactive channel** drop-down list, choose the interactive channel that specifies the interaction points, events, and other settings that can apply to the Interact List process you are defining.

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

c. (**White list** or **Black list** only) From the **Select** drop-down list, specify the input cells (to use as the data source for the contact list. To use more than one cell (such as multiple input segments), click the ellipsis ⬚ button next to the **Select** field. Then, use the **Select cells to use** dialog box that is displayed, and select the input cells to use.

If you select multiple input cells in this step, all of the input cells you select must have the same audience level.

> 📝 **Note:** If the contact process is not connected to a process that provides output cells, there are no cells to select from in the **Select** drop-down list. To correct this, close the process configuration dialog and connect the Interact List process to an output process, then begin the configuration process again. Only active and deployed cell code should be used in Interact List.

d. (**Global offer** only) Use the **Audience level** drop-down list to specify the audience type for which you want this Interact List process to apply.

e. Use the **Target data source** 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 that you specify is created automatically when the process runs if it does not exist.

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

The **Personalization options** dialog is displayed. The predefined set of fields that is written to the table is displayed in the **Fields to output** list.

- Select the fields that you want to include in your output from the
  Candidate fields list.

  You can use Unica Campaign generated fields by expanding the **Unica
  Campaign generated fields** list, or use derived fields by clicking the
  Derived fields button.

- To pair a candidate field to a field already listed in the **Fields to output** list,
  select the candidate field, then select a field in the **Candidate fields** list,
  then click **Add >>**.

- To add a candidate field to the **Fields to log** list without pairing it with an
  existing field, click the blank line after the last entry in the **Candidate fields**
  list, then click **Add >>**.

- Remove fields from the **Fields to output** list by selecting them and clicking
  << Remove.

- If wanted, reorder the fields in the **Fields to output** list by selecting a field
  and clicking **Up1** or **Down1** to move it up or down in the list.

- If wanted, click the **Derived fields** button to create a variable for providing
  output to the table.

h. Select an option to specify how updates to the output table are handled:

  - **Append to existing data** - Each run of this process adds its output data to
    the table you specified in the **Table name** field

  - **Replace all records** - Each run of this process removes any data from the
    table before you write the new output data.

6. To assign one or more offers or offer lists to each target cell defined in this process,
   click the **Treatment** tab.

   The **Assign offers to cells** interface is displayed.

   How you configure the output on the Treatment tab depends on the **OfferList type** you
   selected on the Fulfillment tab.

   a. **Black lists (offer suppression)** - For each target cell displayed in the table, click
      the **Offer** column to select from a drop-down list of available offers, or click
      Assign offers.... Use the Assign Offers dialog to select one or more offers that

you want to suppress for the input cells (visitors) specified on the Fulfillment tab of this process.

b. **White lists (score override)** - For each target cell displayed in the table, click the **Offer** column to select from a drop-down list of available offers, or click **Assign offers...**. Use the Assign Offers dialog to select one or more offers that you want to serve for the input cells (visitors) specified on the Fulfillment tab of this process, even if the marketing score would not otherwise serve that offer to the visitor.

c. **Global offers (default offers)** - For each target cell displayed in the table, click the **Offer** column to select the wanted offers from a drop-down list, or click **Assign offers...**. Use the Assign Offers dialog to select the offers that you want to serve to all visitors of the audience type that is selected on the Fulfillment tab for this process, regardless of the segment into which they fall.

d. **Offer filter (filter by SQL)** - Click the Offer by SQL button to create an SQL expression that allows the Unica Interact runtime server to select the offers that you want to serve to a set of visitors. Use the Create Offer by SQL dialog that is displayed in the following ways:
   - Select an existing SQL template name from the **SQL** drop-down list, or enter a new name in this field for the template if you are defining a new template.
   - Provide the contents of the SQL query in the **SQL template** field.
   - Click **Check syntax** to determine whether your expression is valid. **Check syntax** uses your test run Unica Interact runtime server for validation. Your test run runtime server must be running for check syntax to function.

> **Note:** If you use the SQL Server, **Check syntax** does not show errors in your expression even when your expression is invalid. If your expression is invalid, the flowchart test run fails even if it passed when you used **Check syntax**.

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

7. **Optional:** Click the **General** tab to assign a name or notes to the process.

   The name is displayed on the process in the flowchart. The notes are displayed when you point to the process in the flowchart.

8. Click **OK** to complete the Interact List process configuration.**Note**: In the case of table driven Offer Parameterisation, Derive fields which have a String value and map to Offer Attributes, you should add the String value in Derive Fields in the following manner: "'DeriveValue'".

The process is configured and appears enabled in the flowchart. You can test the process to verify that it returns the results you expect.

Searching for flowcharts and flowchart-related objects

Use **Search flowcharts** to find a flowchart or a flowchart-related object by entering one or more characters as search criteria.

Flowchart-related objects include flowchart and process box names, configuration details, descriptions, owners, user variables, user database tables, segments, associated offers, and any other objects that are stored in the Unica Campaign session files (.ses). From V12.1.1 onwards, search flowchart screen will also display the Campaign code details. Also, Print button is provided to print the results shown. When you do a search, all flowcharts in all campaigns in the current partition are searched. Searching is not case-sensitive. For example, a search for "Customer" can find user databases, process boxes, and assigned offers that contain the word "customer."

1. Click **Search flowcharts** from any available location:
   - On the **All campaigns** or **All sessions** page
   - From any flowchart tab in View mode
2. When the **Search flowcharts** dialog opens, enter your search criteria.

   If you click the **Search** button without entering any criteria, the search results include all flowcharts.
3. Use the **Search results** area to examine the results and optionally navigate to a flowchart. For example, you can click the name of a flowchart to open that flowchart in View mode.

   If you want to see a list of all of the process boxes that contain the search criteria, expand a cell in the **Matching process boxes** column or use the **Expand all / Collapse all** icons in the Search results toolbar.
4. Search results are retained, even if you close the dialog. Therefore, you can navigate to various flowcharts while still being able to access the existing search results. The results remain until you click **Clear results** in the dialog box or perform another search.

Chapter 15. Unica Interact reporting

Unica Interact is integrated with Unica reporting to deliver comprehensive Cognos® reports in Unica Interact.

The Unica reports provide reporting schemas and related maintenance tools that are required to integrate Unica Interact with the supported version of IBM® Cognos® BI, and to run and maintain the Cognos® reports available in Unica Interact.

Unica Interact reports data

Unica 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 Unica Campaign data source for data about offers, and data from the contact and response history from the production runtime server.

The runtime environment stores all contact and response history in staging tables to avoid impeding the performance of the production environment. Unica Interact provides a contact and response history module which copies data from the runtime server to the design environment for your reports to have the correct data. If you do not configure this utility, the reports cannot have the correct data.

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

Unica Interact Reports and Reporting Schemas

The Unica Interact Report Package reports are supported by reporting schemas. You can customize the schemas to specify time periods, configure audience levels, and create extra performance reporting schemas.

You can customize the reporting schemas in the Unica Interact Report Package in the following ways:

- Specify calendar time periods for performance reports
- Configure the audience level for performance reports
- Create extra performance reporting schemas for extra audience levels

The following table maps the individual Cognos® BI reports provided in the Unica Interact Reports Package to the reporting schemas that support them.

	Inter- active View schema	Unica Inter- act Perfor- mance View schema	Interactive Channel / Cam- paign Deploy- ment History	Unica In- teract Run- time View schema	Unica In- teract Learn- ing View schema
Campaign - Interactive Channel Deployment History	X		X		
Campaign - Interactive Cell Performance Over Time	X	X		X	
Campaign - Interactive Cell Performance by Offer	X	X		X	
Campaign - Interactive Offer Performance Over Time	X	X		X	
Campaign - Interactive Offer Performance by Cell	X	X		X	
Campaign - Interactive Offer Learning Details	X				X

	Inter-active View schema	Unica Inter-act Perfor-mance View schema	Interactive Channel / Cam-paign Deploy-ment History	Unica In-teract Run-time View schema	Unica In-teract Learn-ing View schema
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	
Interaction Point Per-formance	X	X		X	

Viewing Unica Interact reports

Unica Interact integration with reports can be used to run Cognos® reports from within Unica Campaign. Some reports contain links to other reports to provide more information.

As the Unica Interact reports exist within Unica Campaign, see the Unica Campaign User's Guide for generic instructions on viewing reports.

You can customize all the example reports available with the Unica Interact Reports Package, for example, add more audience levels. For details about how to customize Unica Interact example reports, see the Unica Platform Administrator's Guide.

Viewing reports from the interactive channel Analysis tab

You can use the **Analytics** area of an interactive channel to view several Unica Interact reports.

The following reports are available from the interactive channel **Analytics** tab:

- Channel Deployment History
- Channel Event Activity Summary
- Channel Interaction Point Performance Summary
- Channel Interactive Segment Lift Analysis
- Channel Learning Model Performance Over Time
- Interactive Channel Treatment Rule Inventory

1. Select a **Report type** from the **Analysis** tab.

   If no additional configuration is needed, the report is displayed.
2. If there are configuration options after the report is displayed, select filters for the report, then click **Refresh**.
   For example, select the interaction point or an end date and time to view for the Channel Interaction Point Performance Summary report. On other reports, you might select date ranges, or specific channel data to use for filtering.
3. If you are required to enter configuration options before the report is generated, as might be the case with the Channel Learning Model Performance Over Time report, select the required report filters and options, then click the **Next** or **Finish** buttons at the bottom of the report.

The selected report is displayed.

Viewing Unica Interact reports from Analytics home

IBM Cognos

You can go to **Analytics > Campaign analytics** to view several Unica Interact reports.

The following reports are available from **Campaign analytics**:

- Channel Deployment History
- Channel Learning Model Performance Over Time
- Event pattern
- Interactive Cell Lift Analysis
- Interactive Cell Performance by Offer
- Interactive Cell Performance Over Time
- Interactive Offer Learning Details
- Interactive Offer Performance by Cell
- Interactive Offer Performance Over Time

1. Select a **Report type** from **Campaign analytics**.

   If no additional configuration is needed, the report is displayed.
2. If there are configuration options after the report is displayed, select filters for the report, then click **Refresh**.
   For example, select the cell to view for the Interactive Cell Performance by Offer report.
3. If you are required to enter configuration options before the report is generated, as might be the case with the Channel Learning Model Performance Over Time report, select the required report filters and options, then click the **Next** or **Finish** buttons at the bottom of the report.

The selected report is displayed.

Unica Insights

You can view the Interact Analytics menu separately, if Unica insights is enabled Navigate to **Analytics > Interact analytics** to view several Unica Interact reports.

To view the data for objects not linked to a campaign, click the **No associated campaigns** option.

The following reports are available direct on the page:

- 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

In addition, the Zone Performance Report by Offer report and Event Pattern report are available when you click the Interactive Entity Reports folder on the Interact Analytics page.

1. Select **Analytics > Interact analytics**.
2. Select the **Interactive Entity Reports** folder.
3. Click the **Interactive Entity Reports** folder to view the zone performance and Event Pattern report list.
4. Select the report that you want to view. The Report parameters window displays.
5. Select the campaign for which you want to view data, then click **Generate the report**.
6. If there are configuration options after the report is displayed, select filters for the report and then click **Refresh**
7. For Channel Learning Model Performance Over Time report, if you are required to enter configuration options before the report is generated, select the required report filters and options, and then click **Next** or **Finish**. The selected repotr is displayed.

Interaction Point Performance report portlet

The only Unica 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 Unica Platform Administrator's Guide.

Channel Deployment History report (interactive channel)

The Channel Deployment History report is an audit log for tracing changes to all runtime servers, and is available from the interactive channel **Analysis** tab. You can filter this report by runtime servers, campaigns, or the user who performed the deployment.

The campaign, interaction strategy, session, and flowchart names are links to the campaign, interaction strategy, session, and interactive flowchart. To return to the report, use the back button of your browser.

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

Channel Event Activity Summary report

The Channel Event Activity Summary report can be used to track the activity of deployed events for an interactive channel.

You can filter the report by all categories, a particular category, all events, or a single event. You can compare how often an event occurred over the last twenty-four hours, or the last seven days. The report also points out the peak hour or day and the slowest hour or day for an event. You can use the peak data to help determine the best ways to optimize your processing resources, or plan your marketing strategies around expected traffic. By knowing when the slowest times are, you can plan your deployments to occur when they will be the least disruptive.If you are using Custom Contact and Responses and if Action for Codes is None, then Total Occurrences will increase for Interaction Events.

About the Channel Interaction Point Performance Summary report

The Channel Interaction Point Performance Summary report measures the performance of each interaction point in the interactive channel across all offers and segments. By analyzing this report, you can determine the peak marketing locations on your interactive channel to help design future campaigns.

To view the deployment data for objects not linked to a campaign, click "No associated campaigns" option. You can filter this report by all interaction points or a single interaction point. The report displays the number of offers displayed, accepted, and rejected for that interaction point.

Channel Treatment Rule Inventory report

The Channel Treatment Rule Inventory report is a list of all the treatment rules that are associated with an interactive channel. You can filter this list by a combination of target cells, zones, and campaigns. You can use this report as a diagnostic tool when investigating the marketing behavior around a specific cell, zone, or campaign.

The campaign and interaction strategy names are links to the campaign or interaction strategy. The offer name is a link to the Interactive Offer Performance Over Time report, which is filtered by that offer. To return to the Channel Treatment Rule Inventory report, use your browser's back button.

Interactive Segment Lift Analysis report

Lift analysis reports show the performance improvement that is created by using Unica 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 Unica 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 Unica Interact built-in learning.

About the Channel Deployment History report (campaign)

The Channel Deployment History report displays the deployment data for all interaction strategies and the interactive channels that are associated with a campaign. Use the **Analysis** tab of the Campaign to view this report.

The campaign, interaction strategy, session, and flowchart names are links to the campaign, interaction strategy, session, and interactive flowchart. To return to the report, use the Back button of your browser.

This report is available from **Analysis** of the interactive channel.

Interactive Offer Learning Details report

The Interactive Offer Learning Details report displays all the learning attributes that you are tracking with the built-in learning module.

Each chart in the report shows the likelihood of a visitor to respond to the specified offer if they have a specific value for an attribute of interest. You can use this report to analyze what the learning module is learning and use that to modify what attributes you track or your offer-to-segment assignments.

You must select an offer to display data in the Interactive Offer Learning Details report. By default, no data displays.

This report is not available if you are using external learning.

Interactive Cell Performance reports

The Interactive Cell Performance reports have two variations: Over Time and by Offer. These reports measure the performance of target cells in their inbound marketing scenarios for a campaign. When you filter by target cell, you are filtering by the cell that is assigned to the smart segment in your treatment rule. You can sort these reports by all cells or a specific target cell. These reports display the number of offers that are presented, accepted, and rejected by a target cell over time or by offer. These reports cover all target cells that are associated with the treatment rules in an interaction strategy within a campaign.

If you display these reports by clicking a link on the Interaction Strategy tab, the report is automatically filtered by target cell. When you display these reports by using a link under the **Analytics > Campaign Analytics** menu, the report covers all target cells, but can be filtered for specific cells after it is displayed.

Interactive Offer Performance reports

The Interactive Offer Performance reports have two variations: Over Time and by Offer. These reports measure the performance of offers in their inbound marketing scenarios for a campaign. You can sort these reports by all offers or a specific offer.

These reports display the number of times that an offer was presented, accepted, and rejected over time or by target cell (segment). These reports cover all offers that are associated with the treatment rules in a campaign.

Interactive Cell Lift Analysis report

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

Channel Learning Model Performance Over Time report

The Channel Learning Model Performance report compares the performance of two channel learning models over a certain time period to help you determine the effectiveness of each learning model in specific time periods.

If you select this report from the Analysis tab of an interactive channel, the report is automatically generated for the current interactive channel. If you generate the report by selecting **Analytics > Campaign analytics > Interact reports**, you can select the interactive channel to which you want the report to apply. You can filter this report for a specific date

range, and you can filter the report for specific click-through/accept properties, and no response/reject properties as wanted.

Zone Performance Report by Offer

The Zone Performance Report by Offer is an interactive cell performance report that is filtered by interaction point. You can use this report to see how offers are performing by zone.

You can view the Zone Performance Report by Offer by selecting **Analytics > Campaign analytics**, then clicking **Interact reports**, and then **Zone performance reports**. When you open the report, you can use the **Zone** drop-down list to specify the zone for which you want to view the performance charts. After the report is generated, you can select different Interaction Points and resubmit the report to update the performance data.

Event Pattern report

The Event Pattern report shows you event pattern activity across interactive channels and their categories.

You can use this report to analyze how personalized offers were presented to visitors through event patterns. You can also analyze how many event patterns are triggered to visitors in the interactive channels you report on.

To run an Event Patter report, you can select which interactive channels you want to analyze. Then, you can select categories in those interactive channels to also appear in your report.

This report is available from the **Unica Interact reports** folder of the **Unica Campaign analytics** area.

Filtering by interaction point

Filter the Channel Interaction Point Performance Summary report by interaction point to view data only for the interaction point that is required.

To filter a report by interaction point, select the interaction point by which you want to filter data from the **Interaction point** list. To select all interaction points, select **Interaction point**.

The report automatically reloads, displaying only the data you selected.

Filtering by event or category

You can filter the Channel Event Activity Summary report by event and category.

To filter a report by category, select the category by which you want to filter data from the **Select category** list. To select all categories, select **Category**.

To filter a report by event, select the event by which you want to filter data from the **Select event** list. To select all events, select **Event name**. If you have selected a category, when the report reloads, the Select Event list displays the events in the selected category only.

The report automatically reloads, displaying only the data you selected.

Filtering by offer

You can filter the following reports by offer: Interactive Offer Learning Details, Interactive Offer Performance by Cell, and Interactive Offer Performance Over Time.

To filter a report by offer, select the offer by which you want to filter data from the **Offer** list. To select all offers, select **Offer ID**.

The report automatically reloads, displaying only the data you selected.

Filtering by target cell

You can filter the following reports by target cell: Interactive Cell Performance by Offer, and Interactive Cell Performance Over Time

When you filter by target cell, you are filtering by the cell that is assigned to the smart segment in your treatment rule.

To filter a report by target cell, select the target cell by which you want to filter data from the **Target cell** list. To select all cells, select **Cell ID**.

The report automatically reloads, displaying only the data you selected.

Filtering by time

You can filter the following reports by time: Interactive Cell Performance Over Time, Interactive Offer Performance Over Time, Channel Event Activity Summary, and Channel Interaction Point Performance Summary

To filter a report by date, select end date for the last 7-day range and click **Refresh**. You can enter a date or select one from the calendar list.

To filter a report by time, select end time for the last 24-hour range and click **Refresh**. The default is 12:00 AM. This displays yesterday's data. If you clear the check box, the report uses the current time on the Cognos® report server.

If there is no data for a particular date or time, the graph does not display any data. In line graphs, if there is no data, the trend goes across dates that contain data only. For example, you have the following data points: 6/1 (100), 6/2 (no data), and 6/3 (50). The line goes from 100 on 6/1 to 50 on 6/3. The line may pass through ~75 on 6/2 but that is not an actual data point. Also, if there is only one data point, no line displays, as there is nothing to connect.

Filtering the Channel Deployment History report

To filter the Channel Deployment History report, select the criteria by which you want to filter data and click **Refresh**. You can select multiple criteria per list by using **CTRL+click**. To select all criteria, click **Select all**. Selecting **Deselect all** indicates no filter, which shows the same data as **Select all**.

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

- Deployment Destination. The server groups to which you have deployed this interactive channel
- Campaigns Updated by Change. The campaigns that contain the interaction strategies that are associated with this interactive channel
- Deployment Owner. The users who deployed this interactive channel

To view the data for objects not linked to a campaign, click the **No associated campaigns** option.

The report does not load until you click **Refresh**. When it reloads, the report displays only the data you selected.

Filtering the Channel Treatment Rule Inventory report

You can use multiple criteria to filter the Channel Treatment Rule Inventory report.

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

- Target Cells. The cells that are assigned to the smart segments in your treatment rules associated with this interactive channel
- Zones. The zones in this interactive channel
- Campaigns. The campaigns that contain interaction strategies that are associated with this interactive channel

To view the data for objects not linked to a campaign, click the **No associated campaigns** option. 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.