Version 11 Release 0.1
August 31, 2018

IBM Interact Advanced Patterns and IBM Interact Integration Guide

IBM

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

Contents

About the integration between IBM Interact and IBM Interact Advanced Patterns

The integration between IBM® Interact and IBM Interact Advanced Patterns provides advanced pattern recognition capabilities for your Interact implementation.

An integrated environment provides enhanced time windows for the three basic Interact patterns.

After integration has been configured, you configure the advanced patterns within the Interact design environment, and you do not have to perform any tasks in Interact Advanced Patterns to deploy or use them.

Note: Integration is supported only for Interactive Channels defined within partition1. This is important to remember if you have an environment with multiple partitions.

Synchronization

Advanced patterns saved from Interact to Interact Advanced Patterns are synchronized as follows.
- When you create, edit, or delete an advanced pattern in Interact, it is created, updated, or deleted in Interact Advanced Patterns.
- If you load a deployment version from deployment history in Interact, patterns are updated appropriately in Interact Advanced Patterns.
- If a deployment fails, Interact automatically rolls back to the last successfully deployed version.

Synchronization is accomplished with no system downtime.

Deleting Interact-created objects from Interact Advanced Patterns

Users with the **Administer real time** permission in Interact Advanced Patterns, which is included by default in the Interact Advanced Patterns Administrator role, can delete most of the objects that the system creates in Interact Advanced Patterns when you deploy an interactive channel that uses advanced patterns.

You might want to do this as a clean-up step in Interact Advanced Patterns if you delete an interactive channel in Interact, but connectivity issues prevent the cleanup from taking place automatically. In that case, you might have some objects in Interact Advanced Patterns that are no longer of any use, and you can delete them.

You should use this manual deletion feature with caution, as you cannot restore these objects by re-deploying from Interact.

With the appropriate permission, you can delete the following system-created objects.
- Pattern components

- Workspaces, if none of the deployments in the workspace is running
- Deployment configurations, if the deployment configuration is not running
- Named value lists, if the list is not in use

What you can see in Interact Advanced Patterns

For information purposes only, you can see the following items in Interact Advanced Patterns after you have deployed your advanced patterns.

- Inferred events used in your patterns are listed in read-only format in the Named Value List Manager.
- One read-only workspace is created for each interactive channel that uses the advanced patterns.

  The workspace contains all of the patterns created for a single interactive channel. Their origin is listed as **Interact** on the Component List tab.

  The workspace name is the name of the interactive channel under which the patterns were created. The origin of the workspace is listed on the window that opens when you click Edit Workspace ✐ in the Workspace List.

- A single data source is created for Interact messages, and it is associated with a default audience level. The value of the audience level field in that data source specifies the audience level for each Interact message.

How the advanced event pattern features work

When integration with Interact Advanced Patterns is implemented, you can configure all three standard event patterns with more sophisticated time spans during which the pattern compares incoming events with its criteria.

The following additional options are available for each basic event pattern.
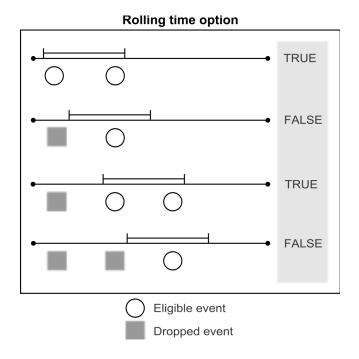
- **Rolling time**
- **Time bound**

This effectively adds six pattern options to your Interact implementation, by adding two new time span options to each of the three standard patterns.

Rolling time

The time span for the rolling time option is determined by the value you specify in the field labeled **Events must occur within *time span***.

When the pattern using rolling time is deployed, events that match the pattern criteria must occur within the specified time frame. This time frame remains the same as time goes by: if the time span is set to seven days, it remains seven days. Events are retained for evaluation against the pattern criteria until they age out, based on their timestamp.

The following diagram illustrates how the rolling time option works.

Rolling time option

For example, suppose you want to make an offer to customers who view the Product X web page 2 times within the span of 3 days. You would configure your interactive channel as follows.

*   Set up an event in your interactive channel to capture the IDs of customers who view the Product X page.
*   Add a rolling time Counter event pattern that uses the event.

    On the Pattern tab, select the event and set the **Event must occur within** field to 3 days.

    On the Action tab, enable the Trigger Re-segmentation action.
*   Configure an interactive flowchart that uses the event to capture the segment of customers whose behavior fits the pattern.
*   Define your interaction strategy to make the appropriate offer.
*   Deploy your interactive channel.

Time bound

The time span for the time bound option is determined by the value you specify in the field labeled **Events must occur within** *time span*.

When the pattern using the time bound option is deployed, events that match the pattern criteria must occur within the specified time frame. This time frame remains the same as time goes by: if the time span is set to seven days, it remains seven days. Events age out or are retained to be evaluated as part of the pattern based on their timestamp.

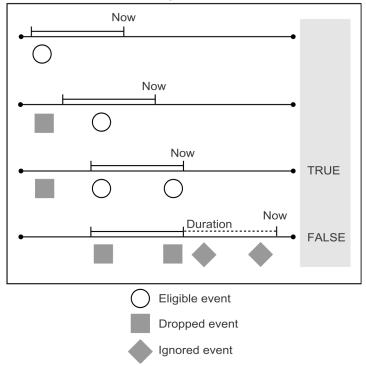The time bound option also includes an extended time span in which the true state is retained. For a pattern using the time bound option, after all of the criteria are met and the state of the pattern changes from false to true, the extended time span goes into effect.

You set the extended time span using the same **Extend true state for additional:** *time span* field. You can use the extended time span to specify how long the

pattern state retains a true state. As soon as the pattern state becomes true, the extended time span starts, new incoming events are ignored, and events already received are dropped.

When the extended time span is over, the pattern state becomes false and the pattern again starts listening for eligible events.

The following diagram illustrates how the time bound option works.

Time bound option with duration

For example, suppose you want to make an offer to customers who view the Product X web page 2 times within the span of 3 days, and you want to withhold further contact with this customer for an additional 7 days, to avoid contact fatigue. You would configure your interactive channel as follows.

- Set up an event in your interactive channel to capture the IDs of customers who view the Product X page.
- Add a time bound Counter event pattern that uses the event.

  On the Pattern tab, select the event, set the **Event must occur within** field to 3 days, and set the **Extend true state for additional** field to 7 days.

  On the Action tab, enable the Trigger Re-segmentation action.
- Configure an interactive flowchart that uses the event to capture the segment of customers whose behavior fits the pattern.
- Define your interaction strategy to make the appropriate offer.
- Deploy your interactive channel.

Configuring integration between Interact and Interact Advanced Patterns

The integration between IBM Interact and IBM Interact Advanced Patterns provides enhanced pattern recognition capabilities for your Interact implementation.

You must have fully functional installations of Interact and Interact Advanced Patterns before you can configure integration.

Note: Integration is supported only for Interactive Channels defined within partition1. This is important to remember if your environment has multiple partitions.

1. In Interact Advanced Patterns, go to the **Settings > Detect Settings > Server Groups** page.

   This is where you create the server group that the system uses to process advanced event patterns.

   The Server Group page has four tabs in the left panel. The last tab, Server Groups, opens four additional tabs in the right panel.

2. On the Servers tab, click **Synchronize with changed Streams configuration** to ensure you have an updated list of Streams servers.

3. On the Database Connections tab, create connections to the databases that hold your run time and state history tables.

   These tables can be in the same database; in that case, you create only one connection. If your run time and state history tables are in separate databases, you create two connections.

   To create a connection, click **Add** and complete the fields as follows.

Table 1. Server Groups page: Database Connections tab

Field	Description
Name	Enter a descriptive name for this database.
Database Type	Select a database type from the drop-down list of supported databases.
Database Name	Enter the name of the database as shown in your database management client. This must exactly match the name as shown in the client. Case-sensitive.
Server Name	Enter the fully qualified name or IP address of the machine that hosts the database server. For example, machine.mycompany.com.
Port	Enter the port on which the database listens. The default port for DB2 is 50000.
User Id	Enter the user name of the database account you want Interact Advanced Patterns to use to access this database.
Password, Confirm Password	Enter the password for the account you entered in the **User ID** field. **Tip:** If a database connection error occurs, verify that the password entered in these fields is correct.

4. On the Data Source Connectors tab, create a connector to your state history tables.

Note: The Default TCP Connector that you see on this tab is created automatically. The system uses this connector for communication between Interact and Interact Advanced Patterns.

To create a connector for your state history table, click **Add**, select **Table Connector** in the drop down list, and complete the fields as follows.

Table 2. Server Groups page: Data Source Connectors tab

Field	Description
Table Connector	
Name	Enter a descriptive name for this table connector. It is a good practice to align this name with the name of the data file or database you will associate with the connector.
Type	Select **State**.
Table Name	Enter the name of the table as shown in your database management client. This must exactly match the name as shown in the client. Case-sensitive.
Description	Enter a description of the table.
Sharable	Select this check box.

5. On the Server Groups tab, add a server group that the system will use to process your real time data.

   To create a server group, click **Add** and complete the fields as follows.

Table 3. Server Groups page: Server Groups tab

Field	Description
Properties tab	
Name	Enter a descriptive name for the server group.
Stream Instance	Select a stream instance ID. See your administrator if you are not sure which one to select.
Usage	Enter **Production**.
For Production	Select this check box.
Servers tab	
Fully Qualified Name	Double-click in the **# of Engines** column to set the number of Interact Advanced Patterns engines to run on this machine.
Database tab	
Select Runtime database connection	Select the run time database that you want this server group to be able to access.
Select database connections for table connector mapping	Select the database connection you created in step 3.
Data Source Mapping tab	
List of datasources	Click the name of the state table data source you created in step 3 to open a pop-up window where you can map the data source to a connector. **Note:** Do not map Outcome and Transaction data sources, as this is done automatically through the integration.
Data Source Mapping tab: Table data source connector mapping	
Data Source name	This is a read-only field that contains the name of the data source you clicked to open this window.

Table 3. Server Groups page: Server Groups tab (continued)

Field	Description
Connector	Select the data source connector you configured in step 4.
Database connection	Select the database connection you configured in step 3.

6. Set configuration properties on the **Settings > Configuration** page as follows.

Table 4. Configuration properties for integration

Property	Value
Campaign | Partitions | Partition *N* **| Interact | serverGroups | opDetectionServerGroupName**	Set this property to the name of the Interact Advanced Patterns server group you will use for processing advanced event patterns. If you do not set this property, Interact looks for an Interact Advanced Patterns server with the same name that is specified in the **Campaign | partitions | partition[n] | Interact | serverGroups | [serverGroup] | serverGroupName** property.
Campaign | Partitions | Partition *N* **| Interact | eventPatterns | enableAdvancedPatterns**	Set this property to **True**.
Interact | services | eventPattern | advancedPatterns | connectionTimeoutInMilliseconds	Set this property to the maximum time it can take to make an HTTP connection from the Interact real time environment to Interact Advanced Patterns.
Interact | services | eventPattern | advancedPatterns | readTimeoutInMilliseconds	Set this property to the maximum time it can take to receive data after an HTTP connection is established between the Interact real time environment and Interact Advanced Patterns.
Interact | services | eventPattern | advancedPatterns | connectionPoolSize	Optionally, change the size of the HTTP connection pool for the communication between the Interact real time environment and Interact Advanced Patterns. The default value is 10.
Interact | services | configurationMonitor | enable	If you want to be able to enable or disable the integration without having to restart real time, set this property to **True**.
Interact | services | configurationMonitor | refreshIntervalInMinutes	If you set **Interact | services | configurationMonitor | enable** to **True**, set this property to the time interval for polling the value of the **Interact | services | eventPattern | advancedPatterns enableAdvancedPatterns** property.

Advanced Pattern Events are now available for use in your Interact installation.

7. Decide whether you want to use the automatic reconnection feature, and set the following properties on the **Settings > Configuration** page accordingly. By default, this feature is turned on.

Table 5. Configuration properties for automatic reconnection

Property	Value
Interact | services | eventPattern | advancedPatterns | autoReconnect | enable	Retain the default value of **True** if you want the system to reconnect automatically if connection problems occur between the Interact real time environment and Interact Advanced Patterns.
Interact | services | eventPattern | advancedPatterns | autoReconnect | durationInMinutes	Set this property to the time interval during which you want the system to evaluate repeated connection problems occurring between the Interact real time environment and Interact Advanced Patterns. The default interval is 10 minutes.
Interact | services | eventPattern | advancedPatterns | autoReconnect | numberOfFailuresBeforeDisconnect	Set this property to the number of connection failures allowed during the specified time period before the system automatically disconnects from Interact Advanced Patterns.

Table 5. Configuration properties for automatic reconnection (continued)

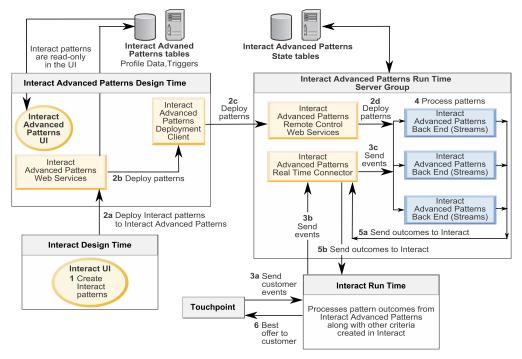| Property	Value
Interact ∣ services ∣ eventPattern ∣ advancedPatterns ∣ autoReconnect ∣ consecutiveFailuresBeforeDisconnect	Retain the default value of **True** if you want the automatic reconnection feature to evaluate only consecutive failures of the connection between the Interact real time environment with Interact Advanced Patterns. If you set this value to **False**, all failures within the specified time interval are evaluated.
Interact ∣ services ∣ eventPattern ∣ advancedPatterns ∣ autoReconnect ∣ sleepBeforeReconnectDurationInMinutes	The system waits the number of minutes specified in this property before reconnecting after the system disconnects due to repeated failures as specified in the other properties in this category. The default value is 5 minutes.
Interact ∣ services ∣ eventPattern ∣ advancedPatterns ∣ autoReconnect ∣ sendNotificationAfterDisconnect	This property determines whether the system sends an email notification when a connection failure occurs. The notification message includes the Interact real time instance name for which failure occurred and the amount of time before reconnection occurs, as specified in **sleepBeforeReconnectDurationInMinutes**. The default value is **True**, which means that notifications are sent.

The integration is complete, and you can now use the advanced patterns. Here is an overview of your next steps.

- In an Interact interactive channel, define events and add Event Patterns that use these events.
- Create a Campaign flowchart with a segment to capture customer IDs associated with the events, and mark for deployment.
- In the Interact interactive channel, define an interaction strategy and mark for deployment.
- Deploy your interactive channel.

There is a video that provides information about post-integration procedures. To view it, see the Video tab in the list of Interact documentation on the IBM Support Portal, or click the **Help > Product Documentation** link in the Interact user interface.

How data flows between Interact and Interact Advanced Patterns

The following diagram illustrates the data flow when Interact is integrated with Interact Advanced Patterns.

Data flow for Interact patterns with Interact Advanced Patterns

What to do if the Streams instance is restarted

Interact Advanced Patterns uses InfoSphere Streams for its processing. If a Streams instance used for Interact Advanced Patterns is restarted, all Interact Advanced Patterns jobs that are running on the Streams server are stopped.

In this case, to restart the jobs that are stopped, in Interact Advanced Patterns go to the Deployment tab of the Interact workspace and click **Start**.

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