Developer's Guide

Advanced Engagement Model

4/16/2025

Advanced Engagement Model

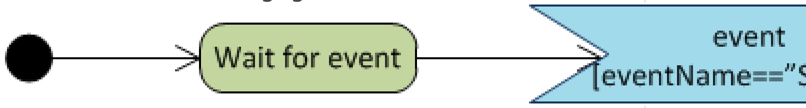
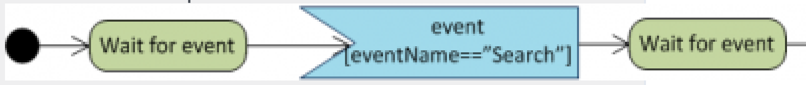
Contents

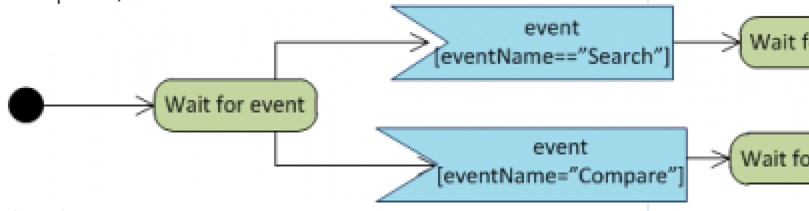
Overview

The Advanced Engagement Model enables customization based on Business events (read more about how the events are structured here). In the 8.1.2 release, the default DSL contains the `Timeout` and `Search` events. To customize the Advanced Engagement Model, you must first define your own events using the DSL, which is loaded in the Browser Tier Agents. Then, you can use the rule templates to create rules based on these events.

Default Rule Templates

The default templates for the Advanced Engagement Model define how to process events sent from the Web Engagement Frontend Server. They define both the type of events and the action to perform. Later, you'll use the Genesys Rules Authoring Tool to create rules based on these templates.

Singleton	
Description	The template receives each single event as a formal parameter. If the event's value matches the condition's event name, then the actionable event is sent to the Web Engagement Backend Server.  GWM single.png
Expression Example	**When** event with name $name **Then** generate actionable event
Sequence	
Description	This template analyses the event stream received from the categorization engine and builds the sequence of events by event names. As soon as the event sequence is completed, the actionable event is submitted. Note that the event sequence must follow a specific order.  Wait for event event [eventName=="Search"] Wait for event Click to enlarge.
Expression Example	**When** event with name $name save as $event1 **and**

	event following \$event1 with name \$name2 save as \$event2 (...) **and** event following \$event^{n-1} with name \$name^{n} save as \$event^{n} **Then** generate actionable event based on \$event^{n}
Set	
Description	This template collects the events by event names. As soon as the event set is completed, the actionable event is submitted. If you use this template, the event order is not taken into account.  event [eventName=="Search"] Wait for event event [eventName="Compare"] GWM Set.png
Expressions	**When** event with name \$name1 save as \$event1 **or** event with name \$name2 save as \$event2 (...) **or** event with name \$name^{n} save as \$event^{n} **Then** generate actionable event

Implementing the Advanced Engagement Model

Complete the steps below to implement the Simple Engagement Model:

1. Business Events Overview
2. Create Business Events by Customizing the DSL File
3. Optionally, you can Create Business Events by Using the Monitoring Agent API.

Business Events Overview

When you create an application, a set of Domain Specific Language (DSL) files that are used by your application is also created. These files are defined in the **apps\*Your application name*\_composer-project\\WebEngagement_EngagementWidgets\\dsl\** directory. You can use the DSL to define Business events (read about the structure of these events here) that are specific to your solution needs.

Default domain-model.xml

The **domain-model.xml** is the main default DSL file for your application:

```
<?xml version="1.0" encoding="utf-8" ?>
<properties>
    <events>
        <!-- Add your code here
        <event id="" name="">
        </event>
        -->

        <!-- This is template for your search event -->
        <!--
        <event id="SearchEvent" name="Search">
            <trigger name="SearchTrigger" element="" action="click" url="" count="1" />
            <val name="searchString"       value="" />
        </event>
        -->
        <event id="TimeoutEvent10" name="Timeout-10" condition=""
postcondition="document.hasFocus() === true">
            <trigger name="TimeoutTrigger" element="" action="timer:10000" type="timeout"
url="" count="1" />
        </event>
        <event id="TimeoutEvent30" name="Timeout-30" condition=""
postcondition="document.hasFocus() === true">
            <trigger name="TimeoutTrigger" element="" action="timer:30000" type="timeout"
url="" count="1" />
        </event>

    </events>

</properties>
```

By using the **<event>** element, you can create as many business events as you need. These events can be tied to the HTML components of your page and can have the same name, as long as they have different identifiers (these identifiers must be unique across the DSL file, to make a distinction between the events sent by the browser). It can be useful to associate several HTML components with the same event if these HTML components have the same function. For instance, you can define several events associated with a search feature and give all these events the same name: "Search".

For each event, you can define triggers which describe the condition to match in order to submit the event:

- Triggers can implement timeouts.
- Triggers can be associated with DOM events.
- You can define several triggers for the same event (see <trigger> for further details).

Each trigger should have an `element` attribute that specifies the document's DOM element to attach the trigger to, and the `action` attribute, which species the DOM event to track.

You can specify standard DOM events for the `action`:

- Browser Events
- Document Loading
- Keyboard Events
- Mouse Events
- Form Events

In addition to the standard DOM events, the DSL supports the following two values: `timer` and `enterpress`.

The following example generates a "Search" event if the visitor does a site search. The "searchString" value is the string entered in the "INPUT.search-submit" form.

```
<event id="SearchEventClick" name="Search">
          <trigger name="SearchTrigger" element="INPUT.search-submit" action="click" url=""
count="1" />
          <val name="searchString" value="INPUT.search-submit" />
</event>
```

If the DSL uses the optional `condition` attribute, the event's triggers are installed on the page if the condition evaluates to true. The following example creates a Business event with a time that can be triggered only if the text inside the <h1> tag is "Compare":

```
<event id="InactivityTimeout4CompareProductsEvent" name="InactivityTimeout4CompareProducts"
condition="$('h1').text() == 'Compare'">
           <trigger name="InactivityTimeout4CompareProductsTrigger" element=""
action="timer:10000" type="timeout"  url="http://www.MySite.com/site/olspage.jsp" count="1"/>
</event>
```

If the DSL uses an optional `postcondition` attribute, this can manage how an event is generated by checking a condition after the actions are completed. The following example creates a Business event timeout by timer if a page is in focus. In this case, the event does not generate if the page is opened in the background:

```
<event id="TimeoutEvent10" name="Timeout-10" condition="" postcondition="document.hasFocus()
=== true">
         <trigger name="TimeoutTrigger" element="" action="timer:10000" type="timeout" url=""
count="1" />
</event>
```

A DSL `trigger` can use the `type` attribute. This can have a value of either `timeout` or `nomove`, which specifies how the timer action works. If the `type` is `timeout`, then the timer interval begins after the page is loaded. If the `type` is `nomove`, then the timer resets each time the user moves the mouse.

You can also apply the optional `url` attribute. This attribute defines the URL of the specific page that raises the Business event. The Business event is not submitted if the current document's URL does not match the URL parameter.

Finally, you can apply the optional `count` attribute. This attribute specifies how many times the trigger needs to be matched before the event is generated and sent to the Frontend Server.

For more information about the DSL elements, see the Business Events DSL.

Creating Business Events by Customizing the DSL File

You can edit the **apps\*Your application name*\frontend\src\main\webapp\resources\dsl\ domain-model.xml** and add a list of events, with specific conditions, related to your web pages' content.

> **Important**
> Genesys recommends that you use the InTools application to help you modify your DSL.

The default **domain-model.xml** file includes a few events to help you get started with your DSL customizations: SearchEvent, TimeoutEvent10, and TimeoutEvent30. The following sections show you how you can customize these events to work on your website.

Using the SearchEvent Template

By default, the **domain-model.xml** file contains commented code that you can implement to trigger a business event when a visitor tries to search for something on your website. Complete the following steps to customize the SearchEvent for your website.

Start

1. Remove the comment characters that wrap around the event: <!– and -->. The event should look like the following:

```
<event id="SearchEvent" name="Search">
     <trigger name="SearchTrigger" element="" action="click" url="" count="1" />
     <val name="searchString"        value="" />
</event>
```

2. Set the **element** attribute to the jQuery selector that triggers a search. For example, we have an input (id="search") with a submit button (id="search-submit").

```
<event id="SearchEvent" name="Search">
     <trigger name="SearchTrigger" element="#search-submit" action="click" url=""
count="1" />
     <val name="searchString" value="" />
</event>
```

3. Set the **value** attribute to the script to retrieve the search string. For example, our input id of "search".

```
<event id="SearchEvent" name="Search">
     <trigger name="SearchTrigger" element="#search-submit" action="click" url=""
count="1" />
     <val name="searchString" value="$(#search).val()" />
</event>
```

   Now the search event is triggered when a visitor clicks the **search-submit** button.

End

Using the Timeout Events

By default, the **domain-model.xml** file contains two timeout events: timeout-10 and timeout-30.

```
<event id="TimeoutEvent10" name="Timeout-10" condition="" postcondition="document.hasFocus()
=== true">
    <trigger name="TimeoutTrigger" element="" action="timer:10000" type="timeout" url=""
count="1" />
</event>
<event id="TimeoutEvent30" name="Timeout-30" condition="" postcondition="document.hasFocus()
=== true">
    <trigger name="TimeoutTrigger" element="" action="timer:30000" type="timeout" url=""
count="1" />
</event>
```

You can customize these events or disable one or both to suit your business needs. By default, these events are triggered with a 10-second and 30-second delay after the tracking script is initialized on the page. The only difference between the events is the **action** attribute, which defines the timeout in milliseconds.

Both events have the **postcondition** attribute set to "`document.hasFocus() === true`", which checks whether the focus is on the current page. The timeout event is only triggered if the **postcondition** returns true.

Creating Business Events by Using the Monitoring Agent API

You can also use the Monitoring JS API, which allows you to submit events and data from the HTML source code.

In this case, you can use the `_gt.push()` method which allows you to decide when events should be submitted and which data they generate, directly from your web pages. See Monitoring JS API Reference for further details.

You should also consider using the API when you have more complex logic that can't be handled by DSL alone. For an example, see How To — Enable a trigger after another trigger.

Next Steps

1. Make sure the CEP Rule Templates are ready. See Publishing the CEP Rule Templates for details.
2. Finish any customizations to the SCXML strategies or Browser Tier Widgets.
3. Continue on with the Application Development Tasks.