

# **GENESYS**

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# Developer's Guide

Publishing the CEP Rule Templates

# Publishing the CEP Rule Templates

After you create business information by following either the Simple Engagement Model or the Advanced Engagement Model, you can begin working with the CEP Rule Templates.

Even if you do not plan to customize the CEP rule templates, you still need to import, configure, and publish them in the rules repository so that they are available when you begin creating your rules. You can do this in two different ways:

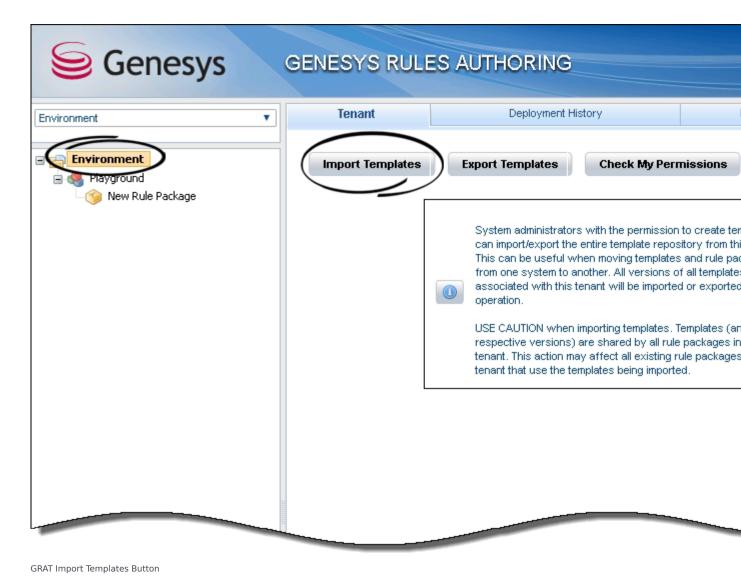
- Import the default CEP rule template into the Genesys Rules Authoring Tool (GRAT) and then use it as is. This is known as the simple mode of default CEP rule template publishing.
- Use the Genesys Rules Development Tool (GRDT) to import the default CEP rule template, then modify it and publish to the GRAT repository. This is known as the advanced mode of CEP rule template publishing.

# Simple mode of default CEP rule template publishing

If you do not plan to introduce new business events and will use only those available in the out-ofthe-box DSL file—or if you just want to get off to a quick start with the default CEP rule template, without using GRDT—you can use the simple mode of default CEP rule template publishing, which only requires GRAT.

Here's how:

- Verify that gwe\_default\_grat\_template.xml is present in Web Engagement installation dir\apps\your application\resources\\_composer-projects\ WebEngagement\_CEPRule\_Templates\import. This file contains the default Web Engagement CEP rule templates.
- 2. Open GRAT and select the **Environment** element from the left pane. The **Import Templates** button appears in the right pane.

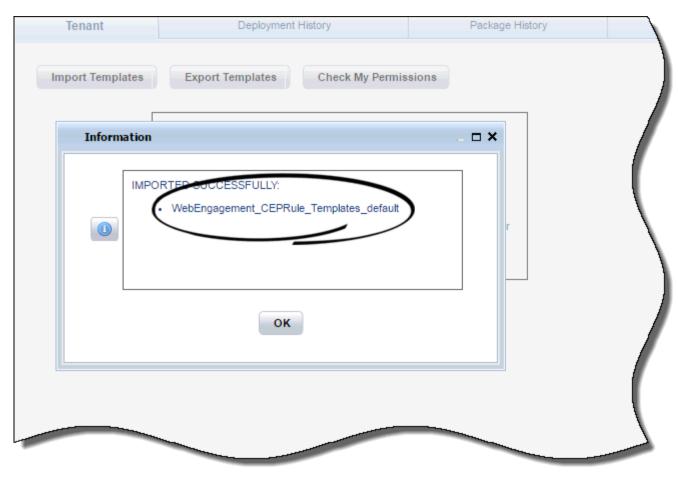


- 3. Click Import Templates.
- 4. Browse to gwe\_default\_grat\_template.xml, then then click the Import button:

mport Templates	Export Templates Check My Per	missions
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		packages
File Choo	se File gwe_defaultemplate.xml	ates ted in one
R	eplace existing completes in repository	
	tion may affect all existing rule packages in this	rand their
	e templates being imported. Proceed with caution.	
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GRAT Import Templates Dialog

5. If the template file was successfully imported, you will see a confirmation dialog:



GRAT Confirmation Dialog

6. You can now create your own rule package, based on the imported CEP rule template:

Senesys	GENESYS RU	LES AUTHOR	RING
Environment	General		
Environment	Package Name Business Name Package Type Description	web_engagement	
	Template	Selected	Name WebEngagement_CEPRule_Templates WebEngagement_CEPRule_Templates

New Rule Package

# Advanced mode of CEP rule template publishing

To use the advanced mode, do this:

- 1. Read the overview information about the rule templates.
- 2. Importing the CEP Rule Templates in GRDT.
- 3. Configuring the CEP Rule Templates.
- 4. If necessary, you can Customize the CEP Rule Templates.
- 5. Publishing the CEP Rule Templates in the Rules Repository.

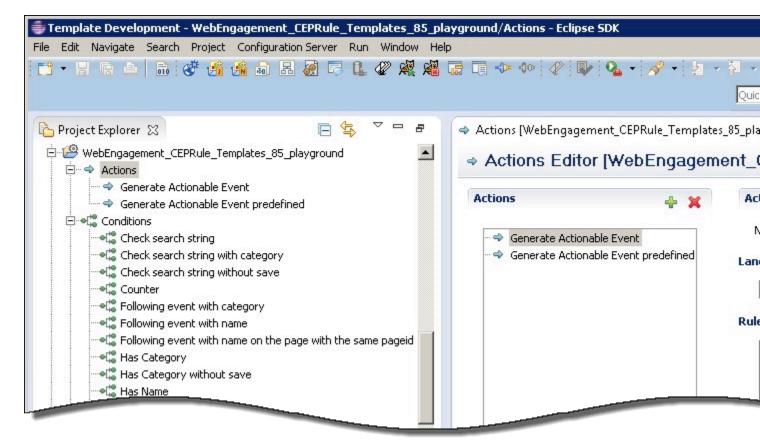
#### Overview

The Complex Event Processing (CEP) Rule Templates define the actions and conditions you can use when you create your business rules in Genesys Rules Authoring Tool.

You use the Genesys Rules Authoring Tool (GRAT) to develop, author, and evaluate these business rules. A business rule is a piece of logic defined by a business analyst. These rules are evaluated in a Rules Engine based upon requests received from client applications such as Genesys Web Engagement. A newly created Web Engagement application contains a pre-defined CEP (Complex Event Processing) template. This template type enables rule developers to build templates that rule authors then use to create rules and packages. These rules use customized event types and rule conditions and actions. Each rule condition and action includes the plain-language label that the business rules author will see, as well as the rule language mapping that defines how the underlying data will be retrieved or updated.

By default, your newly created Web Engagement application contains the following CEP Rule Template:

• \apps\application name\resources\\_composer-projects\WebEngagement\_CEPRule\_Templates includes a GRDT-based project with CEP templates.



CEP rule template in Composer

In order to use these templates to define rules, you must first publish them.

Before you publish the templates, you can edit them to suit your business needs using the the Genesys Rules Development Tool. For more information about rule templates, refer to the Genesys Rules System documentation.

# Important

Note that if you customize your rule templates, you must republish them.

#### Actions

The list of actions available in the template is listed in **WebEngagement\_CEPRule\_Templates** > **Actions**. You can edit, add, or remove these actions. In the Genesys Rules Authoring Tool (GRAT), when you create a rule based on the template, you can add an action by clicking **Add action**; GRAT displays all the actions defined in the template. You'll see how actions are implemented once you start creating rules. The default actions are:

- Generate Actionable Event
- Generate Actionable Event Predefined

#### Enums

The enumerations available in the template are listed in **WebEngagement\_CEPRule\_Templates** > **Enums**. You can edit, add, or remove these enumerations. When you create a rule based on the template, you can specify a **Phase** by clicking **Add Linear Rule**; GRAT displays all the enumerates available in the template. In the default template, no specific enumeration is available.

#### Conditions

The conditions are listed in **WebEngagement\_CEPRule\_Templates > Conditions**.

Java - WebEngagement_CEPRule_Templates_8	5_playground/Conditions - Eclipse SDK	
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	Problems 😂 @ Javadoc 😥 Declarat 0 errors, 11 warnings 0	ion
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List of conditions in the CEP rule template.

You can edit, add, or remove these conditions. Each condition associates a name with an expression. When you create a rule based on the template, you can add one or more condition to this rule by clicking **Add condition**; GRAT displays all the condition expressions available in the template. For complex templates, you need several conditions to implement a rule.

Condition Details						
Condition Name	Expression	Condition details				
Check search string	event searches {searchString}	Returns true if the event Search occurs and if the {searchString}				

#### **Condition Details**

Condition Name	Expression	Condition details
		label is found, this event's result is saved in the {event} label.
Following event with category	AND event following {prevEvent} with category {category} save as {event}	If the event follows {prevEvent} and contains the {category} label, this event's result is saved in the {event} label.
Following event with name	AND event following {prevEvent} with name {eventName} save as {event}	If the {eventName} follows {prevEvent} in parameter, this event's result is saved in the {event} label.
Has Category	page transition event occurs that belongs to category {category} save as {event}	If the event is a page transition for the given category, this event's result is saved in the {event} label.
Has Category without save	page transition event occurs that belongs to category {category}	Returns true if the event is a transition to the given category's page.
Has Name	event with name {eventName} save as {event}	If the {eventName} occurs, this event's result is saved in the {event} label.
Has Name without save	AND event with name {eventName}	Returns true if {eventName} occurs.
Remember last event	Precondition: save last event	Saves the last event.
Save category as event	category is {category} save as {event}	If the event contains the given category, this event's result is saved in the {event} label.
Timeout on category	Timeout event occurs with category {category}	Returns true if the Timeout event occurs for the given category.

# Importing the CEP Rule Templates in GRDT

Complete this procedure to import the CEP rule templates in the Genesys Rules Development Tool. Even if you do not plan to customize the templates, your rule template must be published in the Rules System Repository before you try to create rules. **Prerequisites** 

• The Genesys Rules Development Tool is installed, configured, and opened in Composer.

#### Start

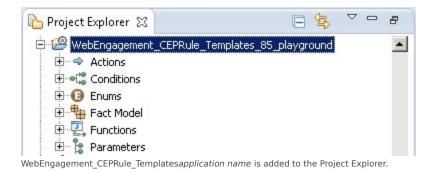
- 1. Navigate to **Window > Open Perspective > Other > Template Development** to switch to the Template Development perspective of the Genesys Rules Development Tool.
- 2. Select File > Import....
- 3. In the **Import** dialog window, navigate to **General > Existing Projects into Workspace**. Click **Next**.
- 4. Select Select Root Directory:, then click Browse.
- 5. Import your project from *Web Engagement installation directory*\apps\application *name*\resources\\_composer-projects\WebEngagement\_CEPRule\_Templates:

- Browse to the \apps\application name\resources\\_composer-projects folder in the Genesys Web Engagement installation directory and select a project.
- Click OK. WebEngagement\_CEPRule\_Templatesapplication name is added to the Projects list.
- Select the WebEngagement\_CEPRule\_Templatesapplication name project.
- Warning: Do **not** enable the option **Copy projects into workspace**.

#Import		_ 🗆 🗙
Import Projects Select a directory to searc	ch for existing Eclipse projects.	
<ul> <li>Select root directory:</li> <li>Select archive file:</li> <li>Projects:</li> </ul>	C:\Program Files\GCTI\Genesys Web Engagem	Browse Browse
WebEngagement	_CEPRule_Templates_85_playground (C:\Prograr	Select All Deselect All Refresh
Copy projects into wo Working sets Add project to work Working sets;		Select
	< Back Next > Finish	Cancel

Import the default templates by clicking **Finish**.

 Click Finish to import the project. WebEngagement\_CEPRule\_Templatesapplication name is added to the Project Explorer.



#### End

### Configuring the CEP Rule Templates

#### Prerequisites

• The Web Engagement Categories business attribute is defined in Genesys Administrator.

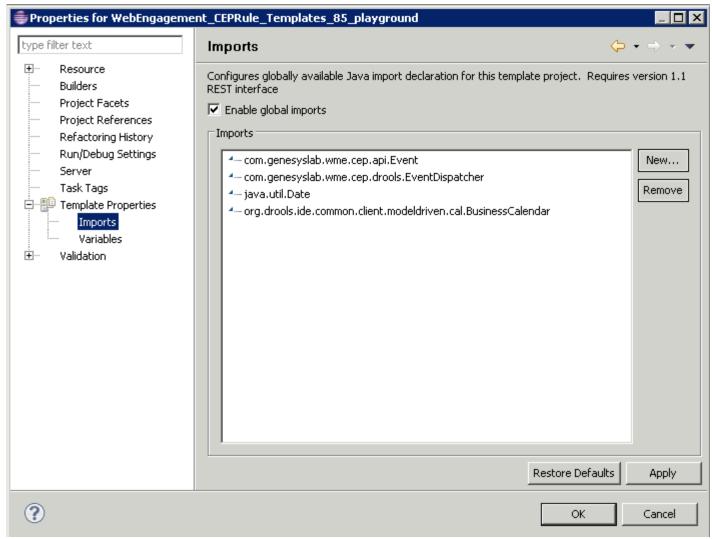
#### Start

- 1. In the GRDT **Project Explorer**, right-click on the **WebEngagement\_CEPRule\_Templates** *name* project. Click **Properties**.
- 2. In the **Properties** dialog window, navigate to **Template Properties**. In **Publishing Data**, set **Type** to web\_engagement.

💀 Properties for WebEngageme	ent_CEPRule_Templates_85_playground	
Topercises for webringagener         type filter text         Resource         Builders         Project References         Refactoring History         Run/Debug Settings         Server         Task Tags         Template Properties         Validation	Template is reserved by you, settings cannot be changed ID: WebEngagement_CEPRule_Templates_85_playground Publishing Data Type: web_engagement Tenant: Environment Description: Base version: 7	YPES
?	OK Ca	ancel

Set the **type** to web\_engagement.

- 3. Navigate to **Template Properties > Imports**. The **Imports** panel opens.
- 4. Select the **Enable global imports** option.



Enabling global imports.

Note: The com.genesyslab.wme.cep.api.Event and com.genesyslab.wme.cep.drools.EventDispatcher packages must be present.

- 5. Click **OK**.
- 6. In the **Project Explorer**, navigate to **WebEngagement\_CEPRule\_Templates**application name > **Parameters > category**.

<ul> <li>③ Java - WebEngagement_CEPRule_Templates_85_playground</li> <li>File Edit Navigate Search Project Configuration Server Run With</li> <li>○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○</li></ul>	
Project Explorer  Project  Project Explorer  Project  Pr	/
Fact Model     Functions     Formeters     count     count     event	
eventName     eventType     g prevEvent     searchString	

7. In the **Parameters Editor** panel, set **Attribute Name** to Web Engagement Categories.

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l	- Count	Description:		*
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		and the second		

8. Click Save.

#### End

# Customizing the CEP Rule Templates (Optional)

#### Start

- 1. Open the CEP rule template project with GRDT and navigate to the Conditions item.
- 2. Expand Conditions to open the Conditions editor.
- 3. In the Conditions tab, click +. The **Add Condition** window opens.

•(# Add	×
Add Condition	
Create a new template condition	
Name: Following event with name o	n the page with the same pageid
	Cancel

- 4. Enter a name and click **OK**. The condition is added and selected in the condition list; the condition detail panel opens.
- 5. Insert the Language Expressions and Rule Language Mapping:

onditions	🕂 🗙 Condition Details
Check search string	Name: Following event with name on the page with the same pageid
	Language Expression:
	The event occurring after {prevEvent} is named {eventName} then save as {event} on the same page
Following event with category	
Following event with name	Rule Language Mapping:
Following event with name on the page with	h the same
	{event}: Event(eval({event}.getName().equals('{eventName}')) && eval({event}.getPageId().equals({prevEvent}.getPageId())) && this after
<ul> <li>Has Name without save</li> </ul>	
<ul> <li>IsCalendarException</li> </ul>	
•[‡ isWorkingDay	
•C isWorkingHours	
•[¦® Remember last event	
Save category as event	

6. Click Save Now when the rule template is published, the rule will be available in GRAT:

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Environment 💌	Ger	neral	Rules	Audit Trail						
	ID	Name	Description	Phase	Calendar	Pending Deployment	Start Date	End Date		
Environment     Get Galactic Galac	Rule-1	00 products	test new condition	*	(None selected)	٢			9	
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						e as {event} (WebEnga			Project)	
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				page transition e	ent occurs that I	pelongs to category (ca	tegory} (WebEi	ngagement_CEPRi	ile_Templates_i	
		page transition event occurs that belongs to category {category} save as {event} (WebEngagement_CE						agement_CEPR		

#### End

Publishing the CEP Rule Templates in the Rules Repository

#### Prerequisites

- Your user has the correct permissions to manage rules in GRAT, as detailed in the Genesys Rules System Deployment Guide.
- You configured GRDT to enable a connection to Configuration Server and Rules Repository Server.

#### Start

- 1. In **Project Explorer**, right click **WebEngagement\_CEPRule\_Templates***application name*.
- 2. Select **Publish**. The **Publish Template Wizard** opens.

Template Development - WebEng			
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🕀 🥙 WebEngagement_CEPRule_Tem	New		) Ii
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e Publich Tamplate Wizard			

The Publish Template Wizard.

3. Select WebEngagement\_CEPRule\_Templatesapplication name.

🕏 Publish Template Wizard		
Project Selection		
Select project to publish to the rule repository		
Project	Target	Туре
WebEngagement_CEPRule_Templates_85_playground		web_engagement
Edit properties		
Rev Sack Nex	t > Finisl	h Cancel

Select WebEngagement\_CEPRule\_Templatesapplication name.

4. Click Finish.

#### End

#### **Next Steps**

- You can continue customizing your application:
  - Customizing the SCXML Strategies
  - Customizing the Browser Tier Widgets
- You can deploy your application.