eServices Manager Plug-in for GAX

eServices Digital Administration 8.5.3

12/29/2021

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eServices Manager Plug-in for GAX

The eServices Manager Plug-in gives you the tools to:

- Respond to incoming interactions using pre-written Standard Responses.
- Customize the Standard Responses using Field Codes to add a personal touch.
- Create Screening Rules in order to screen interactions for specific words or phrases, which you can then use to decide how to handle the interaction.

> **Important**
>
> Genesys Content Analyzer, which uses natural language processing to analyze incoming interactions and assign them to categories in a category tree, has its own interface.

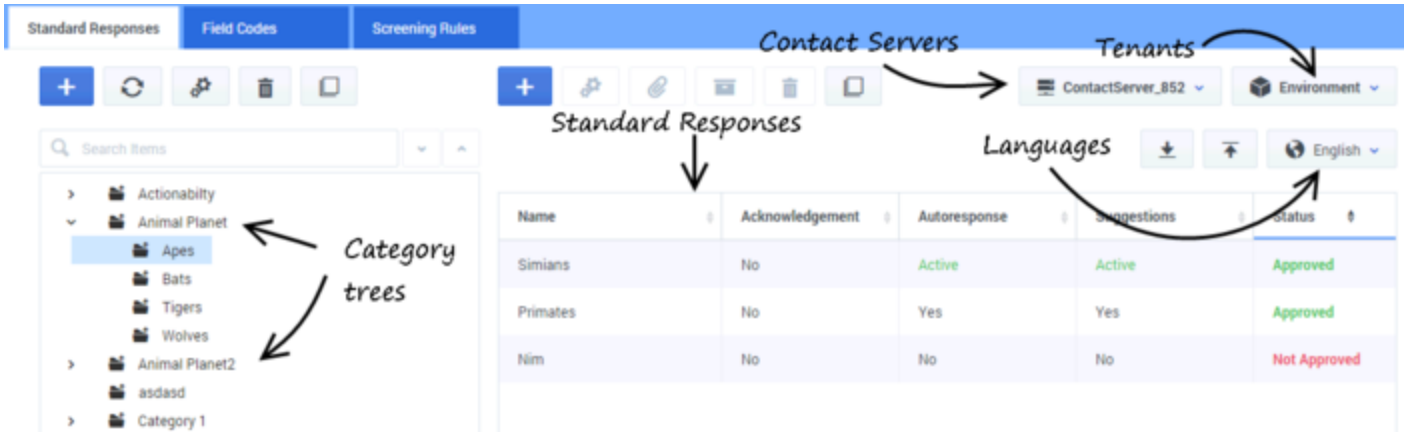
Let's Get Started

If the eServices Manager Plug-in isn't yet installed,

1. Upload a ZIP file that contains the installation package and its associated templates (typically provided by Genesys Customer Care; see Installing Plug-ins with the Software Installation Wizard).
2. Proceed with the installation.

> **Tip**
>
> - eServices Manager is designed to be viewed at a minimum screen resolution of 1280x1024, or a full HD resolution of 1920x1080.
> - For eServices Manager to work with Microsoft Internet Explorer 11 you might have to adjust your browser settings. Ensure that the following Internet Explorer Security options are enabled:
>   - Downloads/Font download
>   - Scripting/Active scripting

Then start Genesys Administrator Extension and open the eServices Manager Plug-in:



eServices Manager: Opening View

What Next?

- Working with Standard Responses explains how to create and edit Standard Responses and how to create the category tree structure you will use to organize your Standard Responses, Field Codes, and Screening Rules.
- How to create and edit Field Codes, which enable you to insert personal information, such as names, into your Standard Responses.
- Working with Screening Rules explains how to create and edit Screening Rules, which enable you to analyse what incoming messages are about and to handle them accordingly.

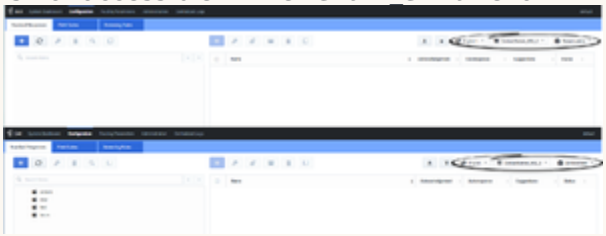
Install eServices Manager

Prerequisites

- Genesys Administrator Extension (GAX):
  - eServices Manager 8.5.304.10 and higher must use a release between GAX 8.5.290.09 to GAX 9.0.001.xx.
  - eServices Manager 8.5.302.02 must use GAX 8.5.270.06.
  - eServices Manager 8.5.301.09/8.5.300.09 must use a release between GAX 8.5.240.19 to GAX 8.5.260.xx. These versions of eServices Manager are not compatible with GAX 8.5.270.06 or later.
- UCS 8.5.200.19 or later
- UCS Proxy 8.5.100.04 or later
- Classification Server 8.5.200.05 or later
- If a previous version of eServices Manager Plug-in for GAX was installed on the current host, uninstall that version.

Important

One UCS instance can support multiple tenants in eServices Manager, and each tenant's data for standard responses and screening rules are stored separately from other tenants. The graphic below shows two tenants (*Environment* and *Tenant_extra*) using one UCS instance (*ContactServer_852_2*). The *Environment* tenant has data that is not accessible in the *Tenant_extra* tenant.



The following exceptions apply:

- Field codes and custom variables are the same for all languages and tenants in the same environment.
- Names of root categories must be unique for all languages in a single tenant.

Creating a zip file

1. Create a temporary folder on your desktop.
2. Copy the IP folder from the original location (typically, the product CD) into the temporary folder.
3. Copy the templates folder from the original location into the temporary folder.
4. Zip the contents of the temporary folder. Ensure the folders **ip** and **templates** are in the root directory of the zipped file.

Alternatively, contact Genesys Customer Care to obtain the required Zip file containing the installation package and associated templates.

Installing the plugin

Local Control Agent 8.5.100.31 or higher

1. Upload the eServices Manager installation package (IP) to GAX. Refer to the GAX documentation for more information.
2. Extract the IP to any folder.
3. Navigate to the **ip** folder in the extracted folder.
4. Do one of the following:
   On Windows, run **setup.exe**

   On Linux, run **install.sh**
5. Restart GAX.

Local Control Agent 8.5.100.29 or lower

1. Add the following option to the **Application Options** tab of the Genesys Administrator Extension (GAX) Application object:
   - Section name: `asd`
   - Option name: `plugin_ip_list`
   - Option value: `eSMngrPlgnAdm64` (for the Windows host) or `eSMngrPlgnAdm` (for the Linux host)

> **Tip**
>
> This option is also used by Content Analyzer Plug-in for GAX and Privacy Manager Plug-in for GAX. If you are running both Privacy Manager and eServices Manager with Content Analyzer, the value can be a comma-separated list; for example, `eSMngrPlgnAdm,PrivacyMng,CntAnlzPlgnAdm`

2. Restart GAX.
3. Upload the eServices Manager installation package (IP). If you previously uploaded the IP, you must do so again now.
4. Carry out the plug-in installation process.
5. Restart GAX.

Configuring the plugin

Local Control Agent 8.5.100.31 or higher

1. Create an Application for eServices Manager with the type Application Cluster.
2. Add tenants to the eServices Manager Application.
3. Specify the Host and Port. The Application Cluster application object and the GAX application must be configured with the same host in order to enable mutual TLS connections.
4. Connect the eServices Manager Application to UCS, UCS Proxy, and Classification Server.
5. Configure these connections: TLS, ADDP, and so on.
6. Navigate to the GAX Application Options.
7. Create a section with the name `gax-km`.
8. Create the following options in the **gax-km** section:
   - `app-name` = eServices Manager Application name
   - `file-storage-path` = Full path to the folder in which eServices Manager creates its temporary file. You must ensure that eServices Manager has permission to write into that directory.
   - `connection-timeout` = 3
9. If you need multi-language support, set the UTF-8 JVM parameter for all Java components (UCS, GAX Server, Browser, Classification Server) in the corresponding .ini file (or the .bat file if you start the component from the command line):
   ini file: `[JavaArgs] -Dfile.encoding=UTF-8 ...`
   bat file: `set JAVA_OPTS=%JAVA_OPTS% -Dfile.encoding=UTF-8 ...`
10. Restart GAX.

> ### Tip
> On multi-language support: In the GAX **User Preference** window (under the Preferences menu), **Use system settings** refers to using the settings in the **System Preferences** window. It does not refer to the Region and Language setting of the host machine.
>
> If **Use system settings** is selected in the **Language** field of GAX's Locale User

Preferences, it refers to the language that is selected in the **Language** field of **System Preferences**. Note that if you want to have any language other than English available in these fields, you must install the relevant language pack plug-in.

Local Control Agent 8.5.100.29 or lower

1. Create an Application for eServices Manager with the type Application Cluster.
2. Add tenants to the eServices Manager Application.
3. Specify the Host and Port. The Application Cluster application object and the GAX application must be configured with the same host in order to enable mutual TLS connections.
4. Connect the eServices Manager Application to UCS, UCS Proxy, and Classification Server.
5. Configure these connections: TLS, ADDP, and so on.
6. Navigate to the GAX Application object's **[gax-km]** section and configure the following options:
   - **app-name** = The eServices Manager Application name.
   - **file-storage-path** = The full path to the folder in which eServices Manager creates its temporary file. You must ensure that eServices Manager has permission to write into that directory.
7. If you need multi-language support, set the UTF-8 JVM parameter for all Java components (UCS, GAX Server, Browser, Classification Server) in the corresponding .ini file (or the .bat file if you start the component from the command line):
   ini file: `[JavaArgs] -Dfile.encoding=UTF-8 ...`
   bat file: `set JAVA_OPTS=%JAVA_OPTS% -Dfile.encoding=UTF-8 ...`
8. Restart GAX.

Tip

On multi-language support: In the GAX **User Preference** window (under the Preferences menu), **Use system settings** refers to using the settings in the **System Preferences** window. It does not refer to the Region and Language setting of the host machine.

If **Use system settings** is selected in the **Language** field of GAX's Locale User Preferences, it refers to the language that is selected in the **Language** field of **System Preferences**. Note that if you want to have any language other than English available in these fields, you must install the relevant language pack plug-in.

Configuring structured messages

> **Important**
> The following section applies only to 8.5.304.10 releases and higher.

The following steps describe how to configure structured messages using Configuration Manager. If preferred, you can use Genesys Administrator or Genesys Administrator Extension.

1. Ensure you have selected the correct tenant that you want to use for structured messages.
2. Create the following business attribute:
   Name: `MediaOrigin`

   Display Name: `Media Origin`

   Type: `Custom`
3. In the **MediaOrigin** business attribute, create the following business attribute values:
   - For Apple Business Chat:
     - **Name**—`applebc-session`
     - **Display Name**—Enter a display name.
4. For **applebc-session**:
   1. In the **Annex** tab, create a section named `rich-media-types`.
   2. Create the following options:
      - `Apple Pay`
      - `Custom Extension`
      - `Date Picker`
      - `List Picker`
      - `Rich Link`

      Do not provide a value for any option.

Role-Based Access

To grant a user access to the GAX menu and eServices Manager Plug-in for GAX, assign the following privileges to the users in GAX:

- **COM/Access Configmanager**
- **eservices-manager/Genesys eServices Manager Plug-in for GAX Access**

You can also assign the following **eservices-manager** role privileges to users:

Type	Privilege name	Prerequisite
Standard response	**View Standard Response**	
	Create Standard Response	**View Standard Response**
	Modify Standard Response	**View Standard Response**
	Delete Standard Response	**View Standard Response**
	Approve Standard Response	**Modify Standard Response**
Category	**Create Category**	
	Modify Categories	
	Delete Categories	
Screening rule	**Create Screening Rule**	
	Modify Screening Rule	
	Delete Screening Rule	
Field code	**Create Field Code**	
	Modify Field Code	
	Delete Field Code	
Import/Export	**Import Knowledge Management Objects**	• **Create Standard Response** • **Modify Standard Response** • **Create Category** • **Modify Categories** • **Create Screening Rule** • **Modify Screening Rule** • **Create Field Code** • **Modify Field Code**
	Export Knowledge Management Objects	**View Standard Response**

Important

- Custom variables share the same set of privileges with field codes. This means that:
  - **Create Field Code** is required to create a custom variable.
  - **Modify Field Code** is required to modify a custom variable.
  - **Delete Field Code** is required to delete a custom variable.
- Test messages share the same set of privileges with screening rules. This means that:
  - **Create Screening Rule** is required to create a new test message.

- **Modify Screening Rule** is required to modify a test message.
- **Delete Screening Rule** is required to delete a test message.

Uninstalling the plugin

On Linux

1. Stop GAX.
2. Go to **<GAX_HOME>/webapp/WEB-INF/lib** on the file system (where **<GAX_HOME>** is your home folder for the GAX application).
3. Delete the **gax-km-<$version$>.jar** file (where **<$version$>** is the version of the plugin).
4. Go to **<GAX_HOME>/plug-ins** on the file system.
5. Delete the **gax-km-<$version$>.jar** file.
6. Go to **<GAX_HOME>/webapp/plugins** on the file system.
7. Delete the **gax-km** folder.
8. Start GAX.

On Windows

1. Stop GAX.
2. Go to **Programs and Features**.
3. Find and run **Genesys eServices Manager Plug-in for GAX <$version$>** (where **<$version$>** is the version of the plugin).
4. Select the **Remote** check box.
5. Click **Next**.
6. Click **Yes** in **Confirm Windows**.
7. Click **Finish**.
8. Go to **<GAX_HOME>/webapp/plugins** on the file system (where **<GAX_HOME>** is your home folder for the GAX application).
9. Delete the **gax-km** folder.
10. Start GAX.

Standard Responses

Standard Responses enable you to send welcoming, helpful answers to frequently-submitted queries from customers.

The high-level process

To create Standard Responses you do the following high-level steps:

1. Plan and build your Category Tree structure. A Category Tree provides the framework for organizing your Standard Responses.
2. Create your Standard Responses.
3. Create Field Codes and then add them to the Standard Responses. Field Codes enable you to personalize your Standard Responses.

You can cut, copy, paste, and delete Standard Responses and other Knowledge Management objects.

Plan and Build a Category Tree

A Category Tree consists of one or more *root categories*, each of which can have subcategories under it. Standard Responses are nodes under categories or subcategories in the Category Tree.

Step 1: Planning

We'll start by planning your Category Tree. To make your Standard Responses useful, you need root categories and subcategories that make sense in your business.

For example, you might create root categories for business units such as Sales, Service, and Billing. Then create useful subcategories. You might want to separate out customer type, such as Platinum, Gold, and Silver customers; or maybe it would work better for you to separate types of products, such as Pet Food, Pet Toys, and Cleaning Supplies; or you might want to respond differently to customers in different locations.

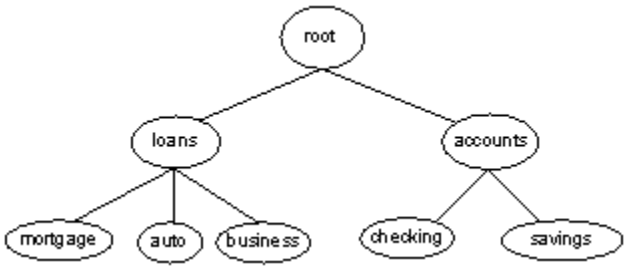
- Make sure that all the Standard Responses you need will fit within the categories you create.

> **Tip**
> Plan your category structure ahead of time. You can edit it, but a little thought now will save time a frustration later.

To read more about how category structures work, see

[+] How Category Structures Work

In general terms, a *category* is a unit of knowledge. Categories are organized in a tree structure; "Example Category Tree" shows an example.



Example Category Tree

Genesys eServices uses category trees to organize and provide access to the library of standard

responses. Each standard response must be associated with one category. One category can have zero or many standard responses associated with it.
Categories with no associated standard responses may be of use in grouping other categories together.

Note these definitions:

- A *terminal* category is one that has no subcategories: a leaf on the category tree.
- A *nonterminal* category is one that has subcategories.
- *Child* is another term for subcategory. For example, in "Example Category Tree", **savings** is a child of **accounts**, and **accounts** has the two children **checking** and **savings**.

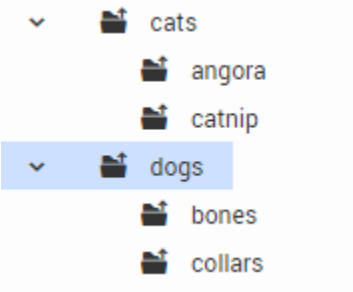
A category tree is specific to a tenant, a Contact Server, and a language. Each tenant/Contact Server/language triplet can have multiple category trees.

You can design different sets of screening rules (for example) for different languages within a single tenant. But the screening rules operate the same way regardless of which language they are grouped under.

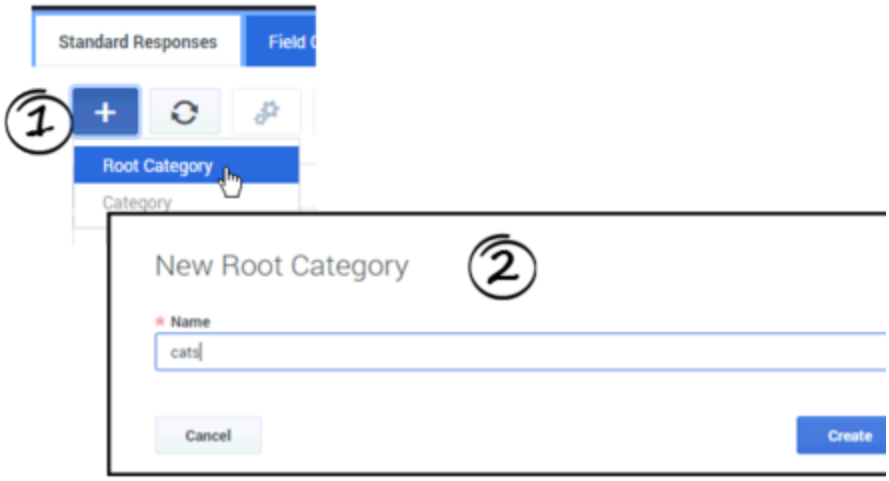
Category membership is inherited. That is, if Category 1 includes Categories 10 and 11, and Category 10 includes Categories 100 and 101, then Category 1 also includes Categories 100 and 101.

Step 2: Build your Category Tree

You've done your planning. Now let's make it happen. For our example, we are going to create two new root categories, Cats and Dogs, with subcategories:



First we'll create our two root categories. Make sure you have selected the right Tenant, Contact Server, and Language, then:

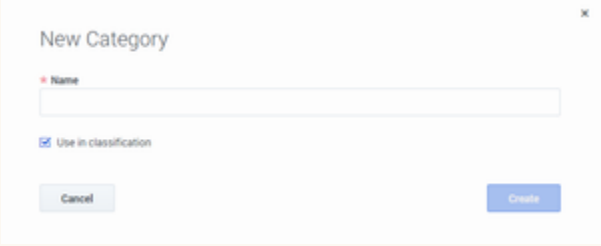


New Root Category

1. Click the New (plus sign) icon and select **Root Category**.
2. Enter the root category name, Cat, and click **Create.**
3. Repeat the same process to create the Dog root category.
4. Now create the subcategories. For each subcategory, select the correct root category and then follow the same process as above, but select **New > Category** instead of **New > Root Category**.

Important

The **New Category** and **Edit Category** dialog boxes (unlike the **New Root Category** dialog) include a **Use in classification** checkbox, which enables you to choose whether Genesys Content Analyzer uses the category in classification. The box is selected by default, but you may wish to have some categories that are used only for organizing other categories or standard responses, not for classification.



Tip

You can cut, copy, paste, and delete categories as well as other Knowledge

Management objects.

More About Categories

- To change a category name, select it and click the Edit (gears) icon.
- To open the root category and show the categories beneath it, click a caret mark (>).
- To locate a category, use the search box located just above the list of category trees.
- To delete a category, select it and click the Delete (trashcan) icon.Deleting an upper-level category also deletes all the categories under it.

Tip

You cannot delete any root category that has at least one training data object or model assigned to it.

Characters Allowed in Names

The names of most eServices Manager and Content Analyzer objects can consist only of the alphanumeric characters supported in UTF-8, plus the characters shown in "Additional Characters Allowed in Object Names". This covers categories, standard responses, and screening rules (for eServices Manager), and training data objects and models (for Content Analyzer). Requirements for the names of other objects are listed below the "Additional Characters" table.

Additional Characters Allowed in Object Names

Name	Character	Name	Character	Name	Character
Hyphen	-	Exclamation point	!	Backslash	\
Number sign, pound	#	Dollar sign	$	Parentheses	( )
Caret	^	Asterisk	*	Question mark	?
Underscore	_	Curly brackets	{ }	Space	
Angle brackets	< >	Period, full stop	.	At sign	@

Other Objects

- Field Code names have the same requirements as most other objects (alphanumeric characters supported in UTF-8, plus the characters in "Additional Characters Allowed in Object Names"), except

that you must not use the sequences <$ and $>.

- Custom Variable names can consist only of Latin characters and numbers (A–Z, a–z, 0–9) plus underscore (_).
- The names of test messages for Screening Rules can use any character in UTF-8.
- The **Display Name** of the Business Attribute called **Language** can consist only of Latin characters and numbers (A–Z, a–z, 0–9).

Name Length

- Categories, Field Codes, Custom Variables, Training Data Objects—64 characters
- Standard Responses, Screening Rules—128 characters
- Test messages for Screening Rules—254 characters
- Models—21 characters

Text Direction

The default direction for text is left to right. To change the direction, right-click the text field and select `writing direction`.

Next Steps

- Creating Standard Responses
- Standard Responses for SMS Gateways
- Personalizing Standard Responses with Field Codes

Create a Standard Response

A Standard Response is an item in the Standard Response Library, which stores prewritten responses for use as suggestions to agents, acknowledgments, and/or autoresponses. Each standard response is assigned to exactly one category in the system; however, a category may have zero or many standard responses assigned to it.

You can use Standard Responses for any of the eServices channels: eMail, Chat, Social Engagement, or SMS.

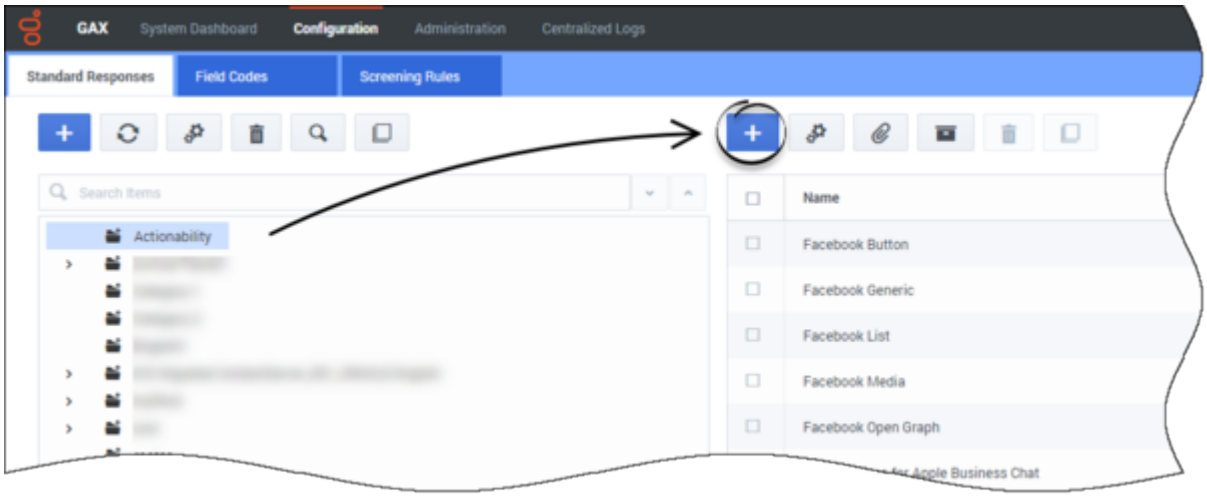
It takes just a few steps to create a Standard Response. The Process Overview below lists the main steps. We'll take each one in sequence, or you can skip to the information you need right now.

Process Overview

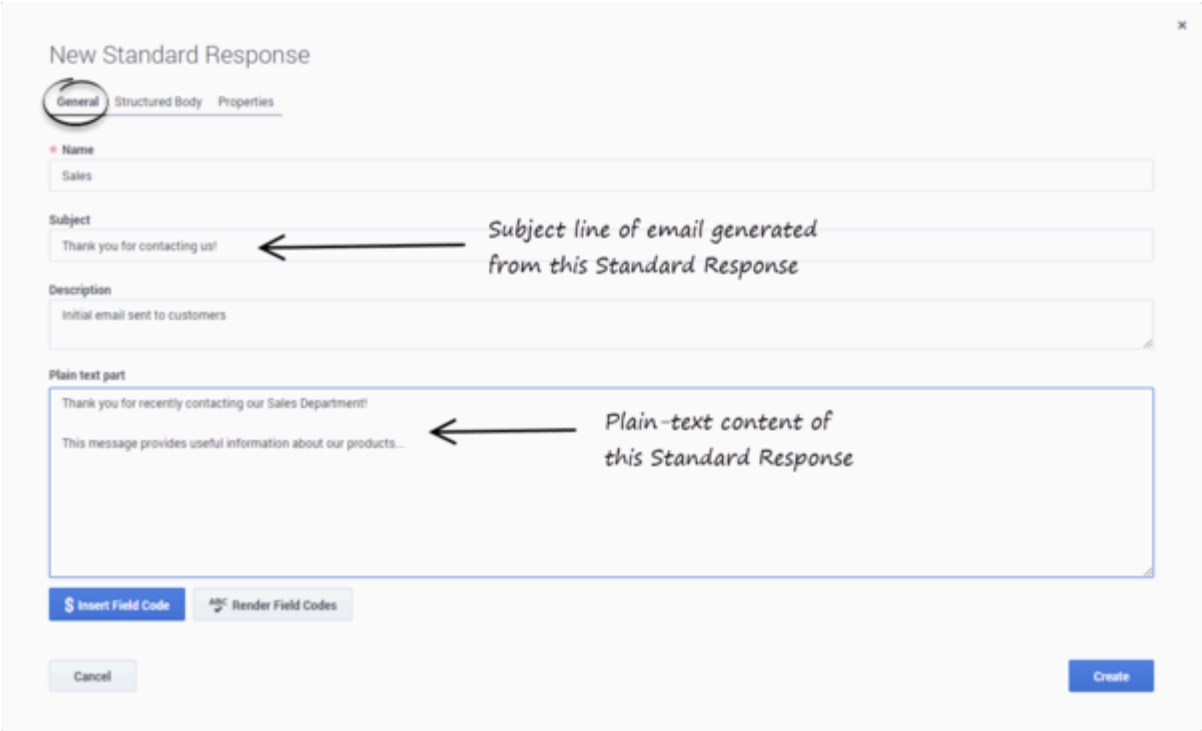
- Create a Standard Response
- Configure the properties for your Standard Response
- Enter the HTML version or Structured Message version
- Create additional versions and retrieve prior versions
- Create and add Field Codes

To create a Standard Response:

1. Select the correct Category Tree node, then click the New (plus sign) icon.



2. The **New Standard Response** window has three tabs. The first is **General**.



Important

- **Name**—The name of the Standard Response must conform to the requirements for the names of eServices Manager objects.
- **Subject**—You can also specify a Subject line in any IRD strategy object that has a **Format** tab (see the *Universal Routing 8.1 Reference Manual*). If you do, this overrides the Subject line that is specified for the Standard Response here in eServices Manager.
- **Plain text part**—You also have the option of including an HTML version.
- **Field Codes**—You will probably want to use Field Codes to personalize your Standard Responses. We'll be creating Field Codes after creating some Standard Responses, and then insert the Field Codes into them.

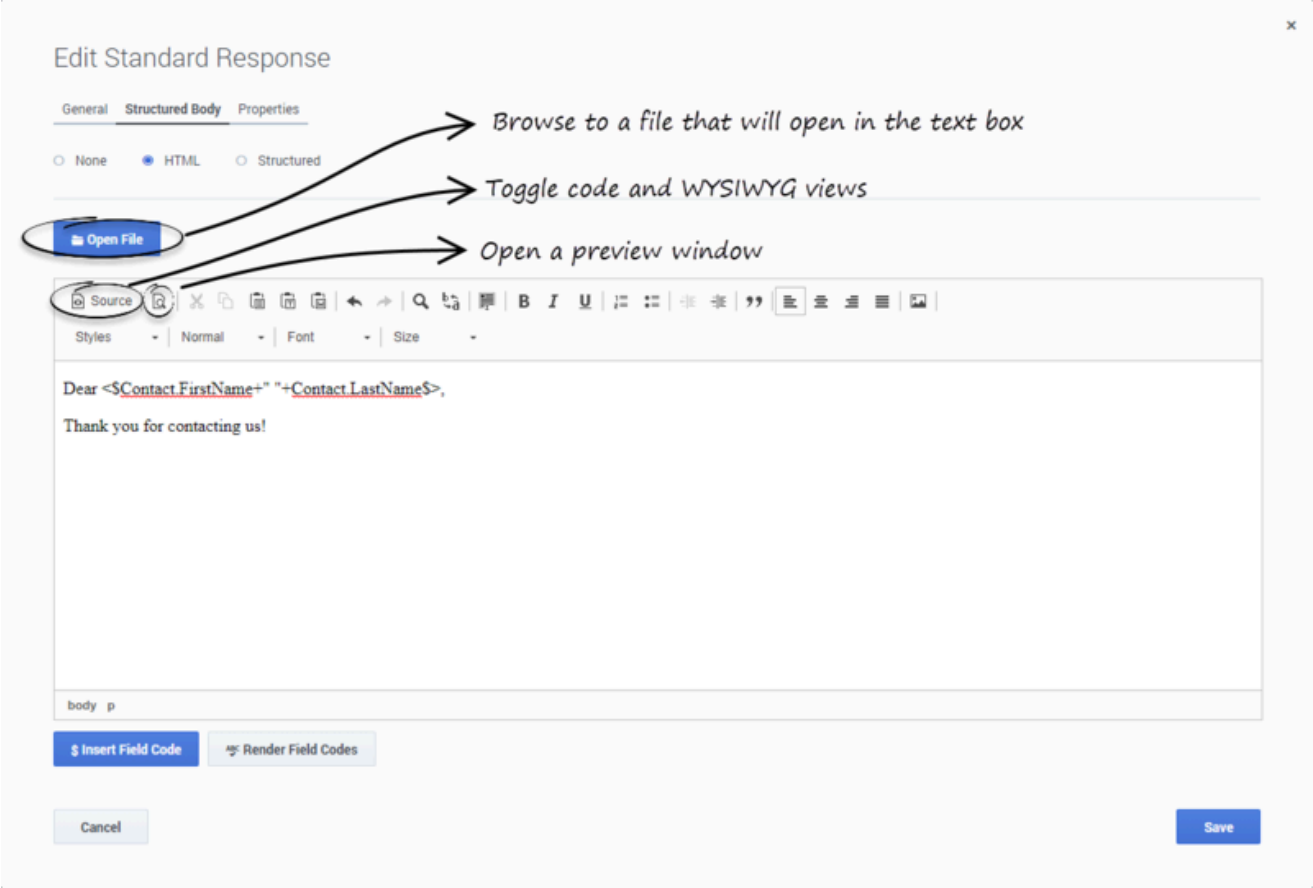
3. After clicking **Create**, you can add an attachment by clicking the paper clip icon. In the resulting **Edit Attachments** window,
   - Click the Attach (paper clip) icon to browse to an file to attach.
   - Click the Download (down arrow) icon to download the selected file to your local machine.
   - Click the Delete (trashcan) icon to delete the selected attachment.

Create the HTML Version

To create the HTML version of your Standard Response, go to the **Structured Body** tab and select the **HTML** option.

Most of the buttons provide commonly-used editing functionality, including the option to insert a link to an image. If you aren't sure what a button does, hover over it to open a tooltip.

The figure below explains buttons with more specialized functionality.



Add Text Content

You can

- Type or paste in any text as plain text.
- Paste formatted content from Microsoft Word.

- Type or paste HTML code into the code view.
- Import an existing HTML file by clicking **Open File**.

Important

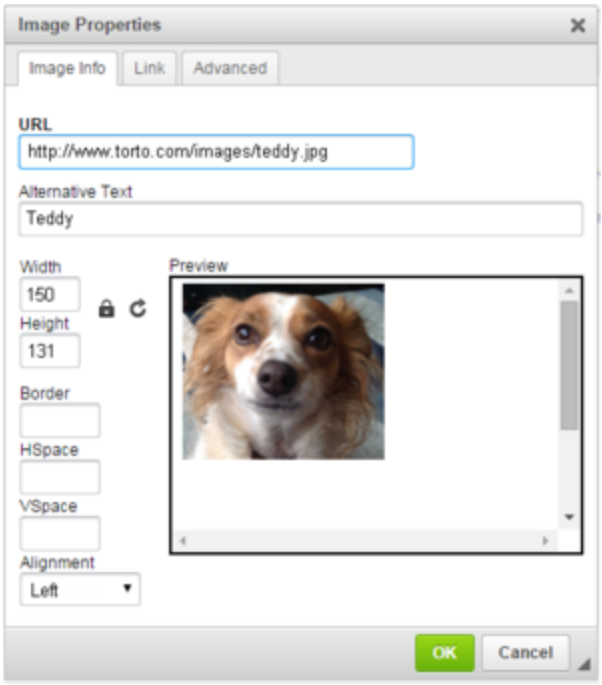
- Links to resources that are used in the content, such as image files, must use absolute URLs; embedded graphics or relative links are not supported. Also, these resources must be available on the web through an HTTP server at the time that the standard response containing this HTML is sent to the customer.
- Make sure that the content of the HTML version, including field codes, matches the plain text version that you created on the main configuration page tab. This is important because email clients may display multipart emails in varying ways. For example, if Microsoft Outlook has AutoPreview turned on, the preview may show the plain text version whereas the full display shows the HTML version. For this reason you should be careful that the plain text and HTML versions have identical content.

Warning

Apostrophes and other special characters in HTML standard responses might be corrupted in non-UTF-8 encodings. This is a known problem: http://www.i18nqa.com/debug/bug-iso8859-1-vs-windows-1252.html. As a workaround, when there is mixed encoding, convert the HTML file to a single encoding (Genesys recommends UTF-8 for compatibility with most browsers).

Add an Image

To add an image, click the  button, then configure the dialog box that opens:



Next Steps

- Review the history and manage versions
- Create Field Codes

Structured Messages

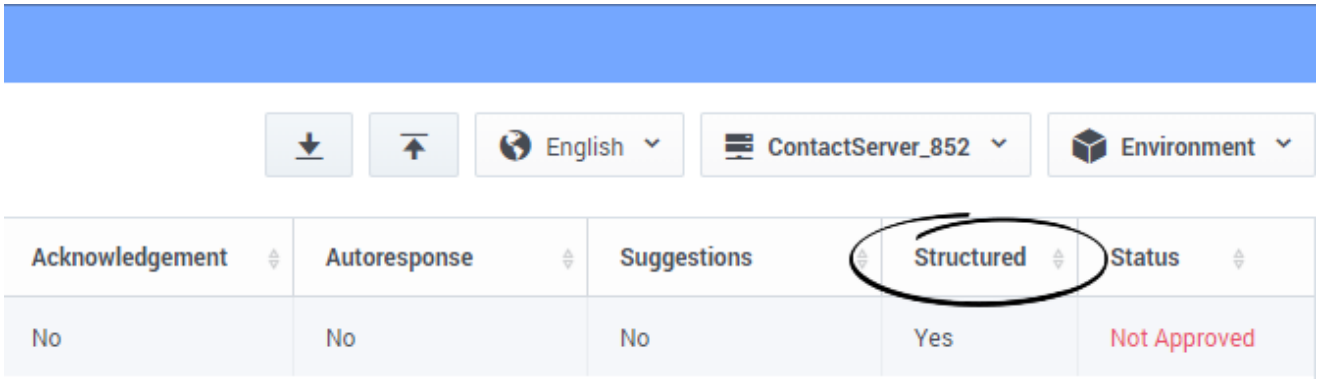
Important

- This page applies only to releases starting from 8.5.301.09.
- As of the 8.5.304.10 release, *interactive standard responses* are known as *structured messages*.
- If you are using the 8.5.304.10 release or higher, you must refer to Configuring structured messages for information on how to configure your environment to support structured messages.
- As of the 8.5.305.09 release, instances of the **Open** button to add images has been changed to the **Add Image** button.
- Refer to the Apple Business Chat documentation for more information on how agents can use these structured messages in customer interactions.

Structured messages provide enhanced functionality for Apple Business Chat interactions. Structured templates contain metadata in the form of JSON strings that specify how to present certain widgets in chat conversations with customers.

Agents can select structured messages from their Standard Response Library and insert them into chat conversations with customers.

In eServices Manager, you can quickly identify structured messages by referring to the **Structured** column, as shown below:



Creating a structured message

> **Important**
>
> - You can use more than one **Media Origin** in a single structured message.
> - If you select **None** in the **Structured Body** tab, the standard response is saved as plain text.

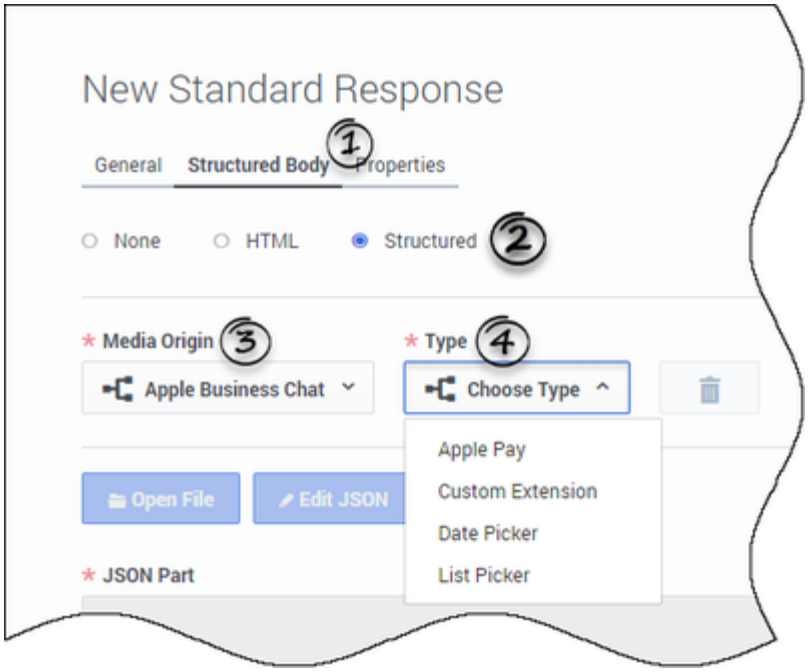
Follow the procedure below to create a structured message:

- Creating a structured message for Apple Business Chat

Creating a structured message for Apple Business Chat

> **Important**
>
> - See the Apple Business Chat documentation for more information on using structured messages with Apple Business Chat.
> - Any text you enter in the **Plain text part** field in the **General** tab appears as the name of the structured message in the agent desktop and in the chat transcript. If you do not enter text in the **Plain text part** field, the **Name** field of the standard response is used.

1. Create a standard response.
2. Go to the **Structured Body** tab (formerly the **HTML** tab).
3. Select **Structured**.



4. In the **Media Origin** menu, select **Apple Business Chat**.
5. In the **Type** menu, select one of the following types:
   - **Apple Pay**—Allow the customer to provide payment information.
   - **Custom Extension**—Use a Custom Interactive Message that provides functionality from a standalone iMessage app or an iOS app. Click here to view the Apple documentation.
   - **List Picker**—Allow the customer to select an option in a list.
   - **Date Picker**—Allow the customer to select a date or time.
   - **Rich Link**—Show an inline preview of a URL that contains an image or video.
6. Optionally, you can directly edit the JSON associated with the media type. Click **Edit JSON** to edit the JSON in the provided field, or click **Open File** to load a JSON file from your local machine.
7. Optionally, add field codes.

> **Important**
> You must not use double-quotation marks (") for field codes that are used in structured messages. Use single quotation marks (') instead.

8. Click **Create**.

Media types for Apple Business Chat

Apple Pay

This option allows the customer to provide payment information using Apple Pay.

You can configure the following options:

Apple Pay tab

- **Merchant ID**—Enter your Merchant ID (provided by Genesys Hub).
- **Merchant Name**—Enter your Merchant Name (provided by Genesys Hub).
- **Supported Countries**—The list of countries to support, specified by ISO country code.
- **Country Code**—Your company's two-letter ISO 3166 country code.
- **Currency Code**—Your company's three-letter ISO 4217 currency code for the payment.

Line Items tab

Click **+** to add a line item for which the customer can pay. You can configure the following options:

- **Label**—Enter a description of the line item.
- **Amount**—Enter the amount of money required to purchase the line item.
- **Type**
  - **final**—Select this option if the cost has been finalized and all required information has been gathered from the customer.
  - **pending**—Select this option if the cost has not been finalized and the customer must provide more information (for example, an address to calculate shipping costs).
- **Total Label**—The name of the field that shows the total price (for example, `Total Price`).
- **Total Amount**—Enter the total amount of money for the line items.
- **Total Type**
  - **final**—Select this option if the cost has been finalized and all required information has been gathered from the customer. This option is only available if all line item **Type** values are set to **final**.
  - **pending**—Select this option if the cost has not been finalized and the customer must provide more information.

You can click **+** to add more top-level items to the list. Or, you can select a line item and click the trashcan icon to remove it from the list.

> **Important**
>
> If you are using a PSP (Payment Service Provider) Connector, do not include shipping costs as a line item. You must only include shipping costs in the **Shipping Methods** tab when using a PSP Connector.

Shipping Methods tab

Click **+** to add a shipping method. You can configure the following options for each item:

- **Label**—Enter text to describe the shipping method (for example, `Standard Shipping`).
- **Identifier**—Enter a unique identifier for the shipping method (for example, `standard`).
- **Shipping Detail**—Enter additional text about the shipping method (for example, `Ships in 24 hours`).
- **Amount**—Enter the shipping cost.
- **Type**
  - **final**—Select this option if the cost has been finalized and all required information has been gathered from the customer.
  - **pending**—Select this option if the cost has not been finalized and the customer must provide more information (for example, an address to calculate shipping costs).
  - **not applicable**—Select this option if the cost and type are not applicable and must be excluded from the payment.

You can click **+** to add more shipping methods to the list. Or, you can select a shipping method and click the trashcan icon to remove it from the list.

Other Fields tab

Requested Billing Fields

Select the billing fields that the customer must provide to use Apple Pay. Refer to the Apple Business Chat documentation for more information.

Requested Shipping Fields

Select the shipping fields that the customer must provide to use Apple Pay. Refer to the Apple Business Chat documentation for more information.

Merchant Capabilities

Select the payment capabilities that you support for Apple Pay. Refer to the Apple Business Chat documentation for more information.

Supported Networks

Select the payment networks that you support for Apple Pay. Refer to the Apple Business Chat documentation for more information.

Received Message tab

These options specify how the message appears to the receiving customer.

- **Title**—Provide a title for the received message.
- **Subtitle**—(Optional) Provide a subtitle for the received message.
- **Style**—Select **Icon**, **Small**, or **Large** to specify the size of the image in the received message.
- **Image**—Click **Add Image** to select an image to attach to the received message. Or, if you have previously attached an image, click **Remove** to remove the attached image.

> **Important**
> Refer to the Apple Business Chat documentation for more information on recommended image sizes.

JSON tab

View the JSON associated with this Apple Pay message.

Custom Extension

This option uses a Custom Interactive Message that provides functionality from a standalone iMessage app or an iOS app.

You can configure the following options:

Custom Extension tab

These options refer to values specific to your application. For more information, refer to the Apple Business Chat documentation on the Apple website.

- **Application Name**—The name of the custom extension.
- **Application ID**—The App Store identifier of the custom extension.

- **Team ID**—Provide your Team ID.
- **Extension ID**—Provide your Extension ID.

Parameters tab

Click **+** to create a parameter (key-value pair) to be passed to your custom extension.

The number and types of parameters you must create are specific to the design and functionality of your custom extension. Therefore, you must consult with the developer of the custom extension to determine which parameters are needed to support the custom extension.

Refer to the Apple Business Chat documentation for more information.

Received Message tab

These options specify how the message appears to the receiving customer.

- **Title**—Provide a title for the received message.
- **Subtitle**—(Optional) Provide a subtitle for the received message.
- **Secondary Subtitle**—(Optional) Provide a secondary subtitle that is right aligned.
- **Tertiary Subtitle**—(Optional) Provide a tertiary subtitle that is right aligned.
- **Image Title**—The attached image's title, which appears in larger type at the bottom of the image.
- **Image Subtitle**—The attached image's subtitle, which appears in smaller type at the bottom of the image.
- **Image**—Click **Add Image** to select an image to show in the preview. Or, if you have previously attached an image, click **Remove** to remove the attached image.
- **Render Field Codes**—Click to render field codes and associated variables, if any, that you are using with this custom extension.

> **Important**
>
> - Some options in this tab are available only in 8.5.305.09 releases and higher.
> - Refer to the Apple Business Chat documentation for more information.

JSON tab

View the JSON associated with this custom extension.

Date Picker

This option allows the customer to select a date or time.

You can configure the following options:

Date Picker tab

- **Title**—Provide a title for the Date Picker.
- **Location**—(Optional) Describe a location for the Date Picker event.
- **Latitude**—(Optional) Provide a latitude for the location.
- **Longitude**—(Optional) Provide a longitude for the location.
- **Radius**—(Optional) The location radius, in meters. If the latitude and longitude fields are missing or empty, this field is ignored.

Timeslots tab

Click **+** to add a timeslot for the customer to select.

On the right, specify a **Start Date** for when you want the timeslot to begin. You can click the **Start Date** to specify a date and time.

In the **Duration** section, drag the sliders to specify the duration of the timeslot in hours and/or minutes.

Optionally, you can create additional timeslots by clicking **+**. Or, you can select a timeslot in the list and click the trash icon to delete it.

Received Message tab

These options specify how the message appears to the receiving customer.

- **Title**—Provide a title for the received message.
- **Subtitle**—(Optional) Provide a subtitle for the received message.
- **Style**—Select **Icon**, **Small**, or **Large** to specify the size of the image in the received message.
- **Image**—Click **Add Image** to select an image to attach to the received message. Or, if you have previously attached an image, click **Remove** to remove the attached image.

> **Important**
>
> Refer to the Apple Business Chat documentation for more information on recommended image sizes.

Reply Message tab

These options specify the appearance of the customer's response after he or she has made a selection.

- **Title**—Provide a title for the reply message.

- **Subtitle**—(Optional) Provide a subtitle for the reply message.
- **Style**—Select **Icon**, **Small**, or **Large** to specify the size of the image in the reply message.
- **Image**—Click **Add Image** to select an image to attach to the reply message. Or, if you have previously attached an image, click **Remove** to remove the attached image.

> **Important**
> Refer to the Apple Business Chat documentation for more information on recommended image sizes.

JSON tab

View the JSON associated with this Date Picker.

Preview tab

View a preview of this Date Picker.

> **Important**
> The **Title** and **Duration** fields are only presented to customers when they add the event to their calendar.

List Picker

Link to video

This option allows the customer to select one or more items from a list.

> **Important**
> If you are using images with the List Picker, consult the Apple Business Chat documentation for more information on recommended image sizes.

You can configure the following options:

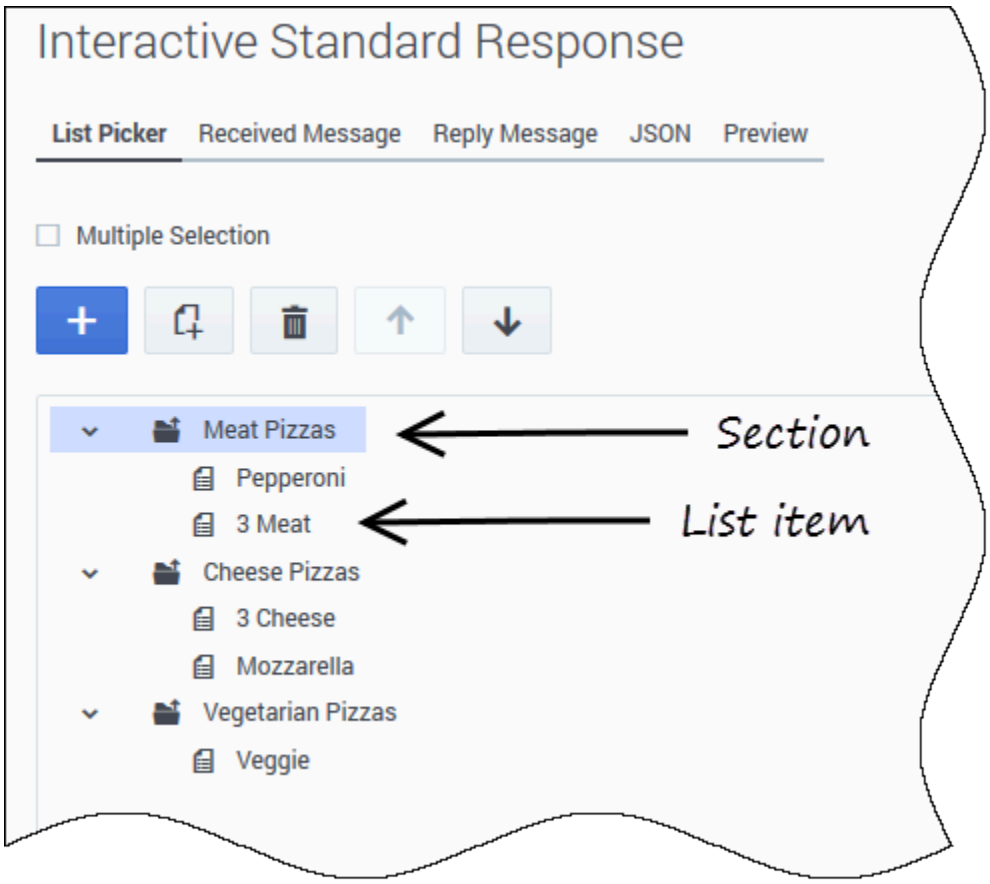
List Picker tab

A List Picker consists of sections and items. Sections can have one or more items for the customer to select.

For example, a pizzeria might use a List Picker to offer various pizzas for the customer to select. This list might consist of the following:

- Meat Pizzas
  - Pepperoni
  - 3 Meat
- Cheese Pizzas
  - Mozzarella
  - 3 Cheese
- Vegetarian Pizzas
  - Veggie

In eServices Manager, this list is represented as the following:



Your first step is to create a section. Click **+** to add a section. On the right, specify a **Title** for the section.

You can click **+** to add more sections to the list.

Next, you can create items within a section. First, ensure you have selected the section in which you want to create an item. Next, click  to create the item.

On the right, specify a **Title** for the list item. Optionally, add a **Subtitle** that further describes the list item.

In the **Image** section, click **Add Image** to upload an image to display with this list item. If you have already uploaded an image, you can click **Remove** to remove the image from this list item.

Once you have multiple sections or items in the list, you can select a section or item and click the arrows to rearrange their order.

To remove a section or item, select it and click the trashcan icon.

> **Important**
> If **Multiple Selection** is checked, the customer can choose more than one item.

Received Message tab

These options specify how the message appears to the receiving customer.

- **Title**—Provide a title for the received message.
- **Subtitle**—(Optional) Provide a subtitle for the received message.
- **Style**—Select **Icon**, **Small**, or **Large** to specify the size of the image in the received message.
- **Image**—Click **Add Image** to select an image to attach to the received message. Or, if you have previously attached an image, click **Remove** to remove the attached image.

> **Important**
> Refer to the Apple Business Chat documentation for more information on recommended image sizes.

Reply Message tab

These options specify the appearance of the customer's response after he or she has made a selection.

- **Title**—Provide a title for the reply message.
- **Subtitle**—(Optional) Provide a subtitle for the reply message.
- **Style**—Select **Icon**, **Small**, or **Large** to specify the size of the image in the reply message.
- **Image**—Click **Add Image** to select an image to attach to the reply message. Or, if you have previously

attached an image, click **Remove** to remove the attached image.

> **Important**
> Refer to the Apple Business Chat documentation for more information on recommended image sizes.

JSON tab

View the JSON associated with this List Picker.

Preview tab

View a preview of this List Picker.

Rich Link

> **Important**
> - This section applies only to 8.5.305.09 releases and higher.
> - Refer to the Apple Business Chat documentation for more information on Rich Links.

A Rich Link shows a preview of a URL that contains an inline image or video. Unlike normal URLs, customers can view the media immediately without having to click a "Tap to Load Preview" message.

You can configure the following options:

Rich Link tab

- **Title**—Specify a title for the Rich Link that will appear in the chat.
- **URL**—Specify the target URL for the Rich Link.
- **Type**—Select one of the following:
  - **image**—Click **Add Image** to select an image to show in the preview. Or, if you have previously attached an image, click **Remove** to remove the attached image.
  - **video**—Specify the URL where the video is hosted.
    If you selected **video**, you can still add an image by selecting **Add Image**. Click **Add Image** to select an image to show in the preview. Or, if you have previously attached an image, click **Remove** to remove the attached image.
- **Render Field Codes**—Click to render field codes and associated variables, if any, that you are using with this standard response.

JSON tab

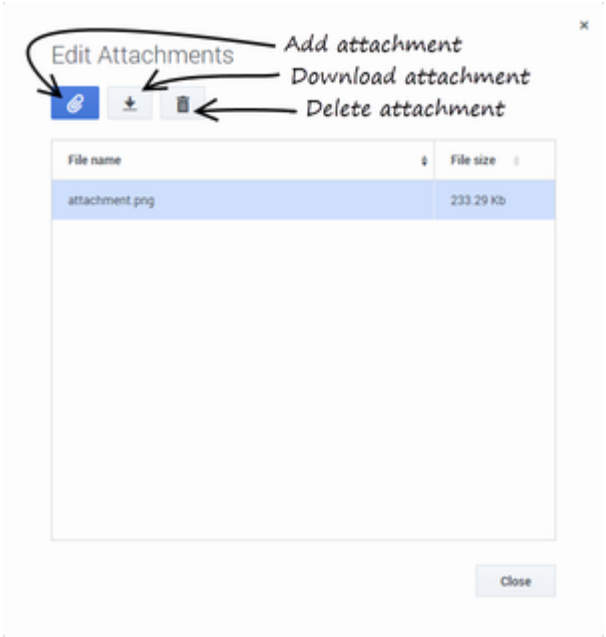
View the JSON associated with this Rich Link.

Manage Attachments

To manage attachments for Standard Responses:

1. Select a category.
2. Select a Standard Response.
3. Click **Attachments**.

4. The **Edit Attachments** pop-up opens.
   - To add an attachment, click **Attach**.
   - To download an attachment, select it, then click **Download**. This downloads the file to your environment.
   - To remove an attachment, select it, then click **Delete**.



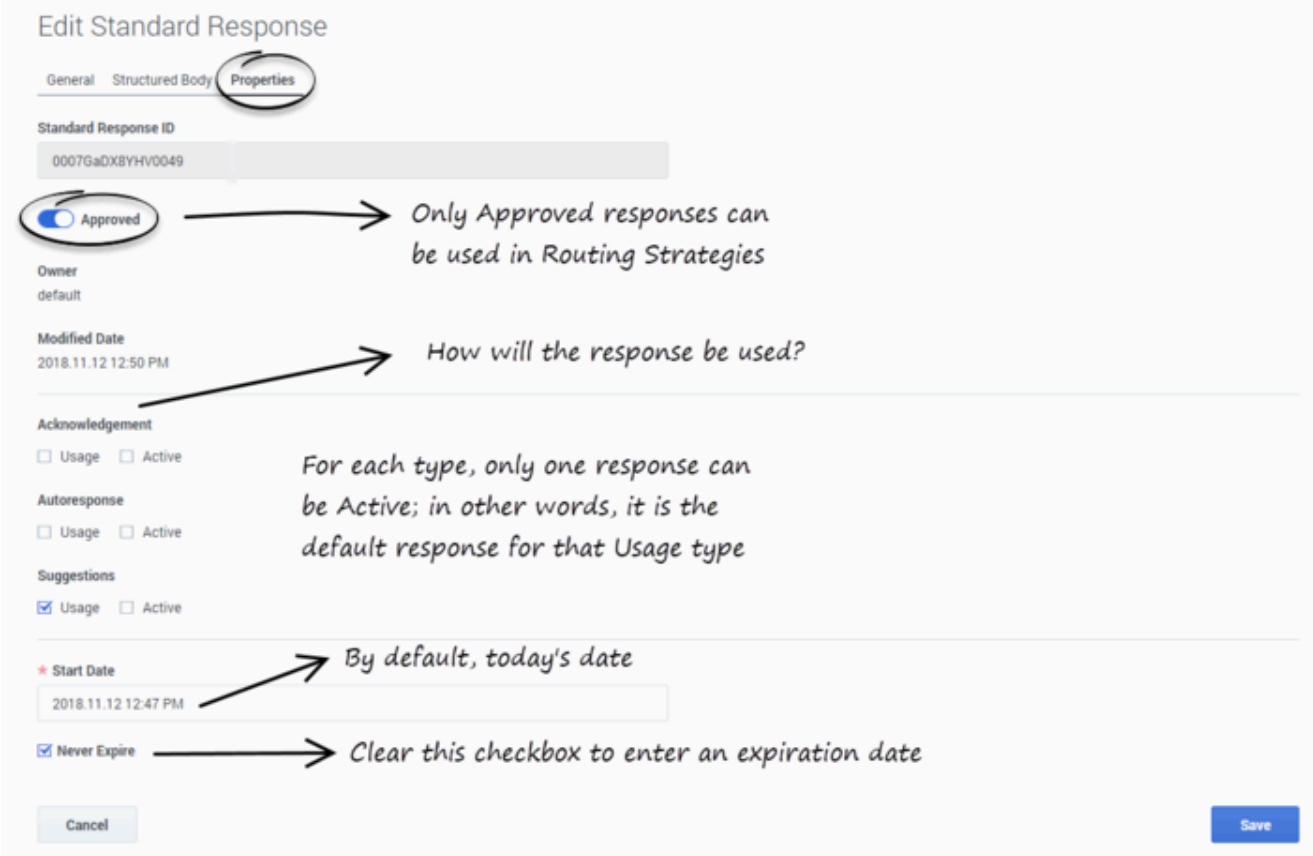
Next Steps

- Review the history and manage versions

- Create Field Codes

Set the Standard Response Properties

Use the **Properties** tab to set the properties for a new standard response or edit the properties of an existing standard response.



Usages

The possible Usages are:

- Acknowledgment—The standard response may be sent to acknowledge receipt of an incoming interaction.
- Autoresponse—The standard response may be used as an automatic response to an incoming interaction.
- Suggestions—The standard response may be offered to agents as suggested wording to use in their own replies to interactions.

Each category in the Category Tree may have multiple standard responses of each Usage type.

Active

For each Usage type, you must specify whether this standard response is the Active one. Only one standard response of a given Usage type can be Active. When the system needs to send a Standard Response of a specific Usage type automatically, it sends the one marked Active.

If you attempt to select Active for a Standard Response (either a new one or an existing one), and there is already an Active Standard Response with that usage type for that category, eServices Manager offers to take the previously Active Standard Response out of Active status.

Expiration Date

If a standard response's expiration date has been reached, it has the following effects:

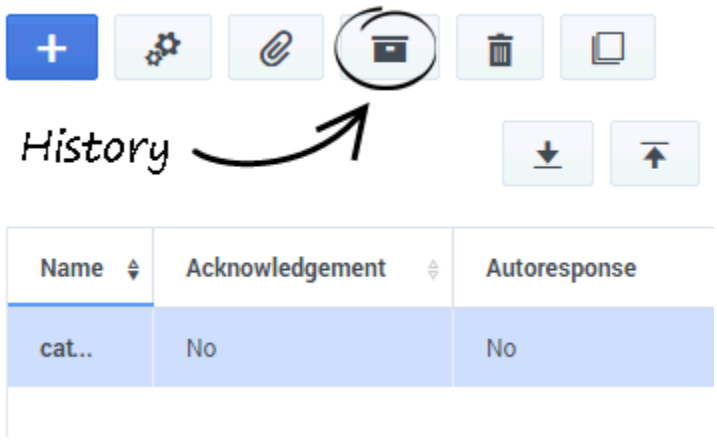
- The standard response is not shown in IRD, so it cannot be used in a new or modified strategy.
- If this standard response was saved in a strategy before the expiration date was reached, E-mail Server does not send the standard response, but returns an error message.

Next Steps

- Create an HTML version or structured message version of the standard response.
- Maintain multiple versions of the standard response.
- Create Field Codes to use in your standard responses.

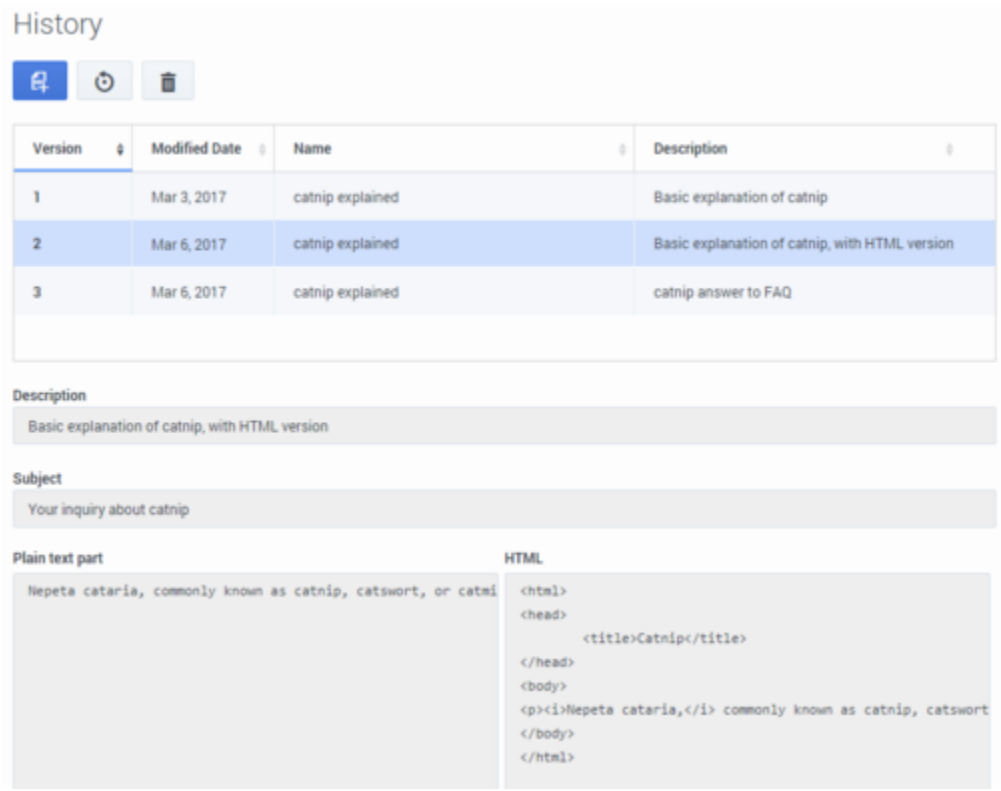
Create and Manage Multiple Versions

To create multiple versions of your Standard Response, select the Standard Response, then click the History icon, as shown in the figure.



History Icon

The History window opens.



Standard Response History Window

- Click the Save to New Version (page with plus sign) icon to save the selected Standard Response as a version.
- Click the Reverse (circling arrow) icon to restore the selected version as the one that appears in the main eServices Manager window.
- Click the Delete (trashcan) icon to delete the selected version.

> **Tip**
>
> When you save a new version, it retains everything except for
>
> - Attachments
> - The settings on the Properties tab

Standard Responses for SMS Gateways

Standard Responses can be used to carry the body of a Short Message Service (SMS) message that E-mail Server sends using an SMS gateway. To accomplish this, you must use a routing strategy that includes a CreateSMS object and specifies certain attached data. For details on this strategy configuration, see the "Multimedia Objects" section of the "Interaction Routing Designer Objects" chapter of the Universal Routing 8.1 Reference Manual.

The form of the special standard response differs according to the requirements of the gateway that you are using. This section provides examples of standard responses that can be used with three available gateways.

Clickatell

For the Clickatell gateway, create a standard response with the following as its body:

```
api_id:1234

user:Name

password:Secret

from: <$AttachedData("OrigSMSNumber")$>

to: <$AttachedData("DestSMSNumber")$>

text: <$AttachedData("SMSText")$>
```

Where:

- 1234 should be replaced with the api_id that you received upon registering for the service.
- Name should be replaced with the user name that you created when registering for the service.
- Secret should be replaced with the password that you created when registering for the service.
- The user data "OrigSMSNumber" contains the number of the originating SMS device.
- The user data "DestSMSNumber" contains the number of the recipient SMS device.
- The user data "SMSText" contains the text of the SMS to send (limited to 160 characters).

You can add other available parameters to the body. For information about what parameters are available for this gateway, do as follows:

1. Go to http://www.clickatell.com/.
2. Select Developers, then SMTP.

SMS Gateway for Mdaemon and sms2email.com

For the SMS Gateway for Mdaemon or the sms2email.com gateway, create a standard response with the following as its body:

```
<$AttachedData("SMSText")$>
```

Where the user data "SMSText" contains the text of the SMS to send (limited to 160 characters).

For more detailed information on Mdaemon:

1. Go to https://www.achab.it/achab.cfm/en/archive-server-for-mdaemon/documentation.
2. Click SMS Gateway for MDaemon, then Features -Outbound SMS.

For more detailed information on sms2email.com:

1. Go to http://www.sms2email.com/.
2. Click Developer Info, then Email to SMS Gateway, then how-to guide.

Field Codes

Although Field Codes are used mostly in standard responses, they are the most complex and powerful aspect of standard responses, so they are described in this separate section.

eServices Manager enables you to create a wide range of Field Codes types, from simple Field Codes that function similarly to a Mail Merge-type word processor feature to complex Field Codes that include multiple objects, formulas, and constants (see Using a Complex Field Code for an example).

Once you create a Field Code, you can use it in multiple standard responses.

The interface for creating Field Codes is simple; creating really useful Field Codes requires a deeper understanding of how Field Codes can be constructed. How to Create and Insert Field Codes provides step-by-step instructions, with links to detailed reference information at the relevant places.

The reference information consists of the following topics:

- Field Code Variables
- Using Formulas in Field Codes
- Field Code Examples

> **Tip**
> You can cut, copy, paste, and delete Field Codes as well as other Knowledge Management objects.

Field Codes Overview

The main use of field codes is to particularize standard responses.

For example, you can use the field code `<$Contact.FirstName$>` in a response beginning `Dear <$Contact.FirstName$>,` which you send to dozens of recipients. In each message, `<$Contact.FirstName$>` is replaced by the first name of the addressee of the message (the contact) as listed in the Universal Contact Server database.

More generally, a "field code" is a formula that you insert into an outgoing text object, such as an email that E-mail Server generates when triggered to do so by a routing strategy object.

The most common type of such text object is a standard response (triggered by an Autoresponse or Acknowledgement object), but you can also insert field codes into other types, such as chat transcripts, SMS messages, and forwarded or redirected emails. In some cases, the only place you can insert a field code is in the Subject line using the **Format** tab in a strategy object.

The following is a complete list of the strategy objects that can use field codes either in a standard

response or in the Subject line:

- Acknowledgement
- Autoresponse
- ChatTranscript
- Create EmailOut
- Create Notification
- Create SMS
- Forward
- RenderMessageContent

The following is a complete list of the strategy objects that can use field codes only in the Subject line:

- Redirect
- Reply from External Resource
- Send

When a text object containing such a formula is processed, the following happens:

1. The formula performs an operation, which produces a result.
2. The result replaces the field code in the text object.

This process of performing an operation and substituting its result is called "rendering."

> **Important**
> Field codes can be used in outgoing text objects only.

A complete reference list of field codes is available in the Genesys eServices Field Codes Reference Manual.

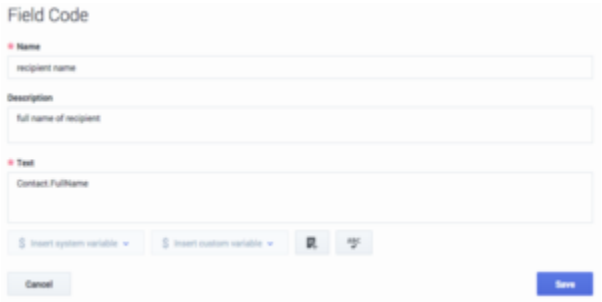
How to Create and Insert Field Codes

Using Field Codes includes:

- Creating and Editing Field Codes
- Inserting Field Codes into a Standard Response

Creating and Editing Field Codes

On the **Field Codes** tab, you can either click the New (plus sign) icon or select a field code and click the Edit (gear) icon. The **Field Code** window appears:



Field Code

Notes:

- A detailed discussion of variables in eServices Manager is available.
- The Text field must conform to the rules described in Using Formulas in Field Codes.
- Click the Validate (ABC with checkmark) icon to verify that the field code is well-formed (that is, that it has no typographical errors, missing parentheses, and so on).

[+] You can create or edit custom variables.

- Click the Edit Custom Variables (page with plus sign) icon. The Custom Variable dialog box appears. As usual, select a variable and click Edit, or click the New icon.
- Names must consist only of alphanumeric characters or underscores.
- A default value is mandatory.

For detailed help constructing Field Codes, see Using Formulas in Field Codes.

For examples showing the use of a custom variable and of a complex Field Code, see Field Code Examples.

Inserting Field Codes into a Standard Response

To insert Field Codes,

1. Create a new Standard Response or open an existing one for editing, then click **Insert Field Code** (on either the **General** or **Structured Body** tab). The resulting window displays a list of all the available field codes.
2. Select a field code and click **OK** to insert it, together with its required delimiters (<$ $>), into the Standard Response.
3. Click **Render Field Codes** to see the standard response with the Field Codes rendered, showing the default values for each Field Code.

Field Code Variables

Using Field Code Variables includes:

- Using UCS Data as System Variables in Standard Responses
- Custom Variables
- Using Your Own Data in Standard Responses

Using UCS Data as System Variables in Standard Responses

In the example given in Field Codes Overview, the field code `Contact.FirstName` retrieves a piece of data about the interaction. The ability to access interaction data is perhaps the most frequent use of field codes. Although field code formulas can be very complicated, many simply retrieve a single piece of data, such as a contact's name.

You access Universal Contact Server data using predefined variables, called "System Variables."

These variables access three predefined objects. Each object has a name and a set of properties. In the example, `Contact` is an object and `FirstName` is one of its properties. The system variable `Contact.FirstName` retrieves the value of the `FirstName` property of the `Contact` object.

In similar fashion, there is a system variable for each `object+property` pair. The objects and properties that you can use in field code formulas are described in the following sections.

Interaction

This object represents the particular interaction being worked on, such as an inbound email. These are its properties:

- AttachedData
- DateCreated
- FromAddress
- Id
- Subject
- TimeZone
- ToAddress

Contact

This object represents the contact associated with the interaction being worked on. These are its properties:

- FirstName
- FullName
- Id
- LastName
- PrimaryEmailAddress
- PrimaryPhoneNumber
- Title

Agent

This object represents the agent working on the interaction. These are its properties:

- FirstName
- FullName
- LastName
- Signature

> **Important**
> Automated responses use the default agent. Create the default agent as a Person object just like any other in Configuration Manager. Then select this Person on the Automated Reply Agent screen of the E-mail Server configuration wizard (or set this Person as the value of the autobot-agent-login-name option in the E-Mail Processing section of the E-mail Server Java application). Since this is the Person who the automated response appears to be from, you may want to name it after your company or institution.

Custom Variables

In addition to the system variables, you can use eServices Manager to create custom variables. Custom variables have the following properties:

- Their values are assigned by strategy objects.
- Therefore, standard responses that use field codes containing custom variables must have the usage type Autoresponse or Acknowledgment.

For an example of the use of a custom variable in a standard response, see Using a Custom Variable. For a complete description of the Routing objects that can use custom variables, see the Universal Routing 8.1 Reference Manual.

> **Important**
>
> The names of custom variables must begin with an alphabetic character or underscore, and the remainder of the name must consist only of alphanumeric characters or underscores. This differs from the requirements for the names of other objects, which may also contain hyphen and space. For example, 5-usercode is not an acceptable name for a custom variable, but it is acceptable as the name of a screening rule or category.

Using Your Own Data in Standard Responses

It is possible to incorporate data that you keep external to Universal Contact Server into your standard responses (including automated responses). This data could include case numbers, account information, and so on. Remember that attached data always consists of key-value pairs.

Incorporating external data into standard responses is a two-step process:

1. Retrieve the external information and add it to the interaction as attached data. One place to do this is in a routing strategy (see Interaction Routing Designer Help).
2. Now that you have attached the data to the interaction, you can use the `AttachedData` property of the Interaction object to access the data and incorporate it into your standard response. The `AttachedData` property requires one argument, which is the key name. The result of the following formula is the value associated with the `OrderStatus` attached-data key:

```
<$Interaction.AttachedData("OrderStatus")$>
```

Using Formulas in Field Codes

In addition to system variables such as `Contact.FirstName`, field codes may contain formulas. This section provides an outline of formula usage. Details on many of these topics are provided in the Genesys eServices Field Codes Reference Manual.

You must always delimit field codes by using `<$ … $>`. If you type a field code directly into the body of a standard response, then you must enter the delimiters yourself. If you select from the list of field codes in eServices Manager, then the delimiters are added automatically.

The text that appears inside the delimiters is a formula. Field code formulas are very similar to formulas in other applications, such as Microsoft Excel.

A *formula* is a sequence of one or more operands (such as numbers and text strings), separated by operators (such as + and -).

For example, in the following formula, 2 and 3 are operands and + is an operator:

```
<$2 + 3$>
```

Operands can be values that do not change (constants), or values that vary based on the context. In the previous formula, all the operands are constants, so the formula always evaluates to `5`. The next formula, on the other hand, evaluates to a different value for each agent who uses it:

```
<$Agent.Signature$>
```

Field Code Syntax

To summarize field code syntax:

- A field code must be delimited by `<$ ... $>`.
- Alphabetic strings, whether constants in formulas or elsewhere in a field code, must be enclosed in double quotes.
- Numeric constants require no special treatment.
- You must use special characters for some purposes. For example, for your field code to render with a line break, you cannot simply type a carriage return. Instead, you must insert the expression `\n`. A list of these special characters is available.

HTML in Field Codes

With special configuration, field codes can contain HTML markup; for example, you could have a field code <$my.agent.signature$> defined as

```
Sam Agent<BR />
Acme Products<BR />
29 Exterior Blvd<BR />
Springfield, CX 09090<BR />
```

To enable this, you must use the Java property `-Dsrl-field-code-allow-html=true`, in one of the following ways:

- Add it to the `JavaArgs` section of `ContactServerDriver.ini`
- Add it as an argument to the startup command line in `contactServer.sh`.

Operator Precedence

If you use more than one operator in a formula, the order in which they are evaluated depends on their relative *precedence* (higher precedence operators are evaluated first). For example, multiplication (`*`) has a higher precedence than addition (`+`), so that the formula below evaluates to `14`, not `20`:

```
<$2 + 3 * 4$>
```

You can use parentheses to override the default precedence. The formula below evaluates to `20`:

```
<$(2 + 3) * 4$>
```

For a complete list of operators and their relative precedence, see "Operator Precedence" in the Genesys eServices Field Codes Reference Manual.

Data Types

Operands of several different types may appear in formulas:

- Number
- String (text)
- Date/time
- Boolean (true/false)
- Object (Contact, Interaction, and Agent)

Each data type behaves differently in formulas, and the operators have different meanings when you use them with different data types. For example, the + operator means “add” when used with numbers, but “concatenate” (paste together) when used with strings. This formula evaluates to *Uncle Sam Wants You*

```
<$"Uncle Sam " + "Wants You"$>
```

In addition, some operators cannot be used with some data types at all. For example, you cannot use the multiplication (*) operator on two strings.
All formulas, regardless of their final data type, are converted to strings before being merged into your standard response. This conversion follows a set of default rules that depend on the data type. For example, the default rules for numbers round them off to integers. This formula causes 2 to be

inserted into your standard response, even though the real result is `2.25`:

```
<$9 / 4$>
```

You can use the `Text` function (see below) or `format operator`:) to override the default formatting. Either of the following formulas inserts `2.25` into your standard response:

```
<$Text(9 / 4, "#.##")$>
```

```
<$(9 / 4):"#.##"$>
```

For a detailed list of data types and how you can use them, see "Data Types" in the Genesys eServices Field Codes Reference Manual..

Functions

When composing formulas, you can use many built-in functions. *Functions* are predefined formulas that perform calculations using values, called *arguments,* which you supply. To use a function, write its name, followed by an opening parenthesis, the arguments for the function separated by commas, and a closing parenthesis.

Function arguments may be of any data type, although individual functions may place restrictions on their arguments. Function arguments may be constants or formulas. The `Length` function, for example, takes a single string argument and returns its length in characters. This formula evaluates to `13`:

```
<$Length("Hello, world!")$>
```

As another example, the `Date` function takes individual date components (year, month, day, and so on), and constructs a date/time value. The formula below evaluates to `1965-11-23 09:03:10`:

```
<$Date(1965, 11, 23, 9, 3, 10)$>
```

Functions may act as arguments to other functions. The `WeekdayName` function takes a single date/time argument and returns the day of the week as a string. The formula below evaluates to `Tuesday`:

```
<$WeekdayName(Date(1965, 11, 23, 9, 3, 10))$>
```

This formula evaluates to `7`:

```
<$Length(WeekdayName(Date(1965, 11, 23, 9, 3, 10)))$>
```

For detailed descriptions of all available functions, see "Functions" in the Genesys eServices Field Codes Reference Manual.

Important

If you want to combine data types, you must first convert the data types to text. Consider the following example:

```
<$ Agent.FirstName + Interaction.DateCreated $>
```

This formula causes an error, as it mixes two data types: Text (**Agent.FirstName**) and Date (**Interaction.DateCreated**). Instead, use the Text type for both types, as shown below:

```
Agent.FirstName + Text(Interaction.DateCreated)
```

Using Objects

All object/property pairs are also available in the `Variables` drop-down menu in the eServices Manager `Field Code Editor`.
Object properties can be of any data type. `Agent.FullName`, for example, is a string, but `Interaction.DateCreated` is a date/time.
The data type of an object property can even be another object. For example, `Contact.EmailAddresses` yields another object called a `ContactEmailAddressList`. In cases such as this, you can access the properties of the resulting object by entering a period (.), followed by the property name, just as before. For example, the formula below evaluates to the number of email addresses assigned to the contact:

```
<$Contact.EmailAddresses.Count$>
```

Some object properties require arguments just as functions do. For these properties, write the arguments, enclosed in parentheses after the property name, just as before.

For example, the ContactEmailAddressList object has a property named `Exists`, which you can use to test whether a particular email address is assigned to a contact. The data type of this property is Boolean (true/false), and it takes one argument, the email address to test. For example:

```
<$Contact.EmailAddresses.Exists("samd@acme.com")$>
```

For detailed descriptions of all objects and their properties, see "Objects" in the Genesys eServices Field Codes Reference Manual.

Field Code Examples

This section presents examples of the use of field codes.

> **Important**
> You must not use double-quotation marks (") for field codes that are used in interactive responses. Use single quotation marks (') instead.

Using a Custom Variable

Purpose: This is a simple example of the use of a custom variable in a standard response.

Prerequisites This example assumes a category tree that includes categories called `Cookbooks`, `Mysteries`, and `Reference`.

1. In eServices Manager:
   a. Create a custom variable called QueryTopic (see See Creating field codes).
   b. Create a field code called `Query_Topic` that consists of the variable `QueryTopic`.
   c. Create a standard response of type `Autoresponse` called `AUTO` that includes the sentence `Thank you for your inquiry about <$ Query_Topic $>`.
   d. Create the following screening rules:
      i. `Cookbook: RegExFind("cook") || RegExFind("recipe") || RegExFind("food") || RegExFind("cuisine")`
      ii. `Mystery: RegExFind("murder") || RegExFind("crime") || RegExFind("case of the") || RegExFind("detective")`
      iii. `Reference: RegExFind("dictionar") || RegExFind("encyclopedia") || RegExFind("almanac")`
2. In Interaction Routing Designer, create a strategy that applies these screening rules one after the other, assigning a different value to the custom variable for each screening rule:
   a. Create a variable called var_screen.
   b. Create a strategy. Start the strategy with a `Screen` object. On the `General` tab of the `Screen` object, select the `Cookbook` rule.
   c. On the `Result` tab, click `Assign values of the key-value pairs`. Then under `Output values` select `var_screen` for `Variable` and enter `ScreenRuleMatch` for `Key from output`.
   d. Connect the `Screen` object to a `Generic Segmentation` object. Create two segments: `var_screen = true` and `var_screen = false`.
   e. Connect an `Autoresponse` object to the top green port (the one corresponding to `true`) of the

Segmentation object. In the Autoresponse, select the Select standard response radio button and select AUTO in the associated drop-down list.

f. Still in this Autoresponse, go to the General tab and in the Field Codes area (bottom of the tab) click the New icon, enter QueryTopic under Key, and enter cookbooks under Value. This will generate an email that includes the sentence *Thank you for your inquiry about cookbooks.*

g. Return to the Generic Segmentation and connect a new Screen object to its second green port (the one corresponding to false).

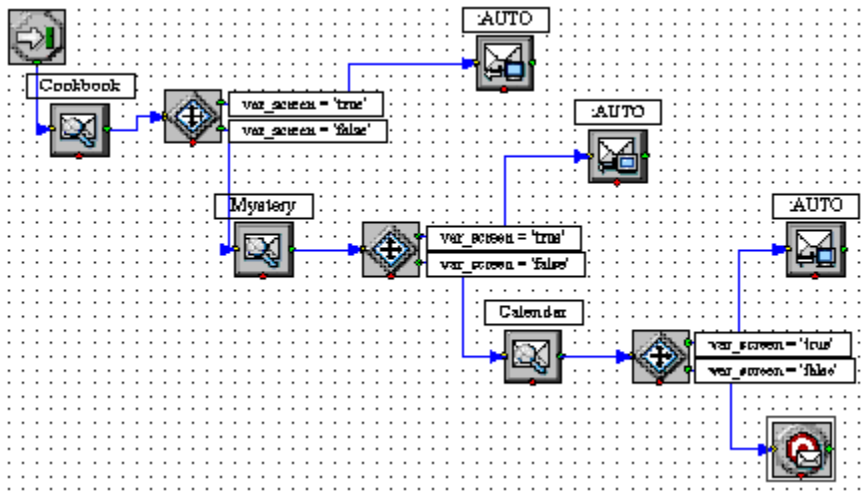
h. On the General tab of the new Screen object, select the Mystery rule. On the Result tab, click Assign values of the key-value pairs. Then under Output values select var_screen for Variable and enter ScreenRuleMatch for Key from output.

i. Proceed as in Steps d–f: Connect this Screen object to a new Generic Segmentation, again with segments for var_screen = true and var_screen = false.

j. As in Step e, connect a new Autoresponse object to the green port for true, select the AUTO standard response, and enter QueryTopic under Key. This time enter mysteries under Value.

k. Return to the second Generic Segmentation's green port for false and repeat Steps g–j, creating a third Screen object and Generic Segmentation. In the Screen object, select the Reference rule; in the Segmentation object, set the custom variable to reference.

The figure "Strategy Using Custom Variable" shows the strategy as described. The single standard response AUTO generates three emails, each with a different word filling the blank in *Thank you for your inquiry about ___.*



Using a Complex Field Code

The following is an example of a complex field code:

```
<$ If (Time() - Interaction.DateCreated > 14, “Please accept our apologies for not
having replied sooner. ”, “”) $>
```

This field code inserts a tardiness apology if more than 14 days have elapsed since the interaction first entered the system. It uses the function If, which has these properties:

- Its syntax is `If (Boolean, TrueResult, FalseResult)`
- If `Boolean` evaluates to `True`, it returns the second argument.
- If `Boolean` evaluates to `False`, it returns the third argument.

In this example, the three arguments of `If` are as follows:

1. `Time() - Interaction.DateCreated > 14` A formula that returns `True` if the difference between the date created and the current system time is more than 14 days. (The result of a mathematical operation on dates is given in days.)
2. `“Please accept our apologies for not having replied sooner. ”` A text string apologizing for tardiness, inserted if the formula evaluates to `True`.
3. The null string: if the reply is not late (the formula evaluates to `False`), nothing is inserted in it.

Next Step

- Go on to create and manage Screening Rules.

Screening Rules

Screening rules scan an interaction and try to match either a destination address (who the message is going to, whether that is identified by an email address, a cell phone number, or some other parameter), a regular expression, or both. Screening is performed by Classification Server when it is triggered by a Screen Interaction object in a routing strategy.

A screening rule can optionally be associated with a category.

> **Important**
>
> Screening can operate on any interaction that has text somehow associated with it, whether as the body of the interaction (email, chat), or otherwise (as user data, for example). In practice, it is expected that most interactions which are screened will be email messages; therefore, the terms *email* and *message* are used interchangeably here, to refer to these interactions. In fact, whatever is said here about email applies to any interaction that has associated text.

Screening Rules topics include:

- How to Create and Test Screening Rules
- Screening Rules Reference, including:
  - What Screening Rules check
  - The functions, arguments, and operators used in them
  - Regular expressions to use in them
- Examples of Screening Rules

You can cut, copy, paste, and delete Screening Rules as well as other eServices Manager objects.

Sample Screening Rules for Sentiment and Actionability

As part of the installation of eServices Manager, Genesys supplies sample screening rules that analyze interactions for:

- The sentiment expressed—Positive, negative, or neutral.
- Actionability—Whether the interaction calls for attention from an agent.

To use this sample, import the file `SentimentAndActionabilityScreeningRules.kme`, which is located in the `<eServicesManagerHome>\SentimentModel` directory. `<eServicesManagerHome>` is normally `C:\Program Files\GCTI\eServices 8.5\eSMngrPlgAdm` for

Windows.

This file provides examples of screening rules for detecting sentiment and actionability, plus category trees containing categories that are assigned to any interactions that match the rules.

The installation of eServices Manager also includes sample Models and Training Data Objects that Content Analyzer can use to detect sentiment and actionability, and to identify language.

How to Create and Test Screening Rules

The step by step procedure for creating a Screening Rule is quite simple. The power of Screening Rules lies in the many ways you can configure them. We'll start with the high-level procedure, then drill down as needed into more detailed explanations of the various parameters.

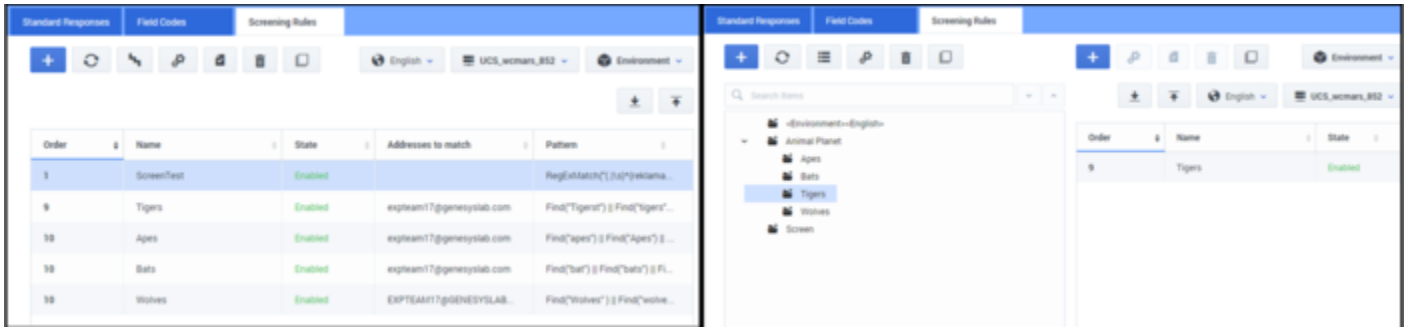
High-level procedure (the order does matter):

1. Start on the eServices Manager browser window. Select the correct Tenant, UCS, and Language, then click the **Screening Rules** tab.
2. Click the New (plus sign) icon.
3. In the resulting **New Screening Rule** window,
    1. Create the rule
    2. Select the categories it will assign matched interactions to (optional).
4. Click **Save**.

You can also edit an existing screening rule by clicking the Edit (gears) icon. The resulting **Edit Screening Rule** window is the same as the **New Screening Rule** window.

Views

New Screening Rule has two views available, as shown in the figure.



List (left) and Tree (right) Views

- The List View simply lists the screening rules without any reference to categories. There is a single New (plus sign) icon, for creating new screening rules.
- In the Tree View, the right-hand pane shows any rule that is linked to the category that is selected in the left-hand pane. If a rule is not linked to any category, it does not appear in this view. There are two New icons: one on the left for creating categories, and one on the right for creating screening rules.

Click the list icon or the stairway icon to switch views.

Basic Attributes

Click the New (plus sign) icon to get the **New Screening Rule** window.

- In Tree View, the new rule will be automatically linked to whatever category is selected in the left-hand pane. You can change or remove that category later.
- In List View, the new rule is not linked to any category, but you can link it to a category as part of creating the rule.

New Screening Rule

> ### Tip
> The numbers in the figure **New Screening Rule** correspond to the numbered steps below. They are also repeated in the detail figures that follow.

(1) Name your rule, remembering that you can only use permitted characters in object names.

(2) Do you need to use the Order text box?

If the Screening Rule is used in an Analyze or Multiscreen routing object in which **All rules** is selected, use the **Order** text box to specify where in the sequence of rules this particular one should be applied. Otherwise the **Order** text box is unused.

(3) The* Enabled *check box — select it to make this Rule available when you add a Screen object to a routing strategy.

Once a strategy includes a Screen object that uses a particular Screening Rule, the strategy will continue to use the Rule whether it is disabled or enabled.

***(4) Views:* Rules *and* Category**

The **Rules** view is selected when the window first appears. Accordingly, first we'll describe how to create a rule. Next will be the way to assign the output of the rule to a category or categories.

Addresses

(5) Do you need to screen the addresses the email is sent to?

New Screening Rule (detail): Addresses

If not, you can leave this section empty and go on to the **Pattern** area. Otherwise, click the blue  Address icon. The **Select Addresses** window appears, as shown in the figure. It displays a list of the addresses that are defined in the **EmailAccounts** configuration database object; select any or all of them. If the address you need isn't there yet, you can define additional addresses in the **EmailAccounts** configuration database object:

- GAX: **Configuration > Routing/eServices > Business Attribute Values > Business Attributes > EmailAccounts > Attribute Values**
- Configuration Manager: **Tenant > Business Attributes > EmailAccounts > Attribute Values**

The new **Business Attribute Values** must have the **[general]** section containing the **address: value** key-value pair (in GAX > **Options** tab, in Configuration Manager > **Annex** tab), where a value is an email address.

> ### Important
> You can also directly type addresses in the **Other addresses** area. Addresses must be separated by comma. Note that the **Other addresses** field does not have email validation.

When you're done, click **Save** to return to the main window.

(6) Does it matter if the address is exact?

- If so, select the **Exact address match** box. The screening rule looks for messages having that exact

address as a destination. For example, **xyz@domainname.com** matches **xyz@domainname.com** but not **abc.xyz@domainname.com.** This match is not case sensitive.

- If not, clear the **Exact address match** box. Then the rule looks for messages having that address as a substring of their destination address. For example, **xyz@domainname.com** matches **abc.xyz@domainname.com** and **xyz@domainname.com.**

(7) Do you want to screen for the exact POP mailbox the email is sent to?

- If so, select **Screen mailbox** to make the rule match the POP box from which the email entered the eServices system, rather than the **To** field of the email itself. The difference is that each email enters the system from exactly one mailbox, while the **To** field can contain multiple addresses.

> **Important**
>
> - For this feature to work as expected, the E-mail Server **enable-samemail-from-mailboxes** option must be set to `true`. With this setting, E-mail Server creates a separate interaction for each address in the **To** field (that is, for each mailbox that it pulls the email from when it creates the interaction).
> - Classification Server does not get the mailbox from user data attached to the interaction, but from the `EmailIn` table in the UCS datase: from the `Mailbox` field, or if that is not available, from the `ToAddresses` field.

(8) How to use the AND and OR radio buttons

- **AND**—makes eServices Manager use *both* the addresses selected in **Use these addresses** *and* match the pattern defined in **Use Pattern**.
- **OR**—makes eServices Manager us *either* the addresses selected in **Use these addresses** *or* match the pattern defined in **Use Pattern**.

Patterns

(9) How to configure the Pattern area

This is the section where you can get really specific about what the Screening Rule should match. The Plug-in includes a pattern builder that offers the choice of each function type in all possible forms, with and without optional arguments, for a total of eight, as shown below.

Pattern Area and Drop-down

Click the New (plus sign) icon to get a drop-down containing regular expressions (functions) and operators you can select to create your Rule. Select the regular expression you want to put it in the text box. Do the same to add operators. You can also enter text manually.

After you select an expression, you must put text between the quotation marks. More specifically, you must:

- For **Find**, put text between the empty quotation marks.
- For **RegExFind** and **RegExMatch**, substitute your desired text for `regular expression` and/or `key`.

> **Important**
> See Screening Rules Reference for an in-depth explanation of how to construct rules.

What message sections should the Screening Rule apply to?

Use the check boxes to have the Screening Rule apply to the message body, subject, header, or any combination. You must select at least one.

If you check multiple boxes, the Screening Rule can behave in one of two ways. See Email Sections to Screen for an explanation.

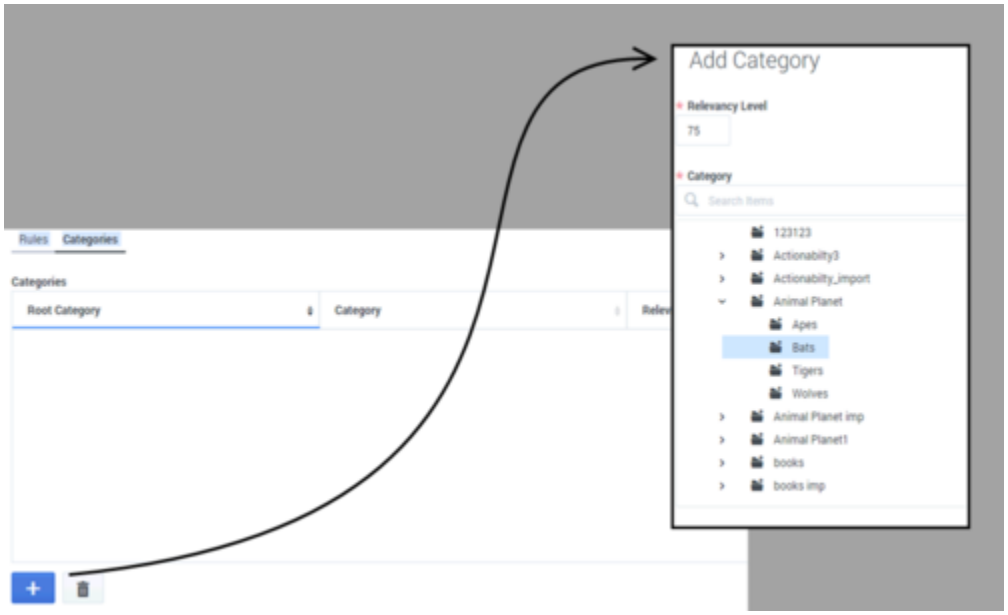
Categories

You can link your rule to a category. That means that when an interaction matches this screening rule, it receives a category name and a confidence level. The confidence level indicates that the system is *X* percent confident that this interaction belongs in this category. *X percent* is the Relevancy value that you will set here.

As mentioned previously, when you create a new rule there is this difference:

- If you create it in Tree View, the new rule is automatically linked to whatever category is selected in the left-hand pane. You can change or remove that category later.
- If you create it in List View, the new rule is not linked to any category, but you can link it to a category as part of creating the rule.

To link a rule to a category, select the **Categories** view (item 4 in the figure ‘’’New Screening Rule’’’ above). This replaces the **Addresses** and **Pattern** area with the **Categories** area, as shown in the figure.



Categories Area: Add Category

Click the New (plus sign) icon to produce the **Add Category** window. Select a category and set the Relevancy (must be in the range 1–100).

> ## Tip
> Relevancy is simply your judgement of how accurate the rule will be. It is used in the **Screen** and **Classify** actions of the **Analyze** routing object.

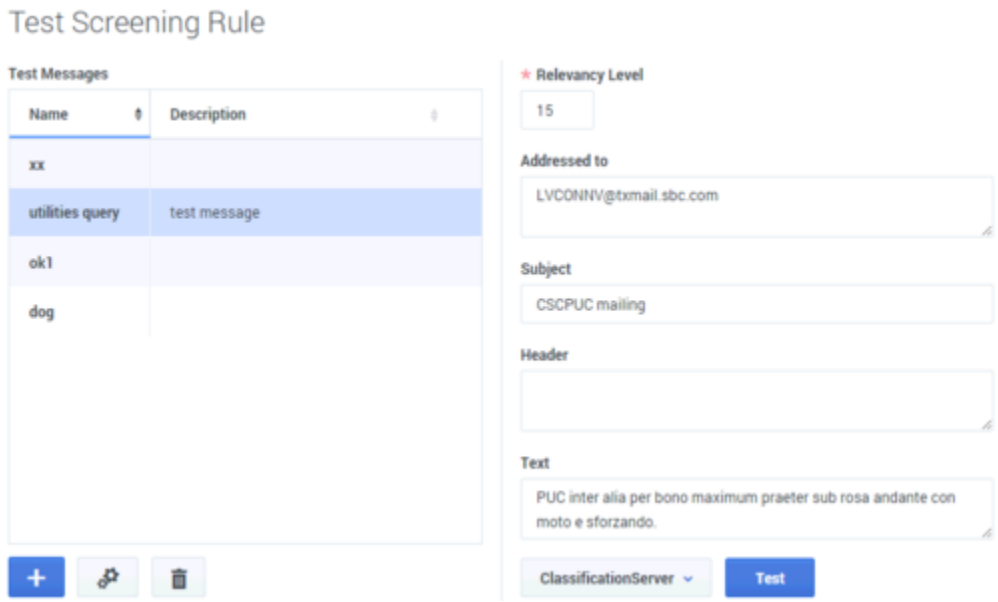
To change the Relevancy for a category in an existing Screening Rule:

- Select the rule and open the **Edit Screening Rule** window.
- In the **Categories** view, select the category and click the Add Category (plus sign) icon.
- Adjust the Relevancy, then click **Add**. The category now has the new Relevancy level (this does not add any new category to the rule).

Test a Screening Rule

You will be testing your Screening Rule against some specially created text to see if it works as desired.

Select a Screening Rule (in either view), then click the Test (checkmark) icon. The **Test Screening Rule** window appears.



Test Screening Rule

Choose a test message from the list of those already created or click **Add** to create a new one (its name must conform to the requirements for allowed characters).

You can modify the content of the test message in the right-hand pane, just for the purposes of this test. Any changes you make to the test message aren't saved (to make saveable changes, click the Edit (gear) icon at lower left).

Important

Test messages that you create are stored on UCS, and are shared by all users of a single UCS. They are stored separately for each tenant and language pair, and are synchronized between multiple eServices Manager instances.

Test Results

The **Screening Rule Test Results** window shows details of the test, namely

- On the left, the request that was sent to Classification Server
- On the right, Classification Server's response to the request.

The result of the test is given in the line `"ScreenRuleMatch":`, which shows whether the text message matched the rule.

Next Steps

Learn more about how screening rules work:

- Screening Rules Reference
- Screening Rules Examples

Screening Rule Reference

This section provides reference information on the following topics relating to screening rules:

- What they check: What Screening Rules Check
- The functions, arguments, and operators used in them: Functions and Arguments
- Regular expressions to use in them: Regular Expressions

What Text Do Screening Rules Check?

Screening rules check the following parts of an interaction, depending on what you select in the Screening Rule Editor, and on the settings in the IRD screening objects:

- The subject, if you select that check box.
- The body, if you select that check box.
- The header, if you select that check box. See also "Subject, Body, and Header" below, on how screening rules behave if two or more of the preceding are selected, and on the **Pattern is found in any selected field (OR relation)** checkbox.
- The destination address, if you have put anything in the **Addresses** area.
- The value of any key in the user data, if both of the following are true:
  - In the Multiscreen or Classify strategy object, you select a key in the **User data key if specified** drop-down list under **Get screened data from**.
  - In the Screening Rule Editor, you select the **Body** check box in the **Pattern** area. Use the check boxes to have the screening rule apply to the message body, subject, header, or any combination. You must select at least one.

User data is first associated with the interaction by the media server when it creates that interaction. As an example, E-mail Server associates the following user data with the interaction:

- FirstName (from Contact information)
- LastName (from Contact information)
- Mailbox (value of the **address** option in the **[pop-client]** section of the E-mail Server Application object)
- To (MIME header field)
- Subject (truncated to 512 characters)
- FromAddress (personal part of From header field)
- FromPersonal (email address part of From header field)
- All Header fields (except Received, Return-Path, X-MIMETrack, Subject, Sender, From, To, Cc, Bcc)

prefixed by `Header_`

- All parent attached data (originally created by E-mail Server) which can be inherited; that is, all parent attached data:
  - not starting with `Header_`
  - not starting with _ (underscore)
  - not equal to `GEM_Failure`
  - not equal to `GEM_FailureMsg`
  - not equal to `GEM_FailureArgs`

User data may then be added or modified by a routing strategy.

Email Sections to Screen

If you select more than one of the Subject, Body, and Header areas, the screening rule applies to all areas at once. There are two ways to implement this method:

- To enforce it for all screening rules, set the subject-body-header option for Classification Server to `true`.
- To enforce it for a particular screening rule:
  1. Leave **subject-body-header** set to `false`.
  2. Open the rule in the Screening Rule Editor.
  3. Select the **Pattern is found in any selected field (OR relation)** check box.

> ### Important
> Setting **subject-body-header** to `true` overrides any selection of the **Pattern is found in any selected field (OR relation)** check box for a particular rule.

Functions, Arguments, and Operators

Functions

Screening rules can use three basic functions:

- `Find("<text>")`, where `<text>` is a text string. It returns the result `true` if the interaction contains the exact string between quotes, ignoring case.
- `RegExFind("<regular expression>")`, where `<regular expression>` is a regular expression (see Regular Expressions). It returns the result `true` if the interaction contains any string that matches the regular expression between quotes.
- `RegExMatch("<regExp>")`, where `<regular expression>` is a regular expression. It returns the result `true` only if the entire content of the interaction matches the regular expression between quotes.

> **Important**
>
> RegExFind and RegExMatch are the same except that RegExFind looks for a match anywhere in the body of the interaction, whereas RegExMatch demands that the entire body of the interaction match the regular expression.

Arguments

All functions have one required argument, which must appear between double quotation marks, as represented above (`<text>`) or (`<regular expression>`). This required argument can be followed by one or two optional arguments, depending on the function. The full form of each function, including all arguments, is as follows:

- `Find("<text>", <IgnoreCase>)`
- `RegExFind("<regular expression>",<"key">,<IgnoreCase>)`
- `RegExMatch("<regular expression>",<IgnoreCase)`

IgnoreCase

The IgnoreCase argument must be a Boolean value (*true* or *false*). All three functions ignore case in

searches unless you include the IgnoreCase argument with a value of `false`.

For example:

- `Find("pacific")` finds *Pacific* and *pacific.*
- `Find("Pacific",false)` finds *Pacific* but not *pacific.*

You can also substitute `true` for `false`—for example, `Find("Pacific",true)`—which means that case is ignored. So `Find("Pacific",true)` is the same as `Find("Pacific")`.

Key

The key argument must be a string. If this argument is present, the system creates a key-value pair with the following characteristics:

- The key name is the string specified by the key argument, prefixed by `ScrKey_`.
- The value is the material that the screening rule matches.

The system then adds this key-value pair to the interaction's attached data. For example, `RegExFind("[A-Z]\d\d\d","ID_code",false)`:

1. Finds strings consisting of a capital letter followed by three digits (see Regular Expressions).
2. Attaches to the interaction a key-value pair called `ScrKey_ID_code` whose value is A123, X005, M999, or whatever the function found in this interaction to match the regular expression.

Operators

Operators are of two types:

- Binary operators join two functions.
- Unary operators operate on a single function.

The operators are as follows:

&& is the binary operator "and". For example,

```
Find("interest rate") && Find("APR",false)
```

matches a message only if it includes both "interest rate" and "APR."

|| is the binary operator "or." For example,

```
Find("station wagon") || Find("convertible")
```

matches any message that includes either "station wagon" or "convertible" (or "Station Wagon" or "station Wagon" or "Convertible").

! is the unary operator "not." For example,

```
!Find("windows")
```

matches any message that does not include the word "windows."

You can combine `!` with a binary operator. For example,

```
Find("bird") && !Find("goose")
```

matches any message that includes "bird" but does not include "goose."

Operator Precedence

`p && q || r` is parsed as `(p && q) || r`. For example, consider:

```
Find("debt") && Find("income") || Find("profit")
```

To paraphrase, this screening rule is basically "find X or find Y," where X is "debt" and "income," and Y is "profit." It matches both "debt exceeds income" and "profits are fantastic".

You can modify the default precedence by the explicit use of parentheses; for example:

```
Find("debt") && (Find("income") || Find("profit"))
```

This screening rule is basically "find X and find Y," where X is "debt" and Y is either "income" or "profit." It matches both "debt exceeds income" and "debts impact profit."

Regular Expressions

A regular expression stands for, not one particular character string, but a class of character strings. For example, suppose that you want to find all interactions with U.S. Zip codes in them. U.S. Zip codes are five-digit numbers, so you could in theory write about 9,000 screening rules (`Find("00000")`, `Find("00001")`, `Find("00002")`, and so on).

Fortunately, you can use the special symbol `\d`, which stands for any digit, to write a screening rule using a regular expression: `RegExFind("\d\d\d\d\d")`. This screening rule matches any sequence of five digits.
There are often several different ways of writing the same regular expression.

For instance, two items separated by a hyphen and enclosed in square brackets denotes a range of which the two items are endpoints. So `[a-d]` matches a, b, c, or d, and `[5-8]` matches any digit between 5 and 8; hence `\d` is the same as `[0-9]`.

> **Important**
>
> In general usage, apart from Genesys eServices, regular expressions are case sensitive. However, in the eServices Manager Plug-in, regular expressions are not case sensitive unless you add `,false` as described in IgnoreCase.

The table "Elements of Regular Expressions" lists some of the most commonly-used elements of regular expressions:

Elements of Regular Expressions

Symbol	Meaning	Example
.	Any character, including space	`b.t` matches *bat, bet, bit,* and *but.*
\d	Any digit	`\d\d` matches any pair of digits from 00 to 99.
\s	Space	`\d\s\d` matches 1 0, 5 9, and so on.
*	Zero or more instances of the preceding expression	`o*f` matches *oof, of,* and *f.* `me.*d` matches *med, mead,* and *meed.*
+	One or more instances of the preceding expression	`bre+d` matches *bred, breed* and*breeed.*

Symbol	Meaning	Example
?	Zero or one instances of the preceding expression	`c?rude` matches *rude* and *crude.*
`{x}`	X instances of the preceding expression	`st.{2}k` matches *steak, stork* , and *stink.*
^	Any character except the following	`s[^e]t` matches *sat, sit,* and *sot,* but not *set.*
`[]`	Any characters or ranges within the brackets	Any characters: `b[aeiou]at` matches *boat* but not *brat.* Any range(s): `[0-9]th` matches *5th, 6th, 7th* `[a-z]` matches any lowercase letter; `[A-Z]` matches any uppercase letter.
\	Turns off the special meaning of the following symbol	`\*` matches the character * (asterisk);`\.` matches the character . (period or full stop).
|	Or	`[b|p]ig` matches *big* and *pig.* Do not be confused: `|` means *or* in regular expressions, but `||` means *or* as one of the Operators used in screening rule formulas.

Here are some other points to keep in mind:

- Space is just another character. The regular expression `savings account` contains a space, and so it does not match the string *savingsaccount.*
- Word boundaries are not considered. The regular expression `read` matches not only *read,* but also *reader, ready, spread, bread,* and so on.
- Use parentheses to group parts of regular expressions together. For example, `RegExFind("(\d{3}\.){2}")` puts `\d{3}\.` in parentheses so that the number-of-instances item `{2}` applies to the all of `d{3}\.`, not just to `\.` This expression matches any group of three digits plus period plus any three digits plus period (for example, 198.351.). Further examples are provided in Examples of Screening Rules.
- Regular expressions make use of many more special characters and operators than those listed in the table "Elements of Regular Expressions." Much documentation on regular expressions is available on the Web. Because Genesys eServices Manager uses Java classes for regular expressions, it is best to consult documents describing the particular version of regular expressions used in Java.

Examples of Screening Rules

This section provides examples of screening rules.

Credit Card Number

To find text that includes a typical credit card number, you need to match a sequence of four groups of four digits, each group separated by -(hyphen):

```
\d\d\d\d\-\d\d\d\d\-\d\d\d\d\-\d\d\d\d
```

> **Important**
>
> This regular expression also works without the \ (backslash) before the hyphens. However, it is better practice to write \- for the character hyphen, because the hyphen also has a special use in range expressions like [a-z].

Or if you want to allow for the possibility that some people will omit the hyphens, use? to make the hyphen optional:

```
\d\d\d\d\-?\d\d\d\d\-?\d\d\d\d\-?\d\d\d\d
```

You could also use the repetition notation to shorten each \d\d\d\d to \d{4}.

North American Phone Number

North American phone numbers consists of ten digits, grouped into two groups of three and one of four. There are a number of ways for the groups to be separated:

203-555-1234

(203) 555-1234

(203)555-1234

203 555-1234

203.555.1234

The following regular expression matches all of the above:

```
(\d\d\d|\(\d\d\d\))[\s\.\-]?\s*\d\d\d[\-\.]\d\d\d\d
```

The table "Phone Number Regular Expression" analyzes this regular expression.

Phone Number Regular Expression

Symbols	Meaning	Remarks
\d\d\d	Three digits	
\d\d\d|\(\d\d\d\)	Three digits, or three digits enclosed in parentheses	\ turns off the special meaning of the character (
[\s\.\-]?	Space or period or hyphen or zero	Any one of the items enclosed in square brackets, either once or not at all
\s*	Zero or more spaces	
\d\d\d	Three digits	
[\-\.]	Hyphen or period	Note again the need to use \
\d\d\d\d	Four digits	

Telltale Words

To screen for interactions from dissatisfied customers, you might try a regular expression like the following:

```
(not\s([a-z]+\s)*(pleased | satisfied)) | unhappy | complain
```

The first part of this expression matches *not* followed by zero or more words followed by *pleased* or *satisfied*; for example, *not* very pleased, not satisfied, not at all satisfied (but it also matches strings like *can not believe how pleased I am*). The rest matches the single words "unhappy" and "complain."

Cut/Copy/Paste Objects

You can cut, copy, or paste categories, standard responses, field codes, and screening rules.

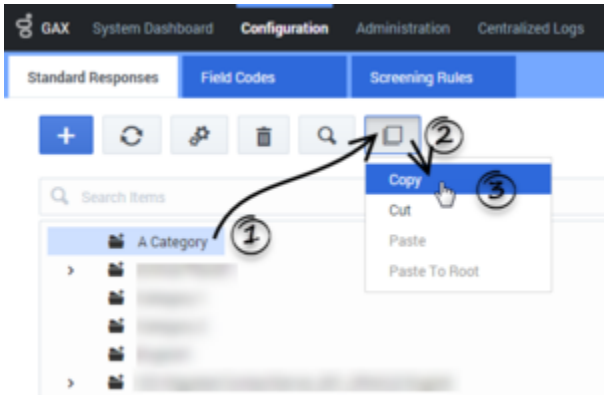
The general procedure is:

1. Select the target object(s).
2. Click  and select an action (for example, **Copy**).

> **Important**
>
> - When you cut an object, it disappears from its original location only after you paste it somewhere else—except that if you cut a category that has a linked screening rule, the screening rule remains in its original location.
> - You can also delete any object by selecting it, then clicking  .
> - Root category names must be unique across all languages.
> - If you paste an object into a location that includes an object with the same name, the pasted object is renamed **Copy_<copy number>_of_<name>**.

Categories

You can cut, copy, or paste one category at a time.



Copying a category in eServices Manager.

1. Click the category that you want to cut or copy.
2. Click  and select an action (for example, **Copy**).
3. Do one of the following:
   - To paste inside a category: Click the target category, and then click  and select **Paste**.

     > **Important**
     > You cannot use the **Paste** option if you previously cut a source category and it is still selected.

   - To paste to the root category: Click  and select **Paste to Root**.

Standard responses, field codes, and screening rules

You can cut, copy, or paste one or more objects at a time. See Important notes about screening rules for information pertaining only to screening rules.

Copying two standard responses in eServices Manager.

1. Click the check box beside each object that you want to cut or copy.

   > **Tip**
   > You can click the check box in the header row to select all objects in the table.

2. Click  and select an action (for example, **Copy**).
3. Do one of the following:
   - For standard responses and screening rules: Go to the category into which you want to paste the objects. Click  and select **Paste**.

- For field codes: Click  and select **Paste**.

> **Important**
> Field codes are shared across all languages.

Important notes about screening rules

Screening rules can be cut, copied, and pasted using the same method as standard responses and field codes. However, there are additional options and restrictions to consider:

- You cannot use the **Paste as link** option if you cut a screening rule and you are still in the same category. You must go to a different category to use the **Paste as link** option.
- The **Paste as link** option links a copied screening rule to a target category, but it does not create a separate copy of the screening rule. This is useful if you want to use a screening rule in multiple categories, but you still want to manage the rule from a central location.
- You cannot use the **Paste as link** option in the List view, or if you cut a screening rule in the List view and subsequently switched to the Tree view.
- You can use the **Unlink from Category** option (Tree view) or **Unlink from all Categories** option (List view) to unlink selected screening rule(s) from the category (Tree view) or all categories (List view).

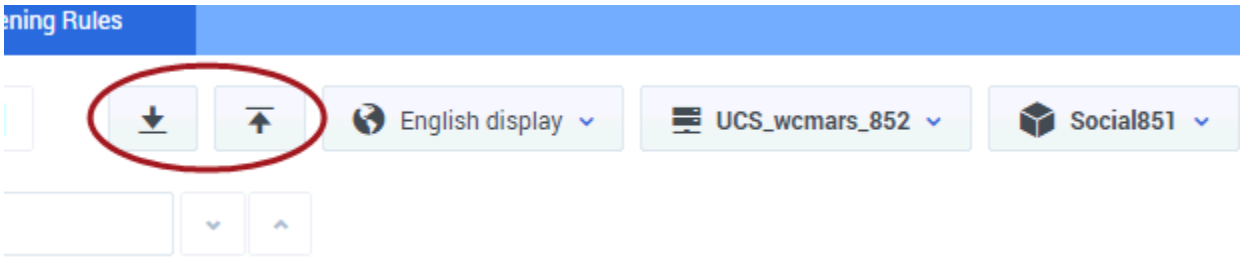
Importing and Exporting Objects

You can export and import categories, standard responses, field codes, screening rules, training data objects, and models (training data objects and models are handled by Genesys Content Analyzer).

> **Important**
> There are two exceptions: test messages and custom variables cannot be imported or exported

Use exported files as backups or to transfer objects between environments.

The import and export buttons are at the upper right of the eServices Manager window, next to the dropdowns for language, UCS, and tenant. Export is the down arrow, and Import is the up arrow.



Export

The process of exporting is simple. After you click the Export icon, series of windows allows you to select:

- Root categories (and their associated category trees)
- Training Data Objects
- Models
- Screening rules

At the beginning, you decide whether the category tree(s) that you select will also include their associated Standard Responses and Field Codes.

The resulting file has the extension `.kme`.

Import a KME file

Clicking the Import icon takes you through these windows:

1. **Import - Select file and options**. Click **Select** to navigate to the KME file you want to import. See below for explanations of the options **Update screening rules** and **Create new UCS ids** (selected by default).
2. **Import - Edit category names**
   If the import file includes any category that has the same name as an existing category, eServices Manager asks you to rename the incoming category.
3. **Import - Process import file**
   This simply shows the progress of the import process.

Note the following:

- The check box **Create new UCS Ids** controls whether the imported records receive new database IDs. Genesys strongly recommends that you leave this check box selected; otherwise, the imported records keep their old IDs and there is a risk of creating uniqueness conflicts. It is only safe to keep old IDs when you are importing into an empty database. One reason to keep the old IDs would be to preserve compatibility with non–eServices Manager components (such as a routing strategy) that need to refer to them.

> **Important**
>
> If the **Create new UCS Ids** check box is cleared and an imported object comes in with an ID that is identical with an existing object's ID, the import process cancels.

- The check box **Update screening rules** controls whether imported screening rules overwrite existing screening rules with the same name. If this check box is not selected, screening rules are treated like all other objects, as described in the preceding paragraph. If the check box is selected, screening rules are treated differently from all other objects: If the names match, the imported screening rule replaces the existing one.
- If an imported screening rule's name does not match any existing rule, but its database ID happens to match that of an existing rule, then eServices Manager creates a new ID for the imported rule.
- If a root category being imported has the same name as an existing category, eServices Manager asks you to change the name of the category being imported.
- If other objects have the same name as existing objects, eServices Manager appends `_<hms>` to the name of the imported object. `<hms>` is a timestamp where `h` is the hour (using a 12-hour clock), `m` is the minutes, and `s` is the seconds. Each unit may be one or two digits; there is no padding. For example, if at 4:25:07 PM you import a screening rule called `Sales`, and there is also an existing rule called `Sales`, the new name of the imported rule is `Sales_4257`.

> **Important**
>
> This adds between four and seven characters to the name of the object. You should be especially careful of this if any imported object's name is more than 58 characters long: the added characters may produce a new name that violates the 64-character limit on names of eServices Manager objects. Importing may fail on

> objects with names that are too long.

- If a Training Data Object contains no training messages, it cannot be imported.

> **Warning**
> Once you import an archive that includes any Training Data Object, you cannot import the archive again to a different language. If you attempt to do so, you will receive a message asking you to change the root category name, but when you do that you receive an error message saying that a Training Data Object with that name already exists.
>
> As a workaround, you can rename the Training Data Object before importing the second time.

Import an Excel file

You can perform a bulk import of standard responses from Excel files, including *.xls* (Excel 1997-2003) and *.xlsx*. Other formats are not supported.

The Excel file must use the columns listed in the table below, and these columns must appear in the first row of the first worksheet. All other data is ignored.

Column name	Description	Valid values	Default value	Comments
TheName	Populates in the **Name** field in the UI.	Any string	Mandatory	128 chars max
Body	Populates the body text in the **General** tab. Uses plaintext characters only.	Any string	Empty string	unlimited
StructuredBody	Populates the body text in the **HTML** tab. Uses plaintext characters and HTML.	Any string	Empty string	unlimited
Description	Populates the **Description** field in the UI.	Any string	Empty string	254 chars max
Subject	Populates the **Subject** field in the UI.	Any string	Empty string	512 chars max
MimeType	Defines the mime	Not verified during	Empty string	256 chars max

Column name	Description	Valid values	Default value	Comments
	type of the standard response.	the import process. Can be left blank.		
StartDate	Populates the **Start Date** field in the **Properties** tab.	Cell value must be of type **DATE** in Excel.	NULL	
ModifiedDate	Populates the **Modified Date** field in the **Properties** tab.	Cell value must be of type **DATE** in Excel.	Current time	
ExpirationDate	Populates the **Expiration Date** field in the **Properties** tab.	`NeverExpire` or cell value of type **DATE** in Excel.	NULL	

The following example shows a valid table with data:

TheName	Description	Subject	Body	StructuredBody	BodyType	StartDate	ModifiedDate	ExpirationDate
Sales followup	Sent to customers who request contact from Sales	Thank you for contacting us	Thank you for contacting your company. We are happy to assist you with your order.					

Important

- Columns can appear in any order.
- Default values are assigned if a cell value is missing.
- The following rules apply to dates:
  - If both **StartDate** and **ExpirationDate** are empty, eServices Manager assigns **StartDate** to current date and **ExpirationDate** to `NeverExpire`.
  - If **StartDate** is empty and **ExpirationDate** is not empty, eServices Manager assigns **StartDate** a value equal to 30 days before **ExpirationDate**.
  - If **StartDate** is not empty and **ExpirationDate** is empty, eServices Manager sets **ExpirationDate** to `NeverExpire`.
- An error message appears if eServices Manager fails to process one or more standard responses. You can check the GAX logs for more details about the cause of the error.

- eServices Manager assumes that all date properties in your UCS environment are stored in the GMT time zone. These properties are always converted to the local time zone by eServices Manager. However, when importing date properties from an Excel file, dates are not converted to local time. For consistency, Genesys recommends you specify dates in the GMT time zone.
- After you import standard responses using an Excel file, eServices Manager initializes the following properties as **Manual**, regardless of whether the Excel file contained other values: **AckUsageType**, **AutoRespUsageType**, **AgentDesktopUsageType**, **WSSUsageType**, **EmailOutUsageType**, and **VoiceAutoRespUsageType**.

To import the Excel file using eServices Manager:

1. In the **Standard Responses** tab, select a category into which the standard responses will be imported.
2. Click  .
3. Select the Excel file to import.
4. Click **Next**.
5. A prompt appears to state whether the import was successful or not. If not successful, the prompt states how many errors were encountered. You can check the GAX logs for more information on the cause of the error(s).
6. Click **Finish**.

Search

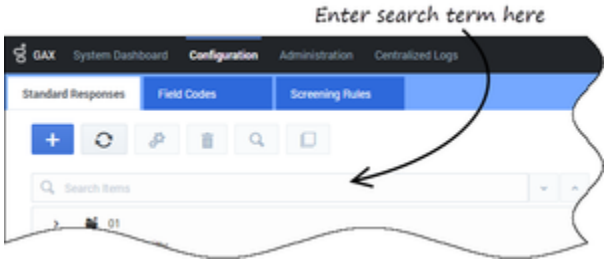
You can search for categories, standard responses, field codes, and screening rules, either by name or by specifying various parameters and properties. Some searches also allow the use of regular expressions.

> **Tip**
> Need help with regular expressions? Many possible parameters are documented on the Regular Expressions page in this guide.

Categories

You can search for categories in the **Standard Responses** or **Screening Rules** tabs.

Click the search bar and enter a search term to search the list of categories.



Standard responses

In the **Standard Responses** tab, select a category and click  to search for one or more standard responses.

> **Tip**
> Are you unable to click  to search? Remember that you must first select a

> category in which to search.

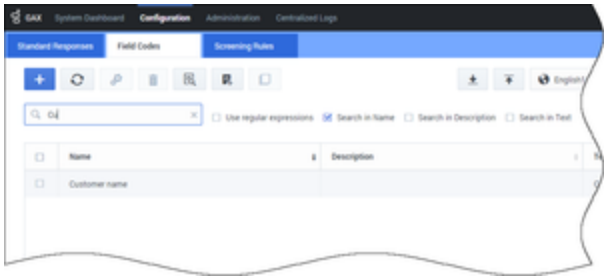
A dialog box appears so you can enter parameters for the search. You can define various parameters for the search by selecting a tab above the search field. In the graphic below, no tabs have a search parameter, as shown by the **0** beside each tab name.

After you define a search parameter in a tab, the value changes to show the number of active search parameters in the tab. For example, in the graphic below, the Text tab has a value of **1**, meaning it has one search parameter, but all other tabs have a value of **0**, meaning these tabs do not have search parameters.

After you define one or more search parameters, click **Find** to begin the search. The **Results** section appears at the bottom of your screen.

Field codes

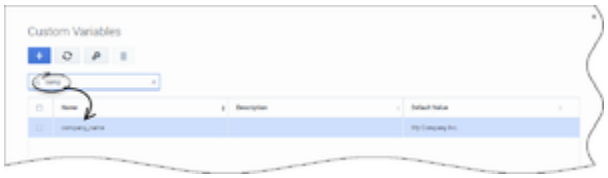
In the **Field Codes** tab, click  to start a search. Enter a search term in the provided field. You can also specify whether you want to look for the search term in field code names, descriptions, or text. You can also use regular expressions.



You can also search when inserting a field code into a standard response.

Custom variables

You can search for custom variables when you are viewing the **Custom Variables** list.



Screening rules

In the **Screening Rules** tab, select a category and click  to search for one or more screening rules.

> **Tip**

Are you unable to click  to search? If you are in the Tree view, you must first select a category in which to search.

A dialog box appears so you can enter a search term. You can select or de-select check boxes to specify whether you want to search in the name or pattern of screening rules. You can also use regular expressions.

After you define one or more search parameters, click **Find** to begin the search. The **Results** section appears at the bottom of your screen.