



Universal Routing 8.1

Business Process

User's Guide

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Preface

Welcome to the *Universal Routing 8.1 Business Process User's Guide*. This guide contains step-by-step instructions for creating business processes, which direct the handling of multimedia interactions through various processing objects including interaction queues, views that extract interactions from queues, and routing strategies that contain more specialized processing objects. This document is valid only for the 8.1 release of this product.

Note: For versions of this document created for other releases of this product, visit the Genesys Technical Support website, or request the Documentation Library DVD, which you can order by e-mail from Genesys Order Management at orderman@genesyslab.com.

This preface contains the following sections:

- [About Universal Routing, page 14](#)
- [Intended Audience, page 16](#)
- [Making Comments on This Document, page 17](#)
- [Contacting Genesys Technical Support, page 17](#)
- [Document Change History, page 17](#)

For information about related resources and about the conventions that are used in this document, see the supplementary material starting on [page 457](#).

About Universal Routing

Genesys Universal Routing enables intelligent distribution of interactions throughout the enterprise, whether you have a single-tenant or a multi-tenant environment. Universal Routing can direct interactions from a wide variety of platforms, such as toll-free carrier switches, premise PBXs or ACDs, IVRs, IP PBXs, e-mail servers, web servers, and workflow servers. It can handle pure-voice, multimedia, and blended environments, enabling routing of each media type based on appropriate criteria. Routing strategies and business processes automate interaction routing to the most appropriate agent/resource based on factors such as the type of inquiry, the value of the customer, and the media channel.

CIM Platform

Universal Routing is a part of the Genesys Customer Interaction Management (CIM) Platform that provides the core interaction management functionality.

Universal Routing, on its own, provides voice-routing capabilities. When combined with Genesys eServices (called Multimedia in 8.0.0 and earlier), you can also route various types of non-voice media. Universal Routing and Genesys eServices work together to enable you to seamlessly route both voice and non-voice interactions.

CIM Components

Genesys CIM is the collection of core servers that enable the rest of your Genesys environment to process the thousands of interactions representing the needs of your customers. The CIM Platform consists of the following Genesys products:

- Management Framework
- Interaction Management, which in turn consists of:
 - Universal Routing
 - Interaction Workflow
 - Knowledge Management
 - Content Analysis
 - Universal Contact History
- Reporting

Figure 1 on [page 15](#) depicts CIM graphically.

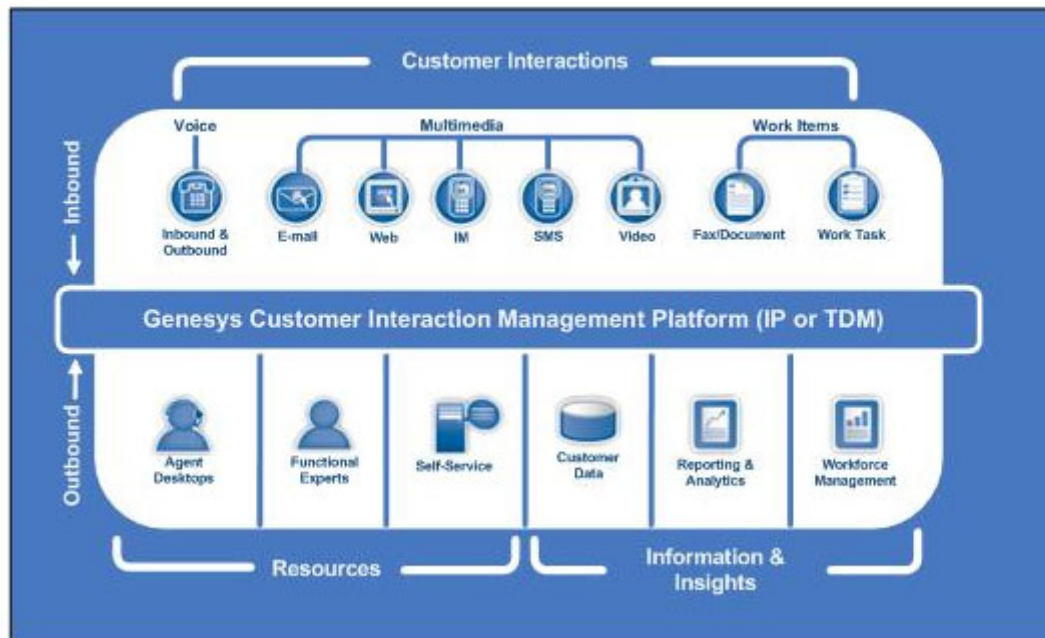


Figure 1: Customer Interaction Management Platform

eServices

The CIM Platform can handle various media channels. Genesys eServices (formerly Multimedia) in [Figure 1](#) encompasses those Genesys components that work together to manage interactions whose media is something other than traditional telephonic voice (for example, e-mail or chat).

eServices includes some parts of the Genesys Customer Interaction Management (CIM) Platform, plus certain of the media channels that run on top of the Platform:

- From the CIM Platform, all of Interaction Management except for Universal Routing:
 - Interaction Workflow—Centralized handling of interactions irrespective of media type
 - Knowledge Management—Creation and maintenance of standard responses and screening rules
 - Content Analysis—Optional enhancement to Knowledge Management, applying natural language processing technology to categorize interactions
 - Universal Contact History—Storage of data on contacts and on interactions (linked as threads)
- From the media channels, at least one of the following:
 - Genesys E-mail
 - Genesys Chat (formerly, Genesys Web Media)

- Genesys SMS (Short Message Service)
- Genesys MMS (Multimedia Messaging Service)
- Genesys Web Callback
- Genesys 3rd Party Media—Ability to add customized support for other media (fax, for example)
- Optionally, Web Collaboration—Ability for agents and customers to co-browse (simultaneously navigate) shared web pages. This is an option that you can add to either Genesys Chat or Inbound Voice.

See [Figure 2](#).

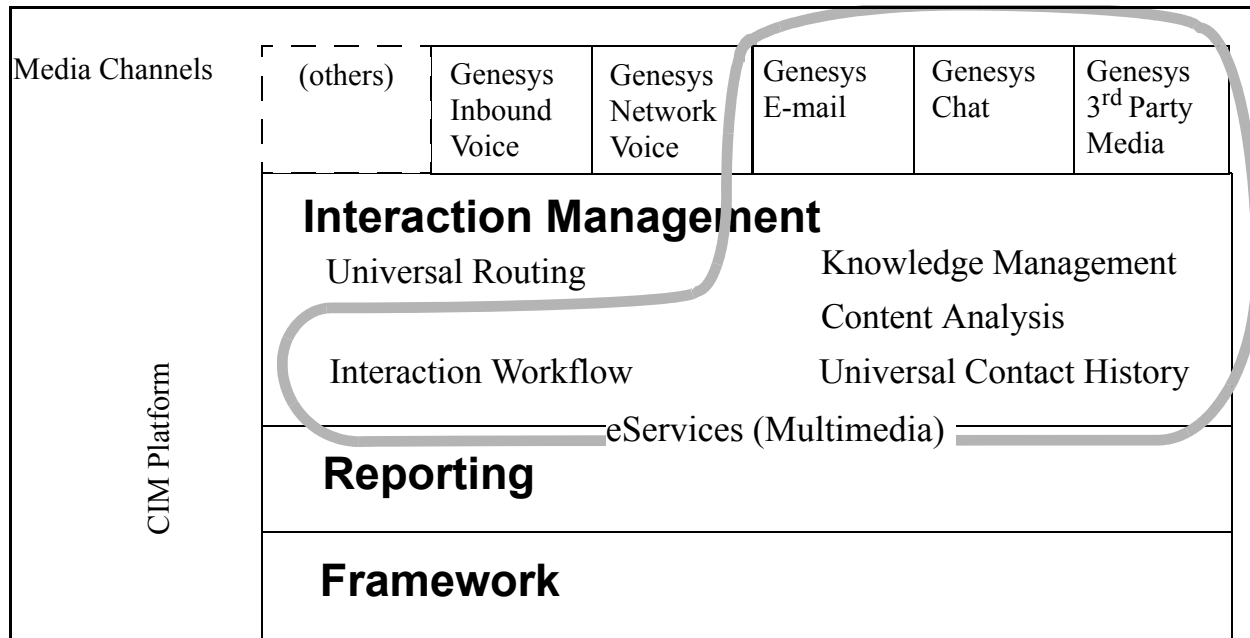


Figure 2: eServices in Relation to the CIM Platform and Media Channels

Any functioning solution (platform plus channels) that includes any part of the Interaction Management sector requires Universal Routing

Intended Audience

This guide is primarily intended for contact center staff responsible for creating business processes. It assumes that you have a basic understanding of:

- Computer-telephony integration concepts, processes, terminology, and applications.
- Network design and operation.
- Familiarity with your own network configurations.
- The Genesys CIM platform.

Ideally, you also have experience designing routing strategies using Interaction Routing Designer (IRD).

Making Comments on This Document

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Document Change History

This section lists topics that are new or that have changed significantly since the first release of this document.

Release 8.1.3

- Chapter 1, “Business Process Overview” on [page 21](#):
 - The Hide Activity feature was added. See “Strategy Object” on [page 30](#) for additional details.
- Chapter 10, “Creating Business Process Objects” on [page 247](#):
 - “Distribution of Load Between Multiple Interactions Servers” on [page 315](#) section was added.

Release 8.1.1

- Chapter 11, “Planning a Business Process” on [page 195](#):
 - In the section, “IRD Limitations” on [page 219](#), a bullet item has been added to describe a new limitation and a sentence has been added to the Note on [page 215](#), referring to this new limitation.

- Appendix, “Business Process Samples” on [page 369](#):
 - A new section, “How To: Conduct a Survey by Using Email” on [page 425](#) has been added to describe the Email or Chat Survey Business Process.



Part

1

Introduction to Business Processes

Part One of the *Universal Routing 8.1 Business Process User's Guide* presents an overview of business processes. It also gives a high level description of Genesys interaction processing. The information in Part One is divided into the following chapters:

- Chapter 1, “Business Process Overview,” on [page 21](#).
- Chapter 2, “Interaction Processing,” on [page 47](#).



Chapter

1

Business Process Overview

This chapter gives a high-level overview of a business process. It covers the following topics:

- [Business Process Definition, page 21](#)
- [Conceptual Diagrams, page 24](#)
- [Sample Business Process, page 25](#)
- [Business Process Objects, page 27](#)
- [Processing Flow, page 42](#)
- [Visual Comparison, page 44](#)

Business Process Definition

A business process directs customer interactions that arrive at the contact center through various processing objects. It defines what happens to customer interactions from the point of arrival to the point of completion. You can create one large business process or a number of smaller business processes connected via queues. A group of business processes comprise an *interaction workflow*.

Interaction Workflow

An interaction workflow implements the procedures used by agents, supervisors, quality assurance, and other personnel in your company to accomplish business objectives related to incoming interactions. This workflow can be broken down into various segments. IRD enables you to represent such segments as individual business processes.

A business process is a logically-organized series of steps that, working together, handle a task or some aspect of a task and that therefore contributes to your overall workflow processing. Think of business processes as containers for performing general tasks, such as moving interactions in and out of queues

and submitting interactions to routing strategies. You can transfer interactions or tasks from one business process to another.

Processing by Media Type

The types of processing applied to interactions varies based on the media type and the contact center's business logic. In most cases, the goal is to generate an appropriate response for the customer.

- In the case of an e-mail interaction, an appropriate response might be an e-mail answering the customer's questions.
- In the case of a chat interaction, an appropriate response might be mailing product brochures to the customer.
- In the case of a fax interaction, an appropriate response might be an e-mail stating the requested materials had been received, and so on.

E-mail Server Example

Assume an e-mail interaction from a customer arrives at the contact center, either via the enterprise mail server or, if the customer sends an e-mail from a web site by filling out a web form, the interaction arrives via the Web API Server.

The media server (E-mail Server in this example) stores the body of the interaction in the Universal Contact Server database, and then sends operational data on the interaction to Interaction Server.

Interaction Server parks the interaction's operational data in its cache and starts processing the data according to the first business process in the interaction workflow.

In general, a business process works as follows:

- E-mail Server directs Interaction Server to place the interaction into an inbound queue. [Figure 3](#) shows an example inbound queue defined in an example E-mail Server Application object):

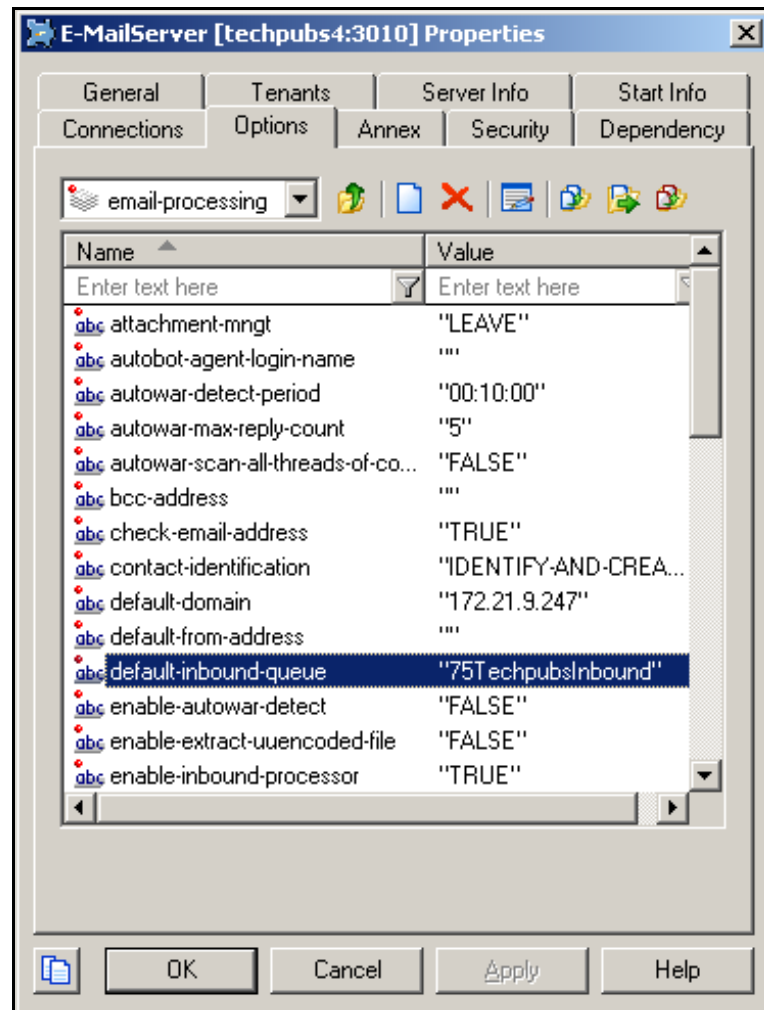


Figure 3: E-mail Server Default Inbound Queue

Note: If you are planning to use a single Interaction Server as a Multi-Tenant application, you can configure as many inbound queues as you need for directing media server interactions into queues via the endpoints: <tenant_DBID> section in the E-mail Server Application object. For more information about endpoints, see [page 41](#).

- The interaction is then taken out of the queue and submitted to a strategy that uses various processing objects (see “Routing Design Toolbar” on [page 123](#) for a summary of available processing objects).
- A strategy performs the processing specified and eventually routes the interaction to a target, but not necessarily the final target. For example, an e-mail interaction may be placed in an agent queue for construction of a response.

- The target processes the interaction and places it into another queue where another strategy may process it. For example, a strategy may send an agent's draft e-mail response to a queue for Quality Assurance checking.
- The cycle of going from queue to strategy to queue continues until processing is stopped or the interaction reaches some final (usually outbound) queue.

Conceptual Diagrams

Figure 27 shows a conceptual diagram of an inbound e-mail business process that ends in outbound Quality Assurance (QA) review.

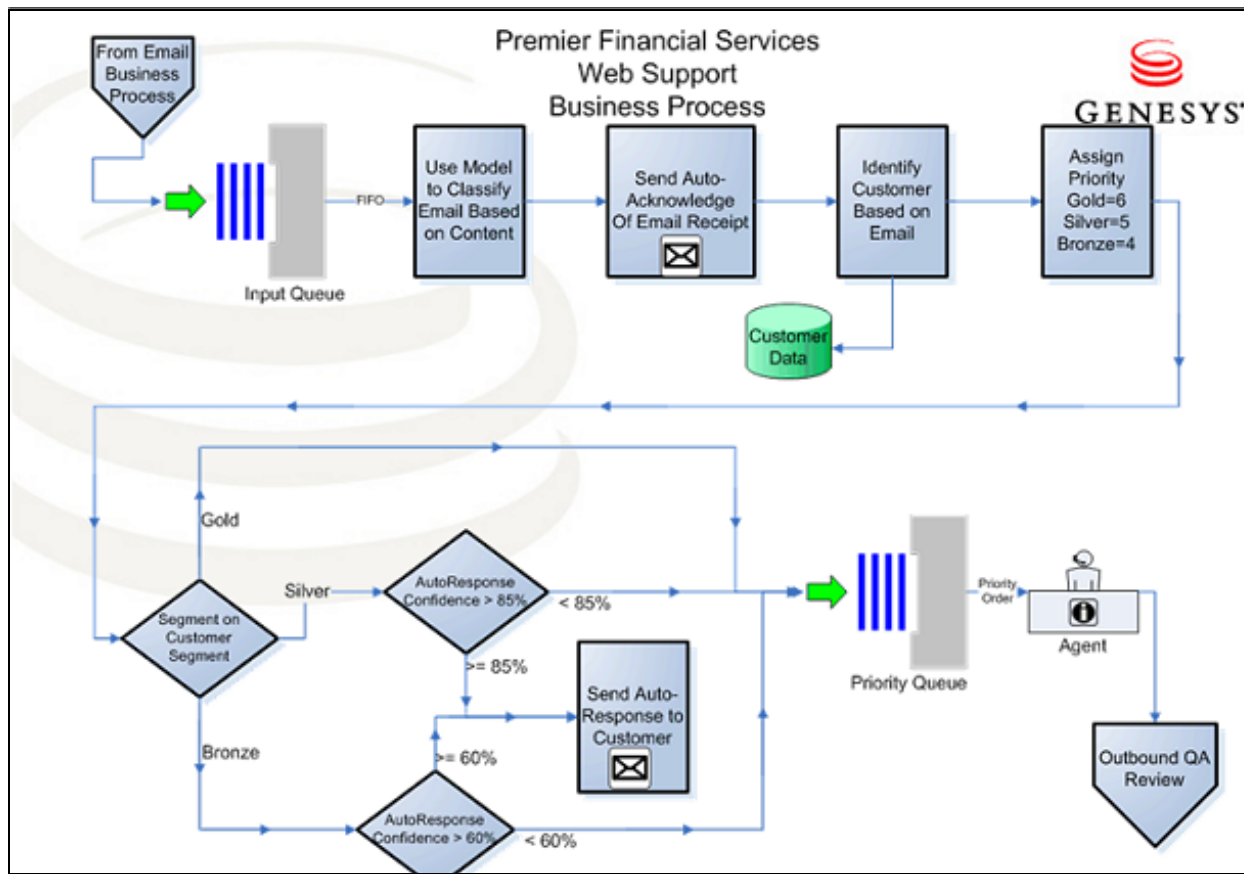


Figure 4: Business Process Conceptual Diagram: Inbound E-mails

Figure 5 continues the conceptual diagram by showing a conceptual diagram of the business process used for outbound QA review.

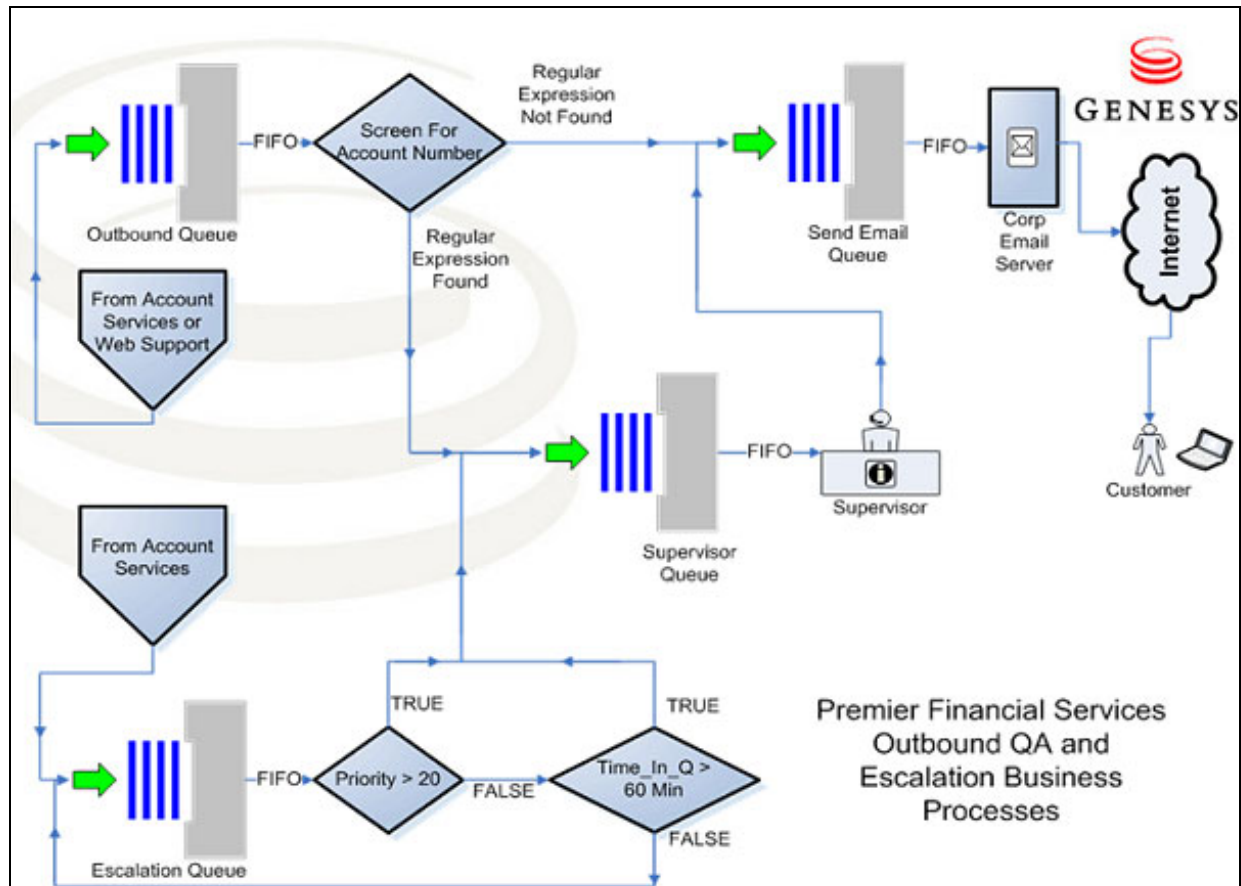


Figure 5: Business Process Conceptual Diagram: Outbound QA Review

Sample Business Process

Note: For information about the interface that is used to create business processes, see Chapter 3, “Business Process Interface,” on [page 57](#).

An actual business process in IRD’s Interaction Design window resembles a diagram. [Figure 6](#) shows an example business process that forwards incoming chat interactions to agents and processes chat transcripts.

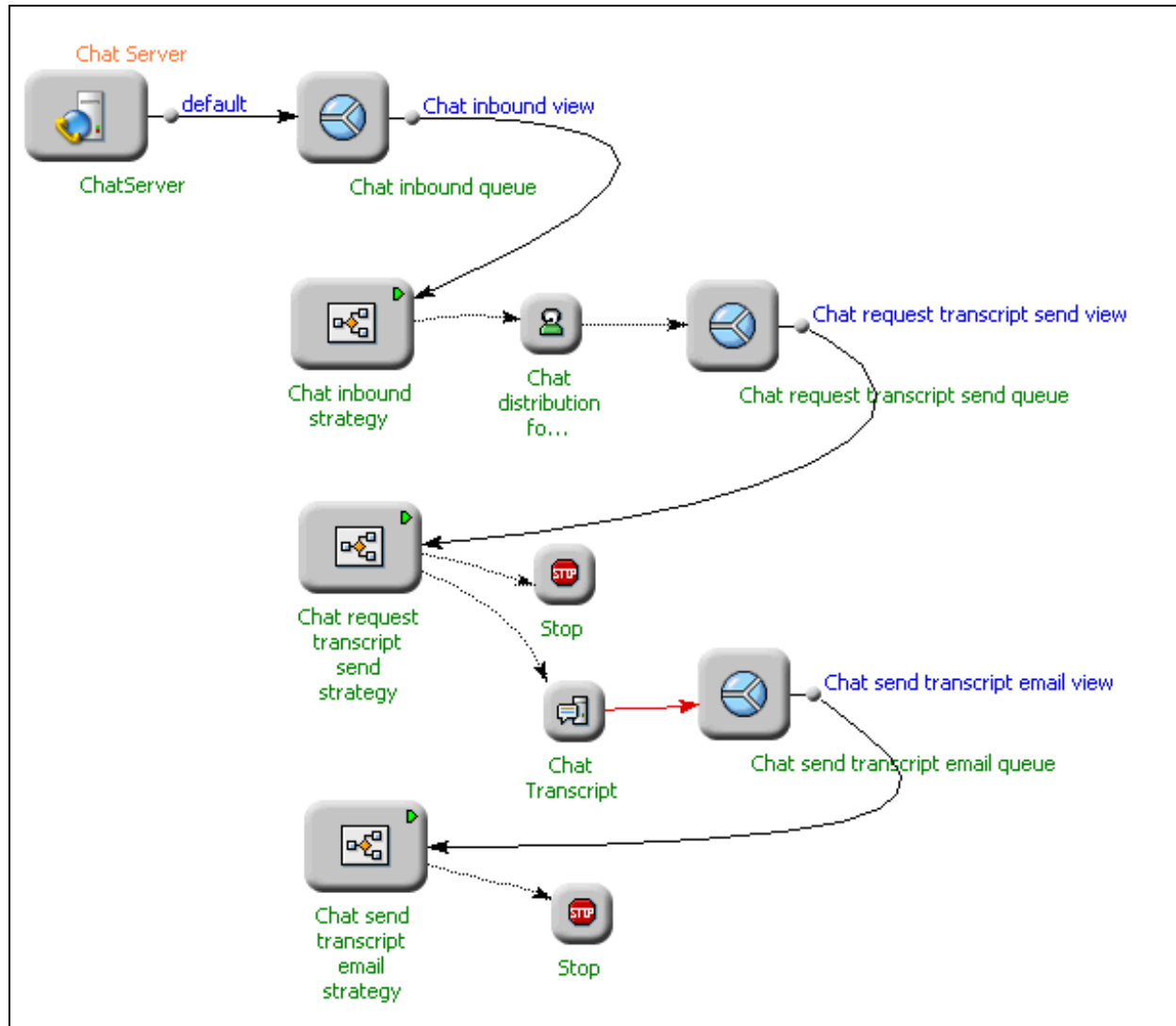


Figure 6: Example Business Process

Objects of several types, together with their properties, define a business process:

- The primary objects are *Queue* (rounded squares in Figure 6), *View* (single small circles in Figure 6), and *Strategy* (rounded rectangles in Figure 6) objects.
- A business process can also contain a *Media Server* object that has attached *Endpoints* (Chat Server in Figure 6).
- Some objects appear because they are specified as targets in strategies: output queues, agents, agent groups, workbins, and servers (such as Chat Transcript in Figure 6). Also see “Strategy-Linked Nodes” on page 34.
- A *Stop* node appears if a strategy contains a *Stop* object, which notifies Interaction Server that processing for a particular interaction has stopped.

- Lines from queues to routing strategies represent *Submitter* processes (75tpin in [Figure 6](#)).
- Lines flowing out from routing strategies point to targets (smaller nodes, such as the line connecting to Chat distribution in [Figure 6](#)).

Business Process Objects

This section discusses the various objects that can appear in a business process.

Queue Object

A *Queue object* represents a logical parking place (persistent queue) for an interaction during its lifetime at the contact center. [Figure 7](#) shows a Queue object, named Inbound emails.

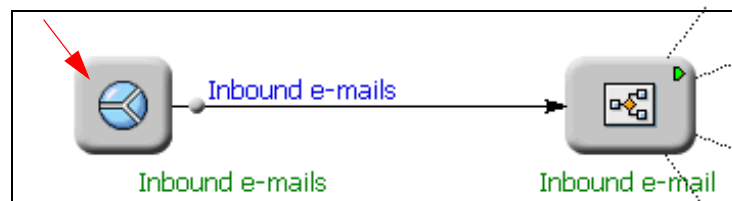


Figure 7: Queue Object

Double-clicking a Queue object opens a properties dialog box (see [Figure 8](#)).

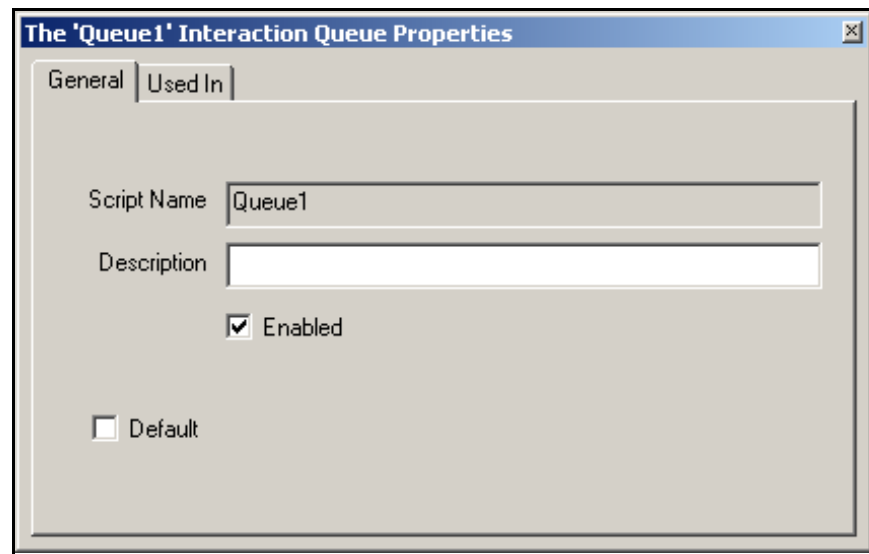


Figure 8: Queue Properties Dialog Box

Select the Default check box to make this the default queue for this Business Process. A default queue is marked with a bright-green square in the Object Browser ().

Setting a queue as default means that when you configure a new Media Server object for this Business Process, it automatically uses the selected queue.

Note: In this example, the display name (Inbound-e-mails) and the Configuration Manager Script object name (Inbound e-mails1) are slightly different. Figure 143 on [page 159](#) shows an example Configuration Manager Scripts folder for Script objects.

A Queue object has special ports for outgoing connections. Such ports represent *View objects*. The same queue can be used in more than one business process—for example to connect one business process to another thereby creating an interaction workflow.

A Queue object may display an *up arrow* in the lower left area of its icon (see [Figure 9](#)).

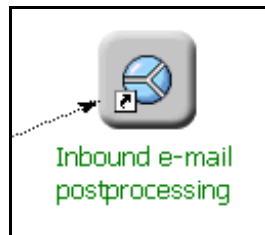


Figure 9: Queue Object with Up Arrow

The up arrow indicates that the queue is “owned” by (originated in) a different business process. You can find the business process that owns the queue by right-clicking the queue and selecting *Locate* from the menu. The queue is then highlighted in the object browser under the business process that owns the queue.

For information about adding Queue objects, see [page 258](#).

View Object

View objects pull interactions from queues and submit them to strategies. Placing an interaction into a queue defines the subsequent actions that are applied to the interaction through *queue-processing rules*, which consist of one or more View objects. [Figure 10](#) shows an example View object (which appears as a small circle) attached to a Queue object.

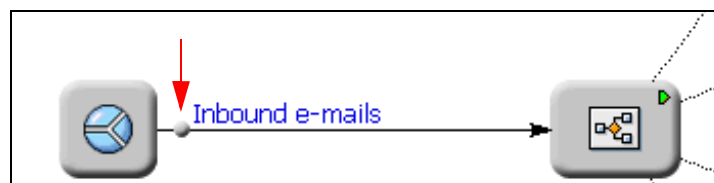


Figure 10: View Objects Attached to Queue Object

Right-clicking a View object in the object browser and selecting **Properties** opens a properties dialog box. You can also open the properties dialog box by right-clicking the associated Queue object and selecting **Properties** of and the name of the View object.

The example in [Figure 11](#) shows a condition for pulling interactions in the **Condition** tab.

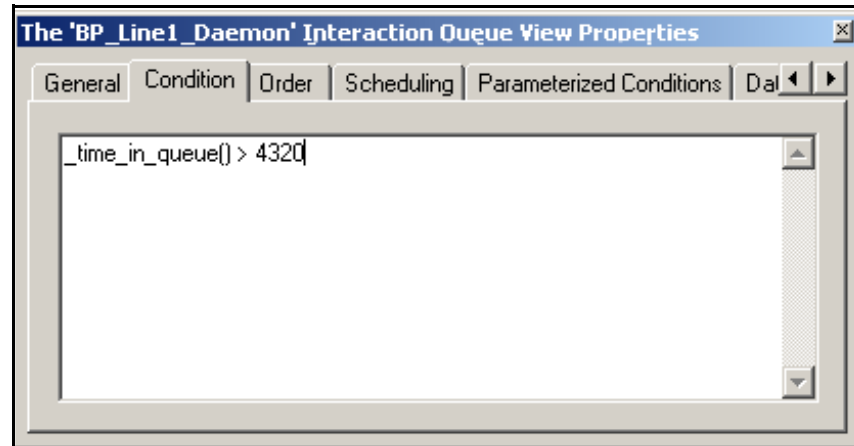


Figure 11: View Properties Dialog Box

A View object defines one or more of the following:

- The name for the View object in the Configuration Manager Scripts folder (see [page 271](#)).
- The conditions for interaction selection including parameterized conditions, such as those used by Agent Desktop (see [pages 272 and 282](#)).
- The order of interaction selection (see [page 274](#)).
- The time interval that Interaction Server uses to check for interactions ([page 275](#)).
- The schedule for submitting interactions to strategies (see [page 275](#)).
- Database hints (see [page 283](#)).
- The number of interactions of different segments (see [page 284](#)).

In addition, you can use Configuration Manager to limit the number of interactions based on interaction properties, such as Customer Segment (see [page 287](#)).

For information about adding View objects, see [page 267](#).

Strategy Object

Note: All objects used in a strategy are hidden if the Strategy object represents a shortcut. To view the objects used in such strategy, you have to first locate the business process that owns the strategy by right-clicking the strategy, and then selecting *Locate*. Then open the strategy in that business process.

A *Strategy object* represents a routing strategy, which performs specific processing operations (for examples, see Figure 28 on [page 44](#) or Figure 114 on [page 132](#)). Stated another way, a strategy is a set of instructions that Universal Routing Server follows in deciding how to handle an interaction. [Figure 12](#) shows a Strategy object named *Inbound e-mail preprocessing st*.

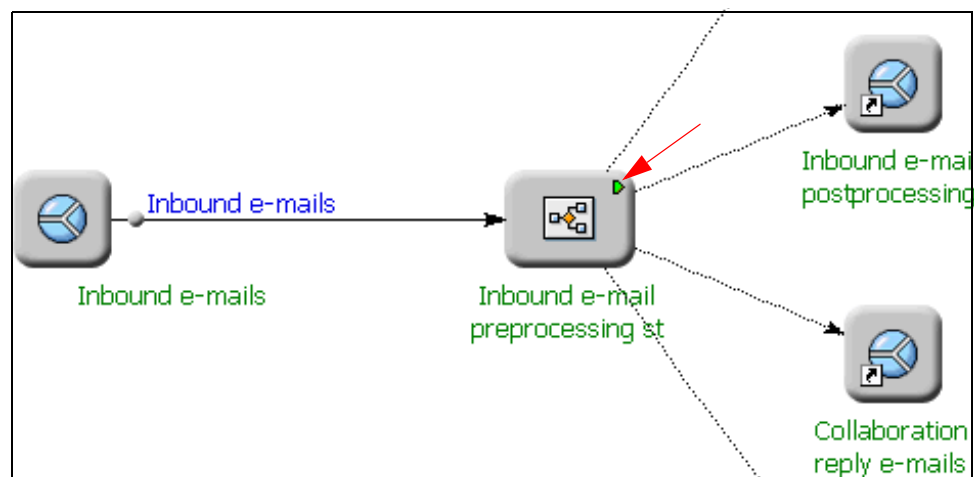


Figure 12: Strategy Object

- Activated strategies that are loaded on a virtual routing point are marked with a small green arrow (see *Inbound e-mail preprocessing st* in [Figure 12](#)).
- The same strategy can be used in more than one business process. You can tell this has occurred if a Strategy object displays an *up arrow* in the lower left area of its icon (see [Figure 13](#)).



Figure 13: Strategy Object with Up Arrow

The up arrow indicates that the strategy is “owned” by (originated in) a different business process.

You can find the business process that owns the strategy by right-clicking the strategy and selecting **Locate** from the menu. The strategy is then highlighted in the object browser under the business process that owns the strategy.

Double-clicking a Strategy object opens a properties dialog box with the name of the Configuration Manager Script object (see [Figure 14](#)), its description, and the path where the graphical portion (.rbn file) is stored (see [page 172](#)).

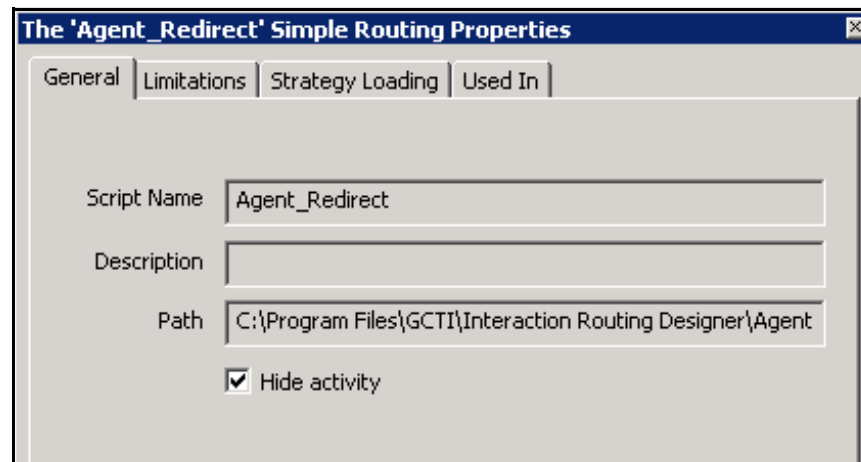


Figure 14: Strategy Properties Dialog Box

- To examine the strategy detail and flow, you can open the strategy for viewing (see Figure 260 on [page 305](#)).
- For information about creating Strategy objects, see [page 323](#).
- If the Hide activity check box is selected, no activity related to the strategy is reported by Interaction server.

When the Hide Activity checkbox is checked, it stores a value of true for the hide-activity option in the default section on the Annex tab of a strategy configuration object. Or as a value of false if the Hide Activity checkbox is unchecked. See [Figure 15](#) for details.

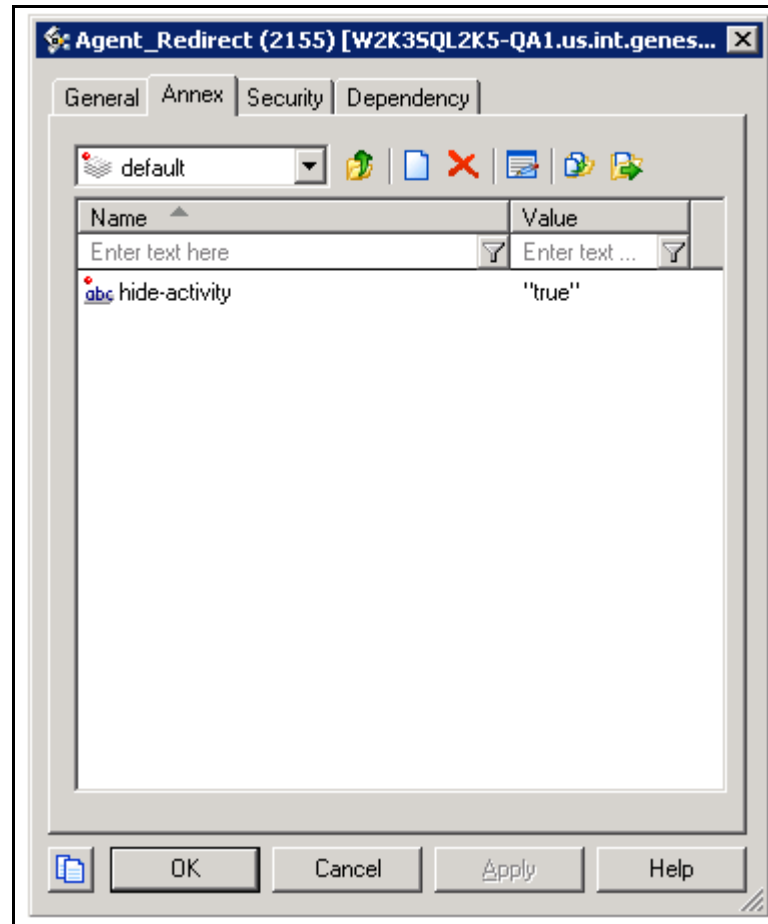


Figure 15: hide-activity Option

Certain activities defined in Business Processes and handled by Interaction Server are intended to periodically check interactions and modify their properties.

For instance, an interaction can be pulled from a queue, pushed to a specific strategy, which changes the interaction's properties, and returned back into the same queue. This activity is reported by the following sequence of events, and can happen multiple times until finally the interaction is either moved to another queue or routed to an agent:

- EventTakenFromQueue (interaction leaving a queue)
- EventPartyAdded (strategy added as a party)
- EventPropertyChanged (one or more changes, if any)
- EventPartyRemoved (strategy party removed)
- EventPlacedInQueue (interaction returned back to the same queue)

If a customer is not interested in reporting these interim changes, all corresponding reporting events can be eliminated in order to not waste network bandwidth and reporting engine CPU.

The Interaction Server reads the value of the strategy `hide-activity` option when it reads the configuration of a corresponding Business Process, and does not report the activity associated with this strategy if the option's value is set to `true`.

Workbin Object

A workbin is an object that holds interactions for later processing. [Figure 16](#) shows the properties dialog box for a workbin.

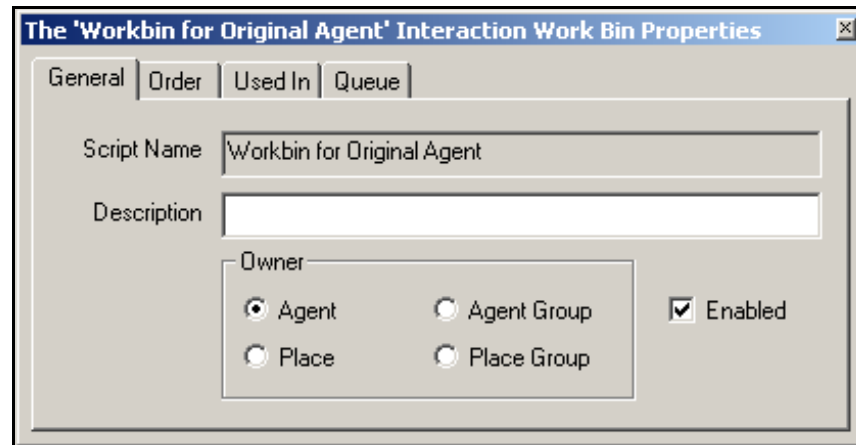


Figure 16: Workbin Properties Dialog Box

- In Genesys Agent Desktop, agents can use workbins to store interactions that they have started working on and wish to continue working on at a later time. For more information, see the *Genesys Desktop 7.6 Deployment Guide*.
- Interactions can be distributed to workbins by Universal Routing Server when executing a strategy that uses the Workbin object (see “Workbin Strategy-Linked Node” on [page 37](#)).
- Workbins may be used in a business process for escalation functionality (see [page 298](#)). Multiple workbins may be associated with the same interaction queue.

A workbin is similar to a queue in that it holds interactions. A workbin differs from a queue in that, when configured with IRD's Workbin routing object, a workbin can be associated with a particular Agent/Agent Group/Place/Place Group. In this case, its major function is to hold interactions for that agent/place/group to process. Agents can view the entire content of a workbin and pull interactions from it in any order. Agents can also pull interactions from queues, but only in the order defined by the queue.

Note: For more information on configuring workbins, refer to “Adding Workbins” on [page 292](#).

Strategy Activity

Strategy-Linked Nodes

Outgoing connections automatically appearing from a Strategy object that represent objects specified inside the strategy are called *strategy-linked nodes*. For example, assume a strategy in a business processes contains the following:

- A Queue Interaction object (see Table 11 on [page 207](#))
- A Workbin object (see Table 11 on [page 207](#))
- A Route Interaction object using a variable for the name of the routing target (see Table 11 on [page 207](#))
- A predefined queue called Stop_Processing

Figure 17 shows the resulting strategy-linked nodes.

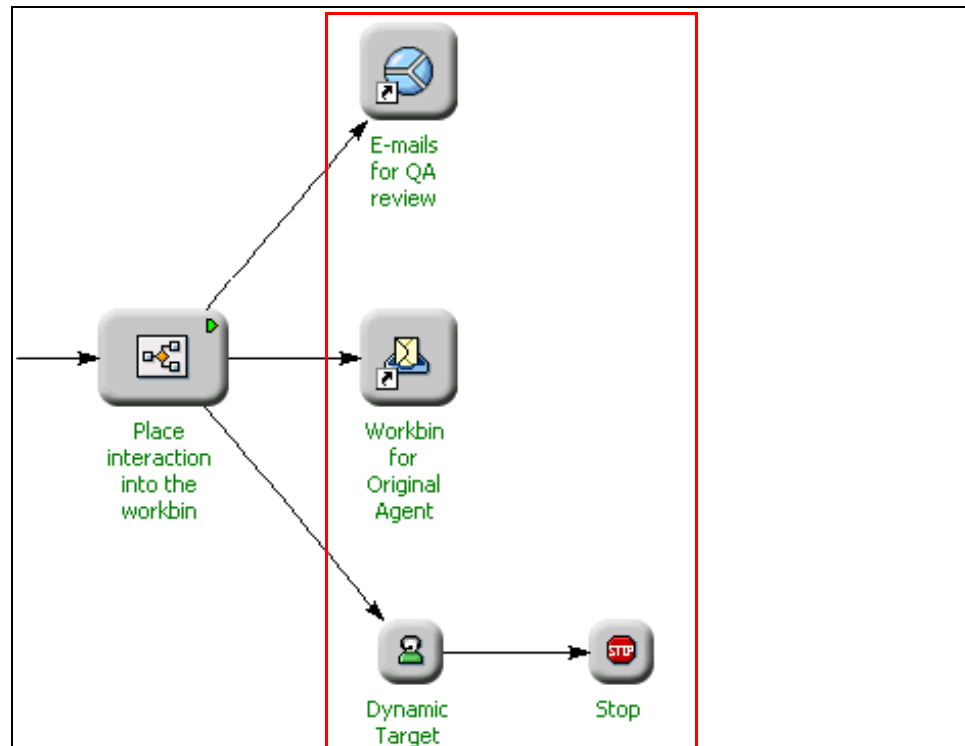


Figure 17: Strategy-Linked Nodes

The next section discusses the various types of strategy-linked nodes.

Queue Strategy-Linked Node

If the Strategy object uses a Multimedia object (see Table 8 on [page 201](#)) or a Routing object (see Table 11 on [page 207](#)) that names an interaction queue, a

queue node with the same name automatically appears in the business process (see E-mails for QA review in [Figure 18](#)).

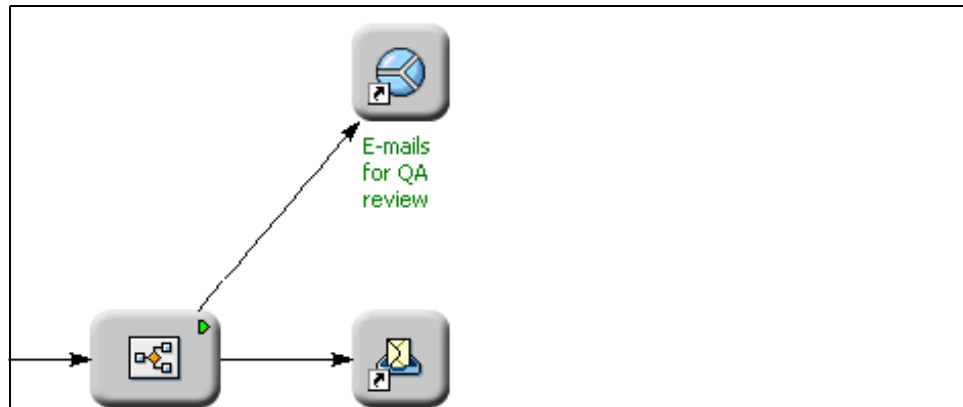


Figure 18: Queue Node Linked to Strategy Object

You can easily tell when a queue node is a strategy-linked node because it flows out of the right side of a strategy and is directly connected to the strategy (see [Figure 18](#)).

Server Strategy-Linked Node

If the Strategy object uses a Multimedia object (see Table 8 on [page 201](#)) that names a server performing an action or operation, a server node with the same name appears in the business process. [Figure 19](#) shows two example server nodes (Email:InteractionAutoResponse and Email::InteractionACK).

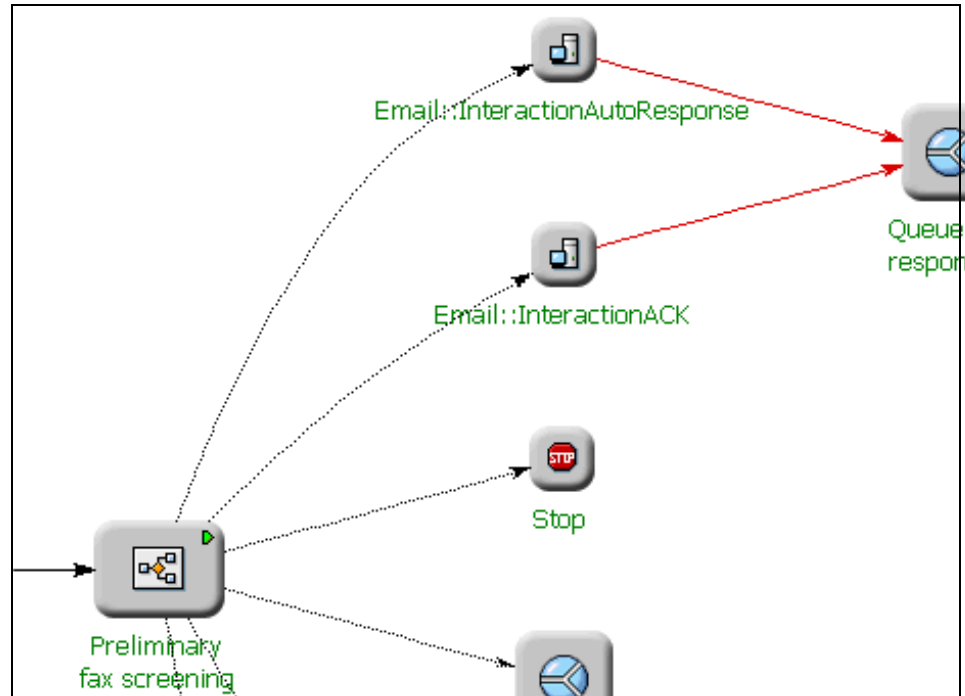


Figure 19: Server Node Linked to Strategy Object

Stop Strategy-Linked Node

If the Strategy object uses a Stop Interaction object (see Table 8 on [page 201](#)), a Stop node appears in the business process (see [Figure 19](#)). This node specifies the end point for processing of an interaction in a strategy.

Target Strategy-Linked Node

If the Strategy object uses a Route Interaction object (see Table 8 on [page 201](#)) that specifies a Person, Agent Group, or Skill (see [page 241](#)) as a routing target, a node with the same name appears in the business process. [Figure 20](#) shows an example Agent Group target node (Email QA Review group).

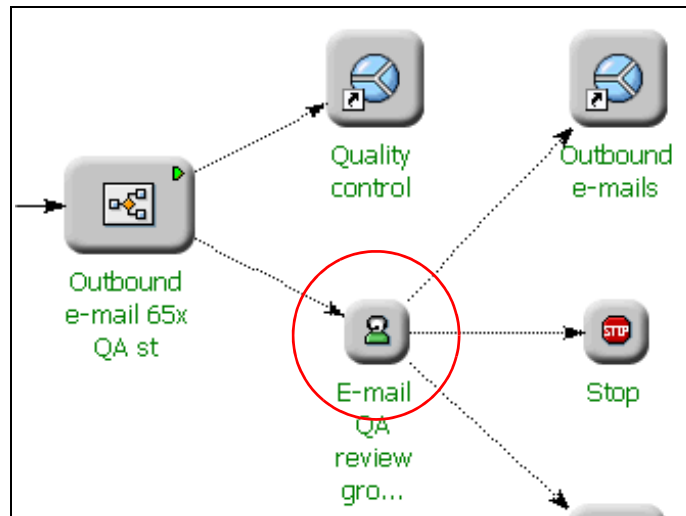


Figure 20: Person Node Linked to Strategy Object

Workbin Strategy-Linked Node

If the Strategy object routes an interaction using the Workbin object (see Table 8 on [page 201](#)), a workbin node appears in the business process (see [Figure 21](#)).

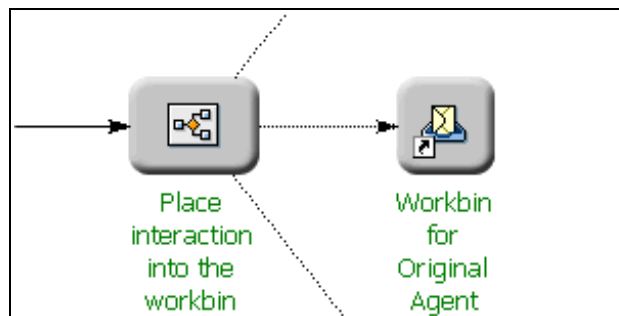


Figure 21: Workbin Strategy-Linked Node

In the case of a workbin strategy-linked node, the Workbin object in the strategy specifies a target type: Agent, Agent Group, Place, or Place Group. The selected target type appears under Owner in the Workbin Properties dialog box (see [Figure 16](#) on [page 33](#)).

The same workbin can be used in more than one business process. A workbin strategy-linked node may display an *up arrow* in the lower left area of its icon (see [Figure 22](#)).



Figure 22: Workbin Object Owned by a Different Business Process

The up arrow indicates that the workbin is “owned” by a different business process.

You can find the business process that owns (originated) the workbin by right-clicking the workbin and selecting **Locate** from the menu. The workbin is highlighted in the object browser (see Figure 36 on [page 61](#)) under the business process that owns the workbin.

- Views extract interactions from workbins.
- For information about creating Workbin objects, see [page 292](#).

Note: The **Workflow Settings** tab in the **Options** dialog box (see Figure 75 on [page 90](#)) affects the visibility of strategy-linked nodes.

New and Existing Interactions

To distinguish existing interactions from new ones, the lines connecting an object that creates a new interaction and the destination for the new interaction are red instead of black.

- If a strategy places an existing interaction in a queue, IRD inserts a Queue strategy-linked node and uses a black connection between the strategy and the queue.
- If a strategy stops interaction processing, IRD inserts a Stop strategy-linked node and uses a black connection to the strategy.
- If a strategy calls a 3rd-party server that creates a new interaction and places it into a queue, IRD inserts the server strategy-linked node and connects it to both the strategy (black connection) and the queue (red connection). See Figure 19 on [page 36](#).
- If a strategy routes the interaction to an agent, IRD inserts an agent strategy-linked node and connects it to the strategy using a black connection.
- If the agent is supposed to stop interaction processing, IRD inserts a Stop strategy-linked node and connects it with the agent node using a black connection.
- If the agent is supposed to place an interaction in a queue, IRD connects the agent strategy-linked node to the queue using a black connection.

- If the agent is supposed to create new interaction and place it in a queue, IRD connects the agent strategy-linked node to the queue using a red connection.

Submitters

When you connect a View object (see Figure 10 on [page 28](#)) to a Strategy object, this action defines a *Submitter*, which fetches interactions through a corresponding view and submits them to the strategy.

[Figure 23](#) shows a Submitter connecting the Inbound e-mails Queue object with the Inbound e-mail processing st Strategy object.

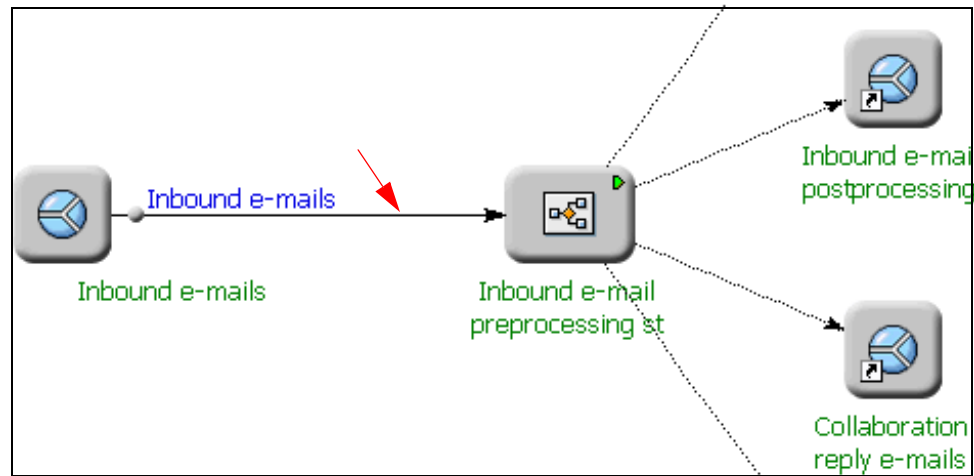


Figure 23: Submitter Object

For information about creating Submitter objects, see [page 303](#).

Media Server Object

At some point, you will need to direct customer interactions into the workflow. The only way to get customer interactions into a workflow (for further processing by other business processes) is to use a Media Server object. The location where the Media Server object is used will frequently be the first business process in the workflow, but the exact location depends on how you design your workflow.

Background

The Genesys Multimedia software components include five *media servers*, E-mail Server, Chat Server, SMS Server, iWD Capture Points, and Third Party Servers, which process e-mail, chat, SMS/MMS interactions, and iWD tasks respectively. Your enterprise's media servers appear as Media Server objects in a Media Servers folder in the Interaction Design window (see [Figure 49](#) on [page 70](#) for an example).

- E-mail Server interfaces with the enterprise mail server and the Genesys Web API Server, bringing in new e-mail interactions from customers and sending out replies or other outbound messages.
- Chat Server works with Web API Server to open, conduct, and close chat interactions between agents and customers.
- SMS Server receives and handles SMS and MMS messages sent from a mobile client.
- iWD Capture Points capture iWD tasks from various source systems.
- Third Party Servers are used to represent servers for which there is no corresponding Application type in Configuration Server.

For more information on the media servers, start with the *eServices (Multimedia) 8.0 Deployment Guide*.

[Figure 24](#) shows example chat and e-mail Media Server objects used in a business process.

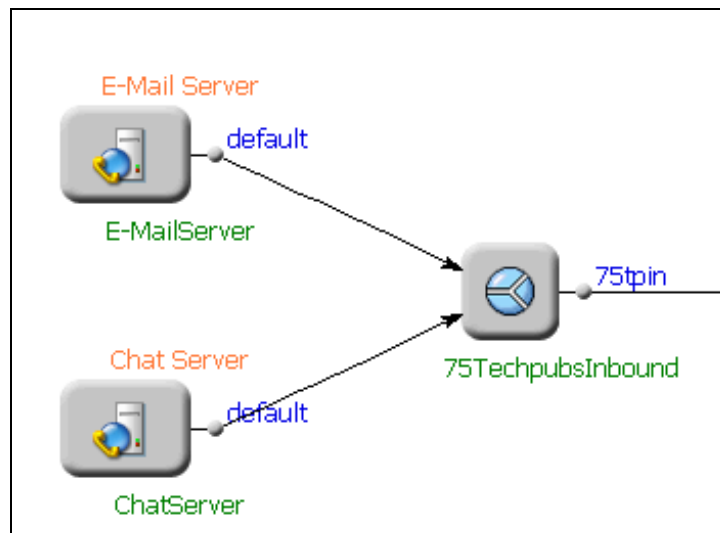


Figure 24: Media Servers and Endpoints

In this particular example, both media servers direct interactions into the same queue (75TechpubsInbound) for sorting. You may want to set up different queues for different media types.

To view a Media Server's properties, right-click it in the object browser Media Servers folder and select Properties. [Figure 25](#) shows an example dialog box.

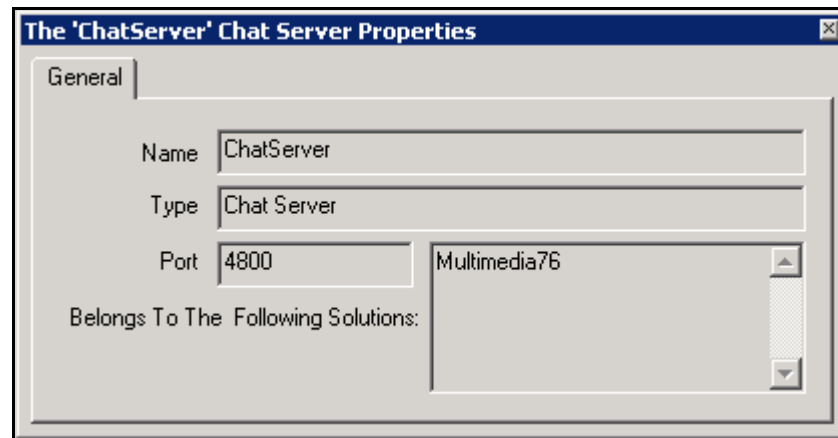


Figure 25: Media Server Properties Dialog Box

For information about using Media Server objects, see [page 252](#).

Endpoint Object

In [Figure 24](#), note the small circles attached to each media server. Each small circle is an *Endpoint object*. An endpoint can be used to connect a media server with a queue in a business process.

To view an endpoint's properties, right-click it in the Media Servers folder of the object browser and select Properties. [Figure 26](#) shows an example dialog box.

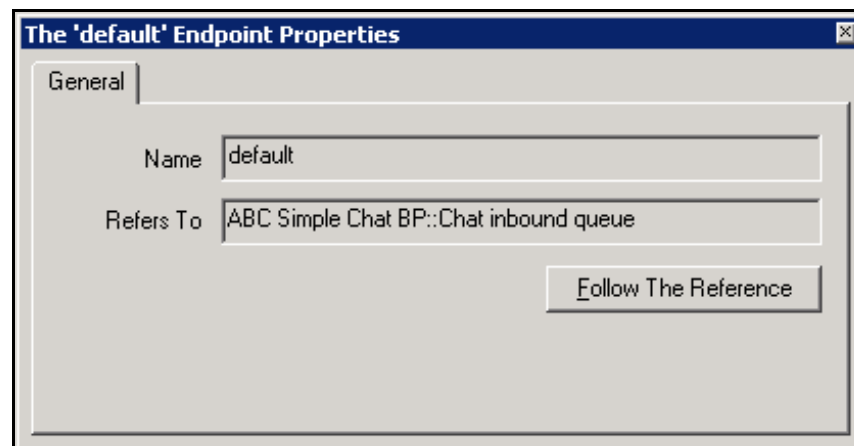


Figure 26: Endpoint Properties Dialog Box

If the endpoint is connected to another object, the Refers To field names the business process and object.

To find the object in the business process to which the endpoint connects, click the Follow the Reference button. IRD highlights the object in the business process.

For information about creating endpoints in the Interaction Design window, see “Adding Endpoints” on [page 254](#).

Processing Flow

[Figure 27](#) shows a flow diagram using objects discussed in “Business Process Objects” on [page 27](#).

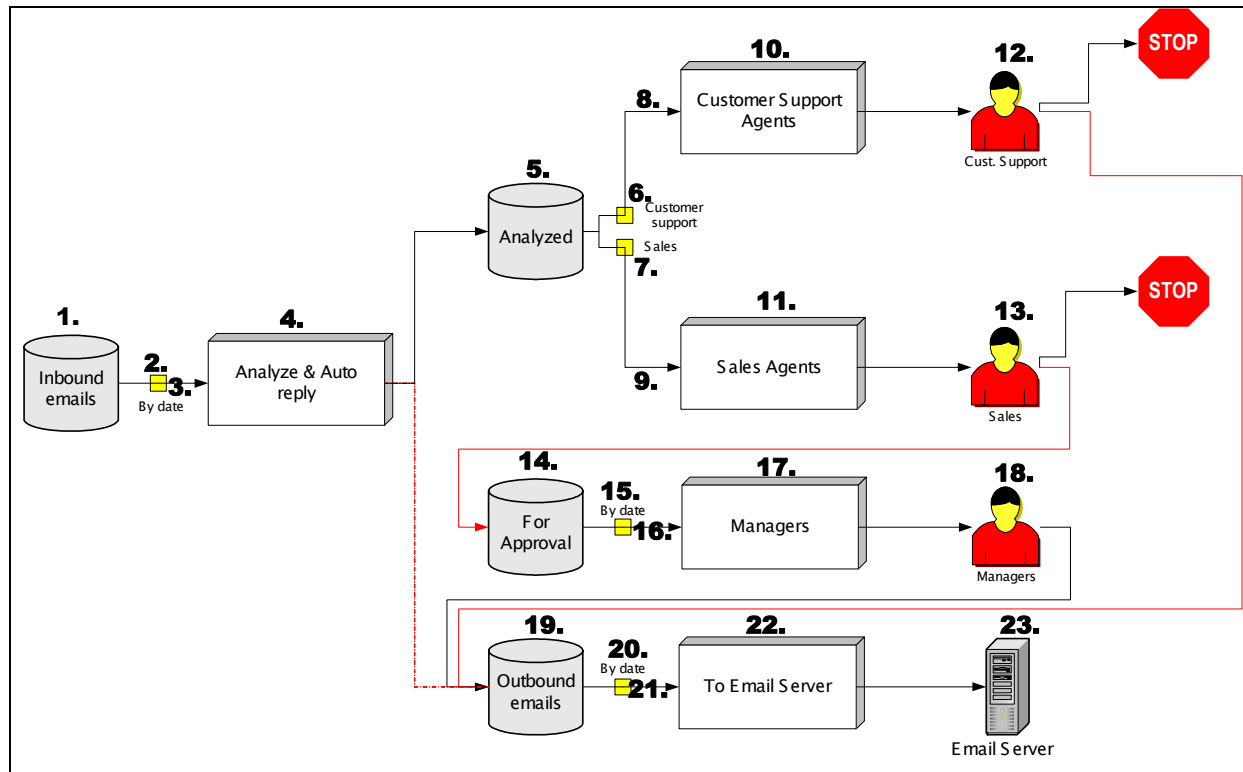


Figure 27: Business Process Conceptual Diagram

The processing flow for the diagram is the following:

1. The **Inbound E-mails** queue accepts all inbound e-mails.
2. The **By Date** view is attached to the Inbound E-mails queue. The view specifies interaction selection by date received (assumed from the view name).
3. A submitter process pulls interactions from the Inbound E-mails queue (through the By Date view) and submits them to the Analyze & Autoreply strategy.
4. The **Analyze & Autoreply** strategy analyzes the e-mail based on its content and defines each e-mail’s special attributes such as To whom. The strategy also generates an autoreply e-mail and places it in the Outbound E-mails queue.

5. The **Analyzed Queue**. The above strategy places e-mails in the Analyzed queue.
6. The **Customer Support** view, attached to the Analyzed queue, specifies interaction selection based on the To whom attribute. It selects only those interactions that have the attribute value equal to Customer support.
7. The **Sales** view, attached to the Analyzed queue, specifies interaction selection based on the To whom attribute. It selects only those interactions that have the attribute value equal to Sales.
8. The submitter pulls interactions from the Analyzed queue (through the **Customer Support** view) and submits them to the Customer Support Agents strategy.
9. The submitter pulls interactions from the Analyzed queue (through the **Sales** view) and submits them to the Sales Agents strategy.
10. The **Customer Support Agents** strategy distributes interactions to agents skilled in customer support.
11. The **Sales Agents** strategy distributes interactions to agents with the sales skill.
12. **Customer Support Agents** process interactions and create replies. Inbound e-mail processing stops here. The reply interactions are placed into the **Outbound E-mails** queue.
13. **Sales Agents** process interactions and create replies. Inbound e-mail processing stops here.
14. The **For Approval** queue. The reply interactions are placed in the For Approval queue.
15. The **By Date** view, attached to the For Approval queue, specifies interaction selection by date received.
16. The submitter pulls interactions from the For Approval queue (through the By Date view) and submits them to the Managers strategy.
17. The **Managers Strategy** distributes interactions to the manager's supervisors.
18. The **Managers** (Supervisors) processes interactions by reading and approving agent replies.
19. The **Outbound E-mails** queue. Managers place interactions into the Outbound E-mails queue.
20. The **By Date** view, attached to the Outbound E-mails queue, specifies interaction selection by date placed in queue.
21. The submitter pulls interactions from the Outbound E-mails queue (through the By Date view) and submits them to the E-mail Server strategy.
22. The **E-mail Server** strategy submits interactions to the E-mail Server. Instructs E-mail Server to send outbound e-mails.

23. The **E-mail Server**. Receives interactions from the E-mail Server strategy and sends outbound e-mails.

Visual Comparison

So that you can visually compare a strategy and a business process, this section shows both.

Figure 28 shows the Inbound e-mail preprocessing st strategy in the Routing Design window.

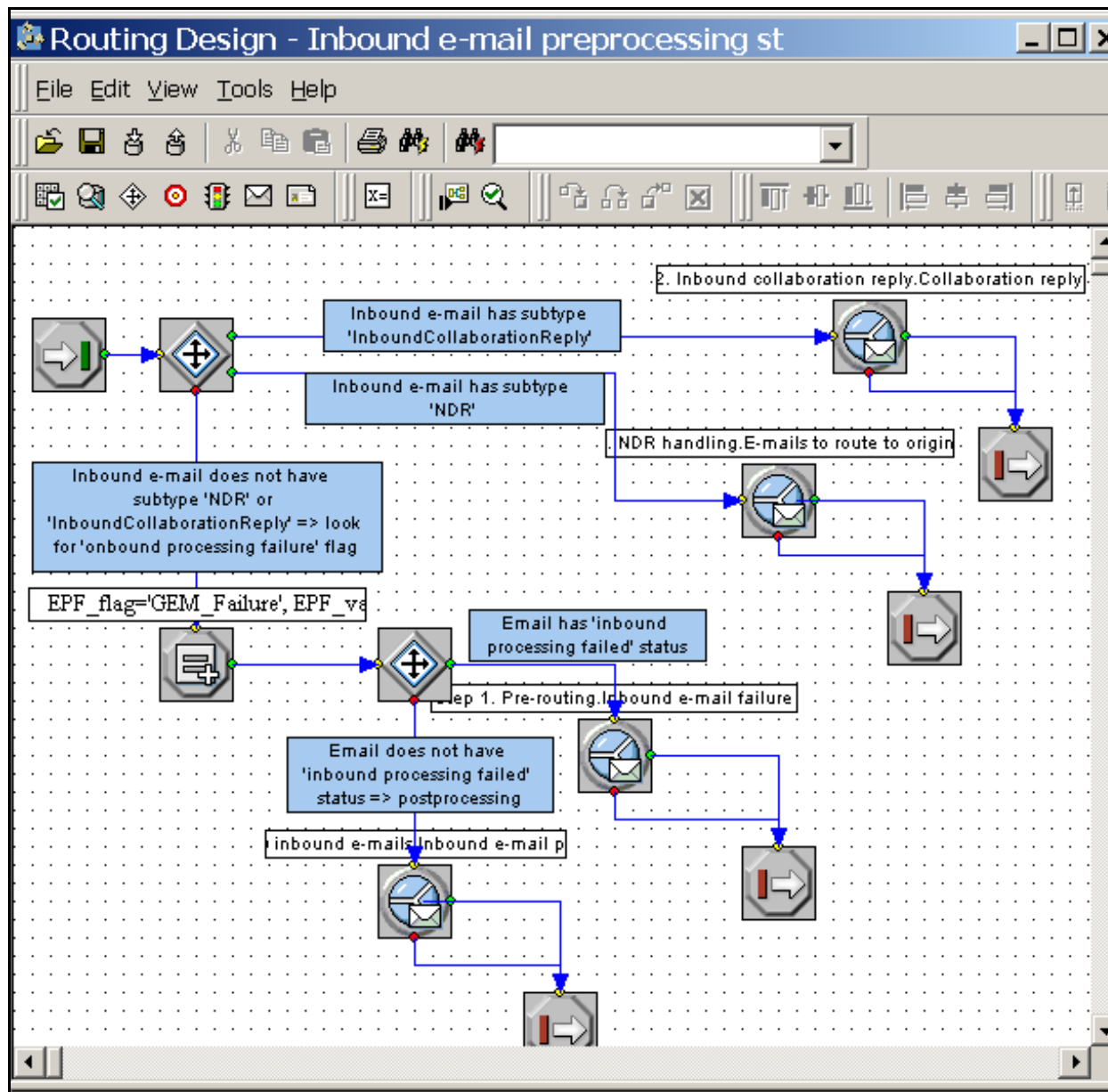


Figure 28: Example Strategy

The strategy in [Figure 28](#) uses the Generic Segmentation, Queue Interaction, and Multi-Assign objects that are described in Table 8 on [page 201](#), as well as the Route Interaction object that is described in Table 11 on [page 207](#).

[Figure 29](#) shows the same strategy in the workflow viewer portion of the Interaction Design window.

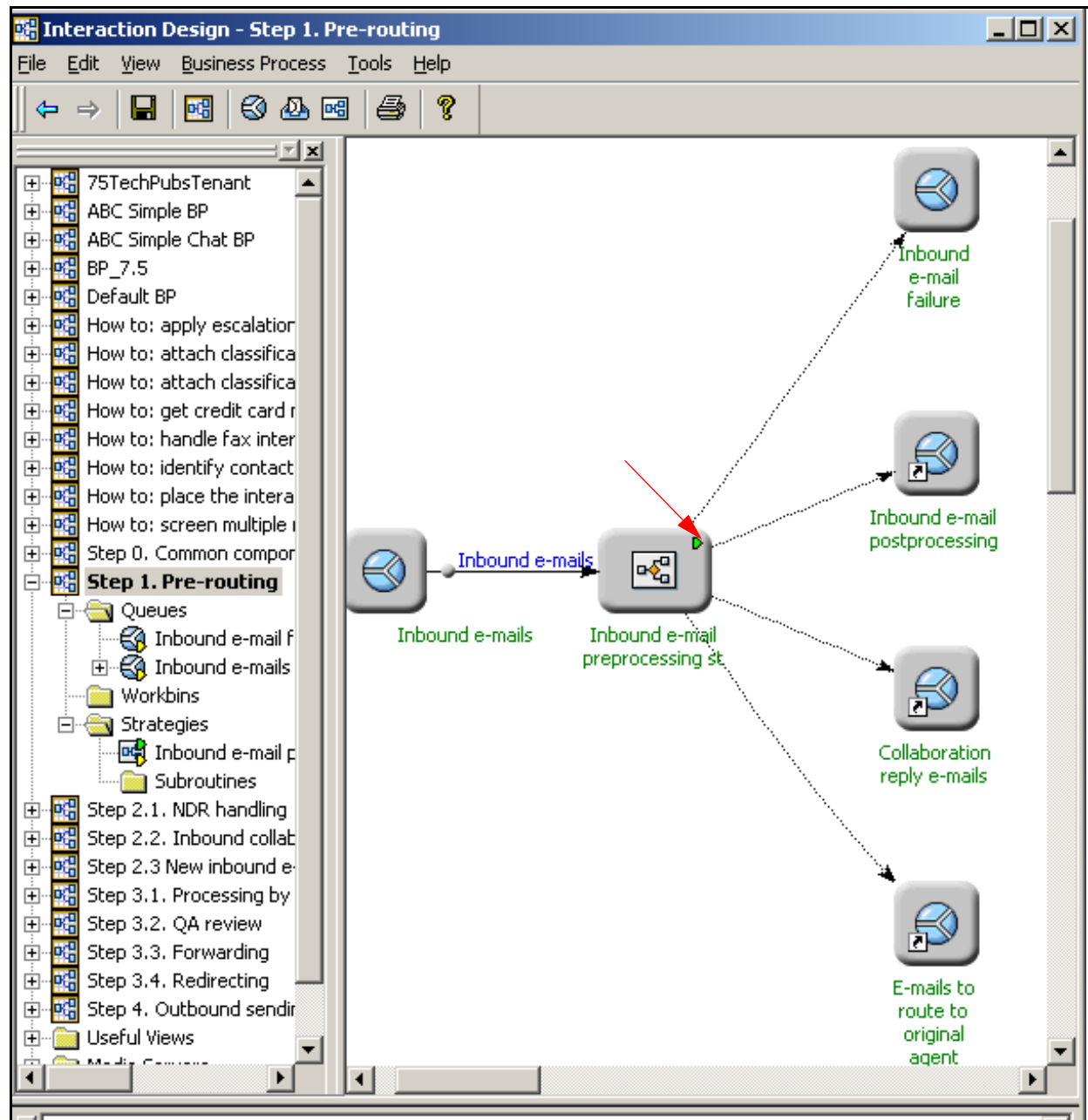


Figure 29: Example Business Process



Chapter

2

Interaction Processing

This chapter familiarizes you with Genesys interaction processing as it relates to business processes. It covers the following topics:

- [Genesys Queues, page 47](#)
- [Interaction Workflow Control, page 48](#)
- [Interaction Flow, page 51](#)
- [Genesys E-mail, page 51](#)
- [URS/Interaction Server Communication, page 53](#)

Genesys Queues

The Genesys software maintains both interaction queues and virtual queues:

- A queue in a business process executed by Interaction Server is called an *interaction queue* in this document. You might also call this type of queue a *persistent queue*. Business process developers define interaction queues (Queue objects) and objects that extract interactions from queues (View objects) in the Interaction Design window (see Figure 36 on [page 61](#)). The definition of an interaction queue is stored as a Script object in the Configuration Database (see Figure 143 on [page 159](#)).
- All interactions submitted to URS are placed in *virtual queues*. A virtual queue is not a physical queue, but instead a logical queue to which all interactions are queued if the specified target in the routing strategy is not available.

Just as a business process keeps all of its interactions in interaction queues, Universal Routing Server (URS) keeps all of its interactions in virtual queues (the Connections list in the URS Application object can have many different T-Servers). URS communicates with Interaction Server about non-voice interactions, and with voice T-Server about voice interactions.

Note: If a target is unavailable, interactions sent to URS by Interaction Server are returned to Interaction Server.

- In addition to interaction and virtual queues, there are also ACDQueue routing target objects. However, the term *queue*, as used in this guide, refers to an interaction queue.

Note: Genesys supplies business processes and strategies that use interaction queues, as detailed in “Using the Samples” on [page 197](#).

Interaction Workflow Control

An interaction workflow refers to a group of business processes that are connected via queues (see [page 21](#) if you need a review). An interaction workflow can also be designed as a single large business process similar to the Genesys-supplied Default BP sample business process that is described on [page 387](#).

The Genesys components shown in [Figure 30](#) handle workflow control for non-voice interactions.

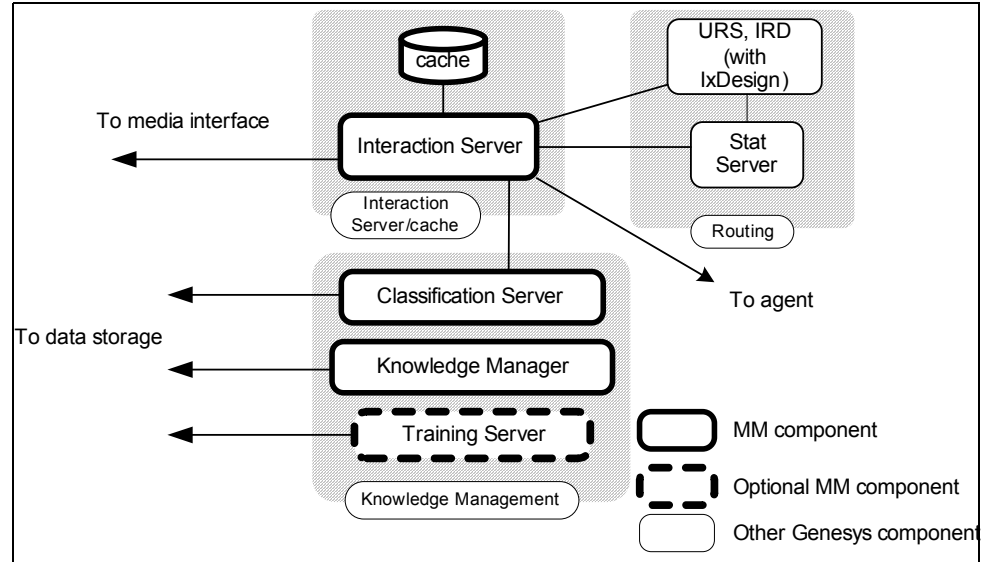


Figure 30: Workflow Control Components

Note: Not shown in [Figure 30](#) are other required Genesys Management Framework components, such as Configuration Server and the Management Layer.

The workflow control software components are as follows:

Interaction Server

Interaction Server is the central interchange for multimedia (non-voice) interaction flow.

- It receives interaction operational data from the media interface.
- It stores the operational data in a *cache* (a database) while receiving and transmitting information about the interaction. This cache also contains queues through which the interaction passes as part of its processing.
- It works in concert with the routing components to route interactions according to business processes and routing strategies.

For more information on Interaction Server, see the *eServices (Multimedia) 8.0 Deployment Guide*.

Interaction Routing Designer

Through its Interaction Design window, IRD creates and traces business processes, which plot an overall path for interactions (see Figure 6 on [page 26](#)). Business processes, executed by Interaction Server, map a route for the interaction between contact center objects—principally, queues and routing strategies. When executing business processes, Interaction Server communicates with Universal Routing Server (URS), which is the server that executes the routing strategies that are contained in business processes.

Note: Genesys recommends using only one IRD application per desktop.

For more information on IRD, see *Universal Routing 8.1 Reference Manual*.

For information about creating routing strategies, see [page 323](#).

Universal Routing Server

Universal Routing Server (URS) executes routing strategies, which trigger specialized processing tasks, such as sending automatic responses to customers and screening of incoming interactions for certain words. URS also applies segmentation logic to the flow; and requests delivery of the interaction to an agent or other target. For more information on all the specialized processing tasks handled by strategies, see “IRD Objects Used in Business Processes” on [page 201](#).

For more information on URS, see *Universal Routing 8.1 Reference Manual*. Also see *Universal Routing 8.1 Deployment Guide*.

Stat Server

Stat Server accumulates data about routing targets: Agents, Agent Groups, Places (desks), and other contact center objects; converts the data into statistically useful information; and passes these calculations to other software applications. In particular, it provides agent capacity information to IRD and URS, which refers to the number and types of interactions an agent can accept (see “Agent Capacity Rules” on [page 164](#)).

For more information on Stat Server, see *Framework 8.1 Stat Server User’s Guide*. Also see *Genesys 8.0 Resource Capacity Planning Guide*.

Knowledge Manager

Knowledge Manager (see Figure 160 on [page 177](#)) is the user interface component of Genesys Knowledge Management, which also includes:

- Classification Server, which applies Screening Rules when triggered to do so by a routing strategy. Screening Rules are basic pattern-matching queries performed on e-mail contents. The results of these queries can then be used in routing strategy logic.
- Training Server, which trains the system to recognize Categories. It is active only in the Content Analyzer option (see below).

You use Knowledge Manager to:

- Manage the library of Standard Responses, which is a collection of ready-made responses to common inquiries and topics.
- Manage Screening Rules.
- Manage Categories, which are used to organize Standard Responses.

For more information on Knowledge Manager, see the *eServices (Multimedia) 8.0 User’s Guide*.

Content Analyzer

Genesys Content Analyzer is an optional enhancement to Knowledge Management, requiring a separate license. It uses natural language processing technology to analyze incoming interactions for assignment to the Categories of the Standard Response Category system. The algorithms for content analysis are built up and refined by Training Server as it processes collections of pre-classified interactions. Setting up and scheduling these training sessions is another function of Knowledge Manager. The content analysis algorithms like Screening Rules, are applied by Classification Server when triggered by routing strategies, and are stored in the Universal Contact Server database.

For more information on Content Analyzer, see the *eServices (Multimedia) 8.0 User’s Guide*.

Interaction Flow

To summarize interaction flow:

- At the highest level, the flow is controlled by business processes as executed by Interaction Server.
- Each business process contains queues and routing strategies.
- Routing strategies may bring in other applications/components to apply specialized processing tasks to the interaction—for example:
 - Send an acknowledgement or an automatic reply
 - Apply a Screening Rule
 - Apply content analysis (with Content Analyzer option only)
 - Forward or Redirect

For a complete list of specialized processing tasks, see “IRD Objects Used in Business Processes” on [page 201](#).

Genesys E-mail

This section presents architecture that is specific to Genesys E-mail. [Figure 31](#) shows the main components.

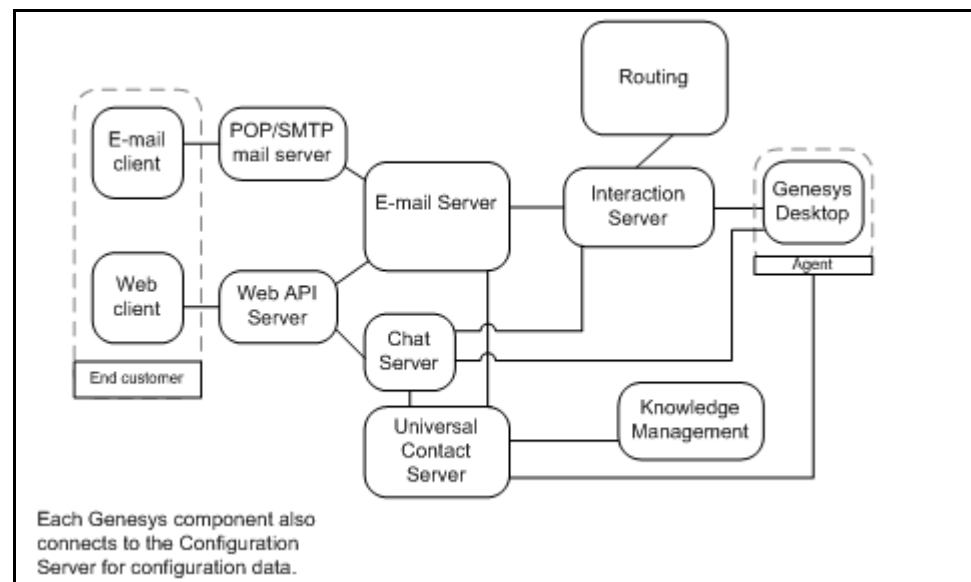


Figure 31: E-mail for Multimedia Components

[Figure 31](#) simplifies the workflow control components by showing Knowledge Management and Routing as single objects. E-mail interaction processing generally proceeds as follows:

1. In addition to replies from external resources (see “External Service” on [page 210](#)), e-mail interactions arrive at E-mail Server in the following ways:
 - a. If the customer sends ordinary e-mail, the interaction arrives via the enterprise mail server.
 - b. If the customer fills out a web form, the interaction arrives via the Web API Server.
2. E-mail Server sends operational data on the interaction to Interaction Server and simultaneously stores the body of the interaction in the Universal Contact Server (UCS) database.
3. Interaction Server parks the interaction’s operational data in its cache and starts processing it according to a business process.
4. What happens next depends on the business process and the routing strategies that it contains. The system may
 - Apply a Screening Rule.
 - Assign one or more Categories to the interaction (if Content Analyzer is present).
 - Generate an automatic response.
 - Route the interaction to an agent’s desktop, possibly also sending an automatic acknowledgement to the customer.

A supervisor may intervene at various points as long as the interaction’s operational data remains in the Interaction Server’s cache.
5. The agent receives the interaction. With the Content Analyzer option, the interaction may arrive with a Category assignment and associated suggested response. Otherwise, the agent may search manually for a Category with a suggested response.
6. The agent may then:
 - Simply reply to the interaction.
 - Transfer it to another agent.
 - Produce a collaborative response by consulting with other agents.
7. When the reply is finally released by the agent or agents (typically to an Outbound queue in the Interaction Server cache), it may optionally be routed to a senior agent or supervisor for QA review. The reviewer decides whether to let the reply continue through the outbound part of the business process, return it to the agent for revision, or take other action.

URS/Interaction Server Communication

URS and Interaction Server communicate by using T-Server message protocol where all messages from URS to Interaction Server starts with Request and all messages from Interaction Server to URS start with Event. The basic message set is shown in [Table 1](#).

Table 1: Basic URS/Interaction Server Communication Protocol

Name	Direction	Comment
EventRouteRequest	from Interaction Server to URS	Ask URS to find appropriate target (Place, Agent, ...) for given interaction
RequestRouteCall	from URS to Interaction Server	Provide Interaction Server with target information for a given interaction
EventRouteUsed	from Interaction Server to URS	Report to URS about successful processing or command to cancel strategy execution for this interaction (ReferenceID = 0)

Interaction Server executes business processes and, in doing so, communicates with URS using a subset of T-Server protocol:

RequestUpdateUserData, RequestAttachUserData, RequestDeletePair, RequestDistributeEvent for EventQueued, EventDiverted, EventPartyAdded, EventPartyRemoved, and EventAbandoned are supported.

The message types that are shown in [Table 2](#) for third party servers (such as Universal Contact Server and E-mail Server) are also supported.

Table 2: URS/Interaction Server Request and Event Messages

Name or Request/Event	Direction	Comment
Request3rdServer	From URS to Interaction Server	Send to Interaction Server request for third-party server operation
Event3rdServerResponse	From Interaction Server to URS	Returns results of third-party server operation
Event3rdServerFault	From Interaction Server to URS	Supply error information about third-party server operation failure

You can use these messages in the log file when you are diagnosing strategy/routing problems. For more information, see the *eServices (Multimedia) 8.0 Open Media Interaction Models Reference Manual*. It has examples of basic scenarios that involve messaging between Interaction Server and other components, including URS.



Part

2

User Interfaces

Part Two of the *Universal Routing 8.1 Business Process User's Guide* familiarizes you with the various Genesys user interfaces involved with creating business processes.

The information in Part Two is divided into the following chapters:

- Chapter 3, “[Business Process Interface](#)” beginning on [page 57](#), describes the features and functions of the interface used for business process design and configuration.
- Chapter 4, “[Strategy Interface](#)” beginning on [page 103](#), describes the features and functions of the interface used for routing strategy design and configuration.
- Chapter 5, “[Configuration Layer Interface](#)” beginning on [page 155](#), describes the features and functions of the interface used to define Genesys Configuration Layer objects.
- Chapter 6, “[Knowledge Manager Interface](#)” beginning on [page 175](#), describes the interface used to define Standard Responses, classification Categories, and other elements required by certain IRD objects.



Chapter

3

Business Process Interface

This chapter introduces the interface that is used to create business processes. Find step-by-step instructions for creating a business process on [page 247](#).

This chapter covers the following topics:

- [Opening IRD, page 57](#)
- [Accessing Interaction Design, page 60](#)
- [Object Browser, page 62](#)
- [Workflow Viewer, page 70](#)
- [Viewers, page 71](#)
- [File Menu, page 73](#)
- [Edit Menu, page 78](#)
- [View Menu, page 80](#)
- [Business Process Menu, page 82](#)
- [Tools Menu, page 83](#)
- [Help Menu, page 93](#)
- [Shortcut Menus, page 93](#)
- [Interaction Design Shortcut Bar, page 100](#)

Note: Prior to 7.1, business processes were created outside of IRD in a standalone application that was called Interaction Workflow Designer.

Opening IRD

The information in this section assumes that you have already installed IRD as described in the *Universal Routing 8.1 Deployment Guide*.

Procedure: Logging into Interaction Routing Designer

Purpose: To access the interfaces that are used for creating strategies as well as the interfaces that are used for creating business processes.

Start of procedure

1. Click the desktop shortcut if a shortcut is present (see [Figure 32](#)).



Figure 32: Interaction Routing Designer Desktop Icon

As an alternative, click the Start button on your computer desktop and select Programs > Genesys Solutions > Routing > Interaction Routing Designer > Start Interaction Routing Designer.

2. Respond to any security-related screens that your company may have configured to appear before the Interaction Routing Designer login dialog box.
3. Complete the Interaction Routing Designer login dialog box. [Figure 33](#) shows dialog box with example entries after clicking Details<<.

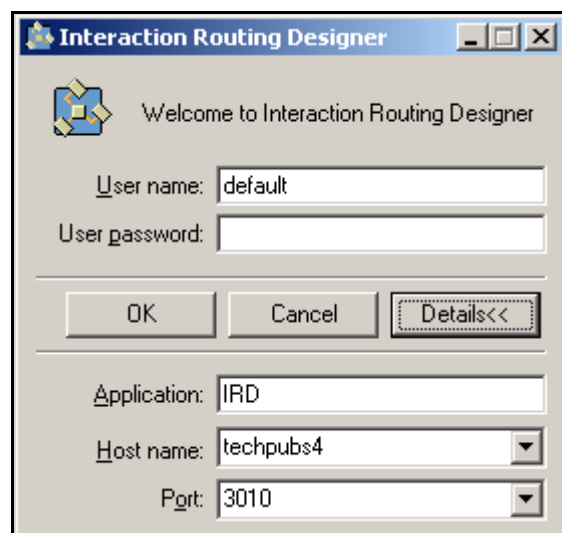


Figure 33: Interaction Routing Designer Login Dialog Box

The first time the login dialog box opens, all fields are empty. The next time you log in, IRD “remembers” previous entries for the following fields: User name, Application, Host name, and Port.

4. Use the information in [Table 3](#) to complete the login dialog box shown in [Figure 33](#).

Table 3: IRD Login Dialog Box

Field	Description
User name:	Name of Person object that is defined in Configuration Manager (see Figure 144 on page 160). See “Setting Permissions” on page 173 .
User password:	Password of Person object in Configuration Manager.
Application:	Enter the name of an IRD Application that is defined in Configuration Manager (see Figure 141 on page 157).
Host name:	Name of machine where Configuration Server is running.
Port:	Port number used by Configuration Server.

5. Click OK, the Strategies list pane opens. [Figure 34](#) shows an example.

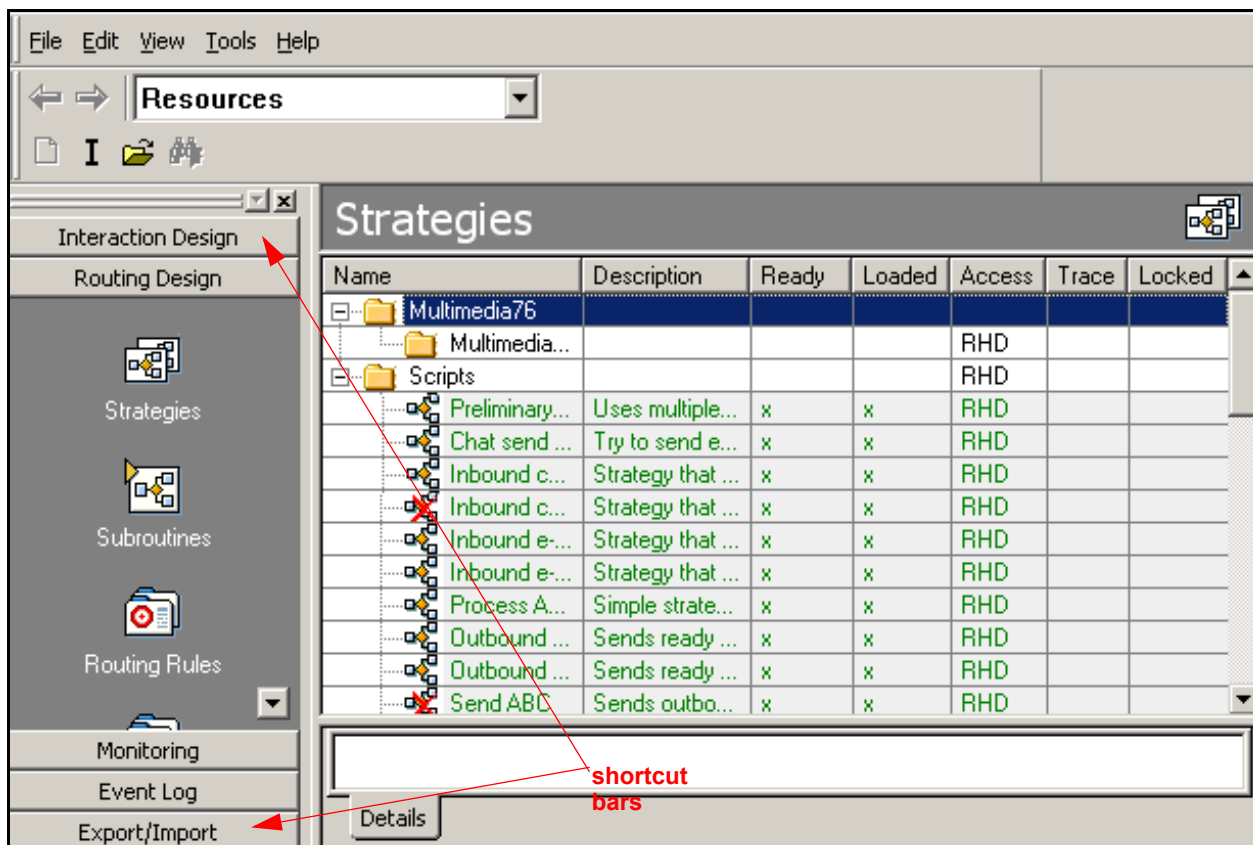


Figure 34: Strategies List Pane

End of procedure

Accessing Interaction Design

You create/edit business processes in the Interaction Design window, which opens from the IRD main window.

Procedure: Opening the Interaction Design window

Start of procedure

1. Log into IRD as described on [page 58](#).
2. Click the Interaction Design bar (see [Figure 34](#) on [page 59](#)). If bar does not appear, see [page 100](#).
3. Click the Business processes icon to bring up Business Process list pane (see [Figure 35](#)).

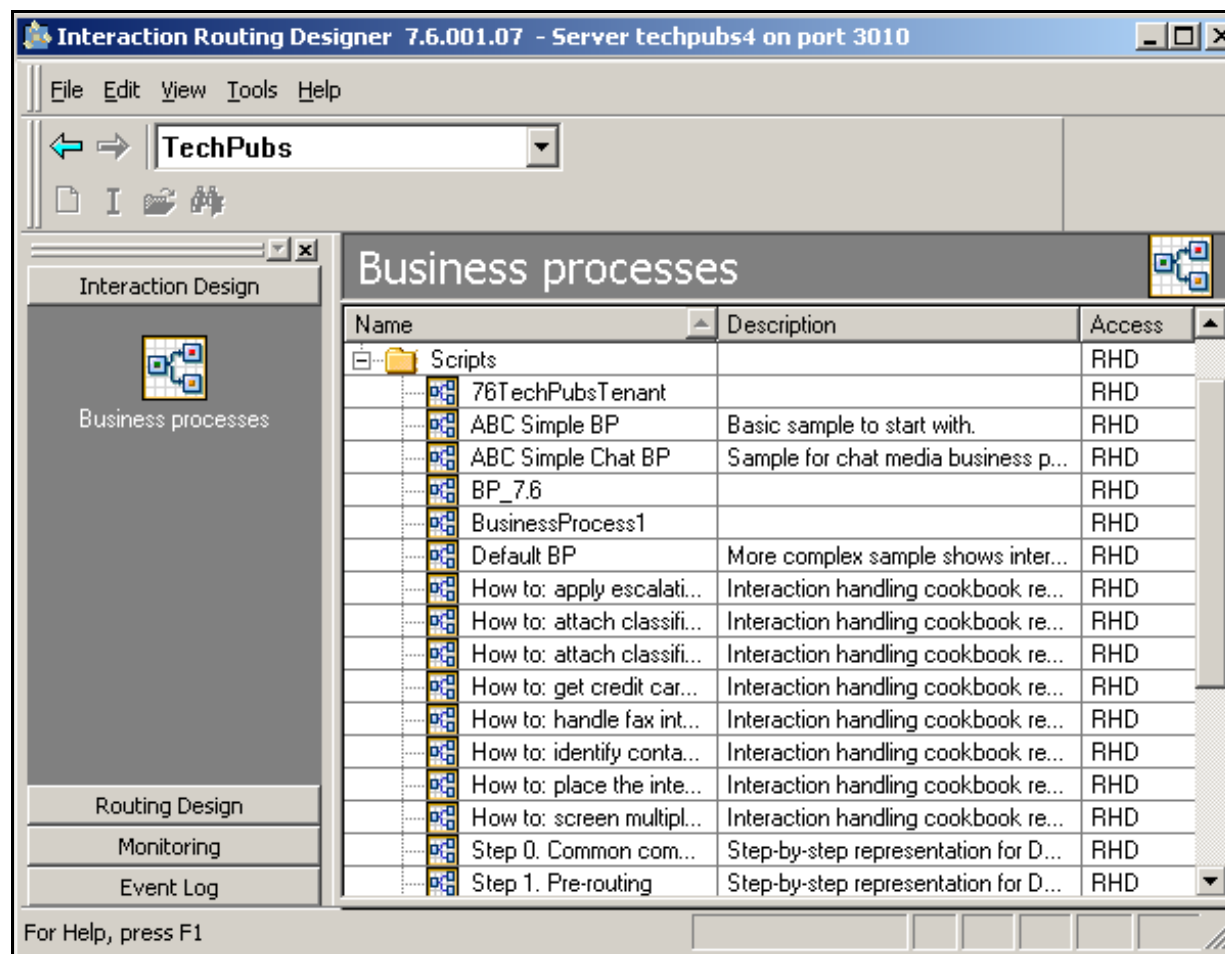


Figure 35: Business Process List Pane

At this point, you can create a new business process (see [page 247](#)) or edit an existing one. Edit an existing business processes as follows:

4. Double-click a business process to open it in the Interaction Design window as shown in [Figure 36](#).

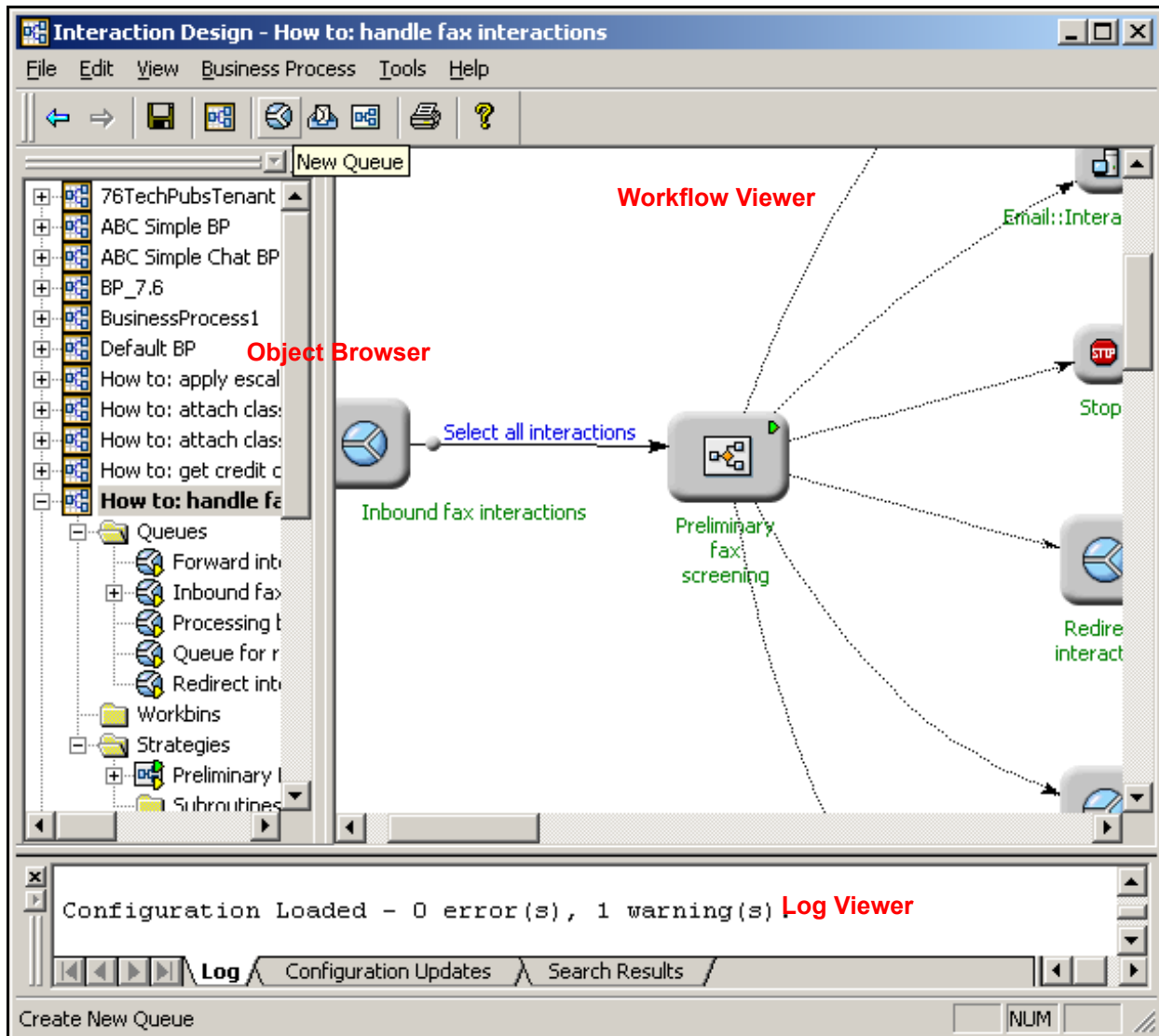


Figure 36: Interaction Design Window

End of procedure

Note: Through the use of queues, you can connect multiple business processes to create an interaction workflow (see [page 199](#)).

The Interaction Design window has three areas:

- An object browser (dockable) on the left displays queues, views, routing strategies, strategy-linked nodes, media servers, and endpoints in a tree style.
- A workflow viewer (static) on the right displays the selected business process.
- A log viewer (dockable) at the bottom of the window displays a running list of status and event messages.

The next section discusses each area.

Object Browser

By default, each business process has the following folders: Queues, Workbins, Strategies, and Subroutines.

When a business process is expanded, the object browser (see Figure 36 on page 61) displays its configuration objects in a tree structure. Assume that you expand the folders in an example business process that uses queues, workbins, and strategies, but not subroutines. The object browser appears as shown in Figure 37.

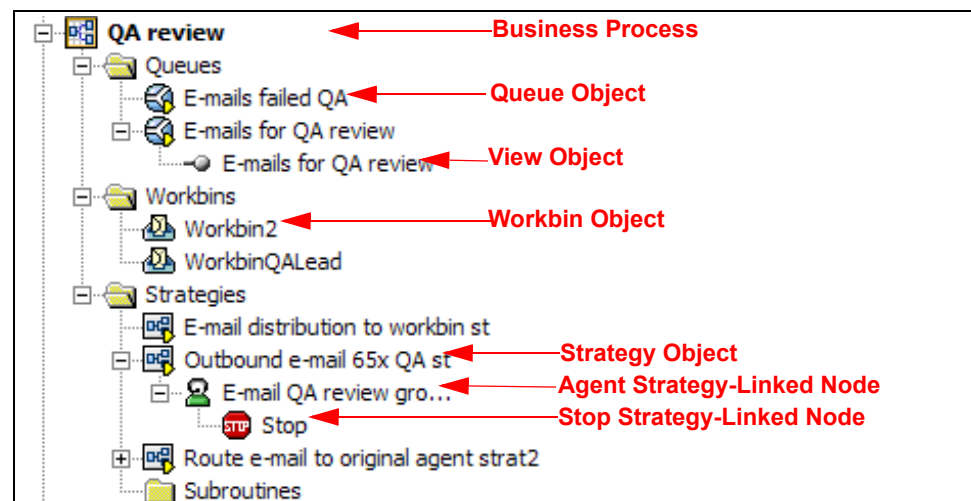


Figure 37: Object Browser

Small Yellow Triangle

Once you use an object in a business process, the browser marks it with a small yellow triangle. For example, in Figure 37 under Queues, see E-mails failed QA. The yellow triangle is helpful when working with a large business process when you cannot see all objects at once and you are unsure whether a particular object has been dropped in the viewer.

- If you see the yellow triangle, the object has been dropped in the viewer.

- If you delete a previously dropped object from the business process, the triangle disappears.

Independent Objects Folder

The Independent Objects folder holds objects that do not belong to any business process. [Figure 38](#) shows an example Independent Objects folder expanded.

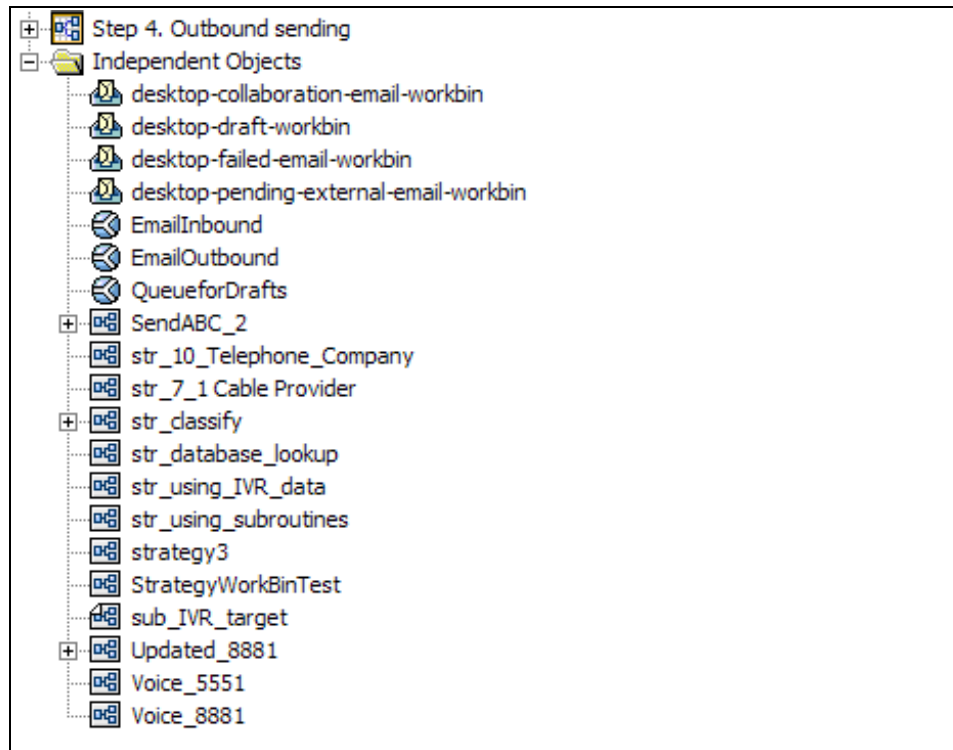


Figure 38: Independent Objects in Object Browser

In order for a strategy of any media (voice and non-voice) to appear in the Independent Objects folder, two requirements must be met:

- The strategy must be created without using queues and workbins that belong to a particular business process.
- The strategy must be created outside of the Interaction Design window. “Created outside” means that in the IRD main window, under Routing Design, you clicked Strategies, selected New from the File menu, and created a strategy in the Routing Design window.

Note: In the Interaction Design window, you can only create a strategy under a particular business process, even if you are not using queues and workbins that belong to a business process.

Using drag and drop functionality, you can move objects between the corresponding subfolders of different business processes, as well as between the Independent Objects folder and appropriate subfolders of business processes.

Once a strategy belongs to a business process, it no longer appears in the Independent Objects folder.

Useful Views Folder

The Interaction Design window object browser includes a folder that is called Useful Views (see Figure 49 on [page 70](#)). It contains the Global View and the Deployment View. To bring up either view, open the desired business process. Then right-click either Global or Deployment View in the object browser and select Show The View from the shortcut menu.

Deployment View

[Figure 39](#) shows the beginning of an example Deployment View.

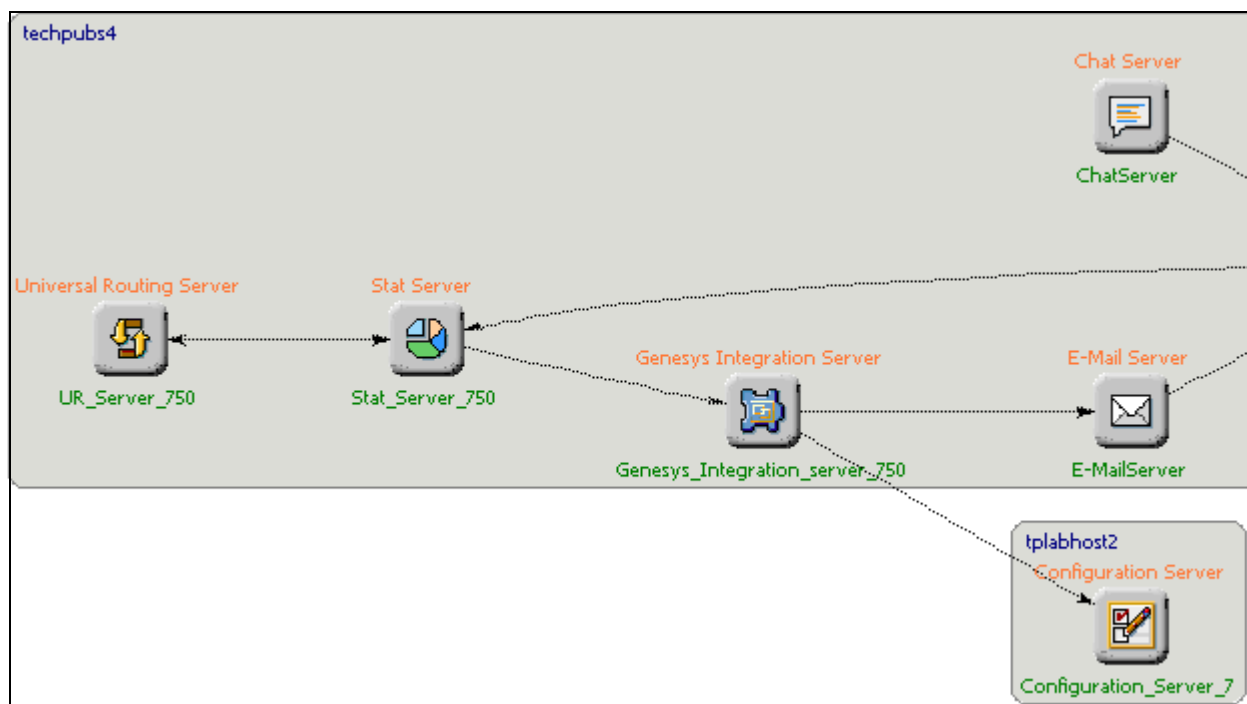


Figure 39: Deployment View Example

In this example, there are two hosts, techpubs4 and tplabhost2. This simplified view, showing only hosts and certain Applications within the business process, was created by filtering Applications in the Show Applications tab of the Deployment View Filter dialog box (see [Figure 47 on page 68](#)).

Deployment View shows how various objects in your Configuration Environment are deployed and interact. As shown in Figure 39 on [page 64](#), they are grouped by host. You can print the Deployment View.

Viewing Deployment View Properties

To view the properties for any Application in the Deployment View, right-click it and click Properties on the shortcut menu. The resulting properties dialog box is read-only. [Figure 40](#) shows an example.

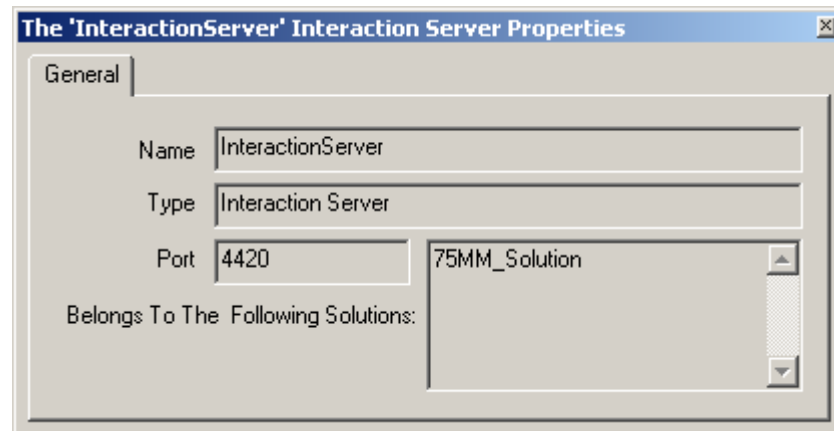


Figure 40: Deployment View, Example Properties for Application

- For an Application object (see Figure 39 on [page 64](#)), the dialog box gives the name of the Application, its type, its port number, and the Solutions to which the Application belongs. [Figure 41](#) shows some example Application nodes that you can right-click to bring up a properties dialog box.

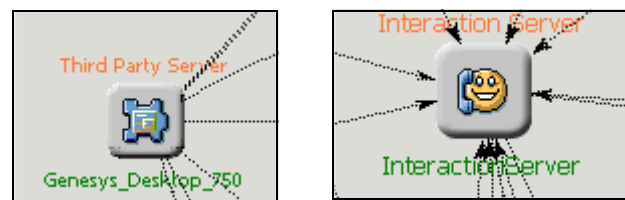


Figure 41: Application Object Examples

- For a Switch object, it gives the switch name and type. [Figure 42](#) shows an example Switch node that you can right-click to bring up a properties dialog box.



Figure 42: Switch Object Example

For a Database Access Point, it gives the name of the DAP, its type, its port number, and the Solutions to which it belongs. [Figure 43](#) shows an example Database Access Point node that you can right-click to bring up a properties dialog box.

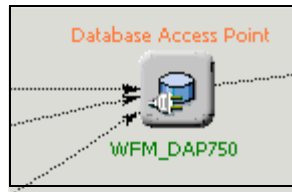


Figure 43: Database Access Point Example

- For a Host object, it gives the host name, IP address, and operating system. [Figure 44](#) shows an example Host node (mkatten) that you can right-click to bring up a properties dialog box.

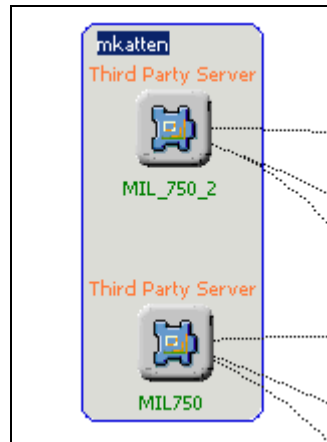


Figure 44: Host Object Example

You can also see the settings for the Deployment View as a whole by right-clicking Deployment View in the object browser tree and selecting Properties from the shortcut menu (see [Figure 45](#)).

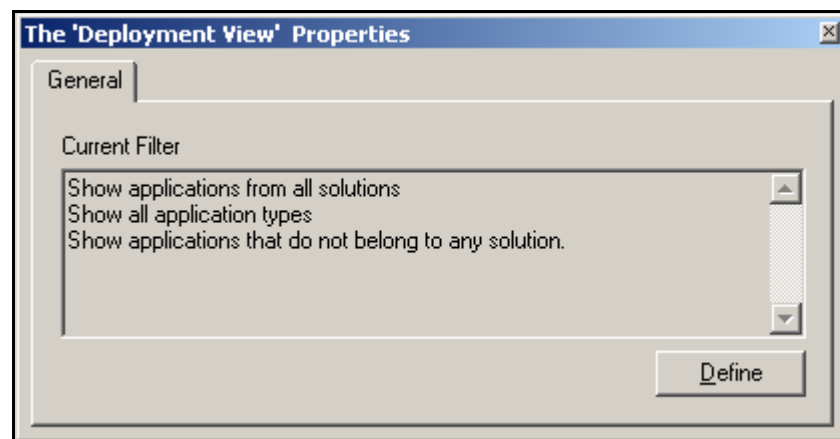


Figure 45: Deployment View Properties Dialog Box

Changing Deployment View Settings

You might want to change settings. For example, you might want to view only Applications from certain Solutions, only certain types of Applications, or to reduce complexity by not showing unconnected Applications.

To change Deployment View settings:

1. Click right-click Deployment View in the object browser and select Properties from the shortcut menu. This brings up the Deployment View Properties dialog box (see Figure 45 on [page 66](#)).
2. Click Define to bring up the dialog box for changing settings (see [Figure 46](#)).

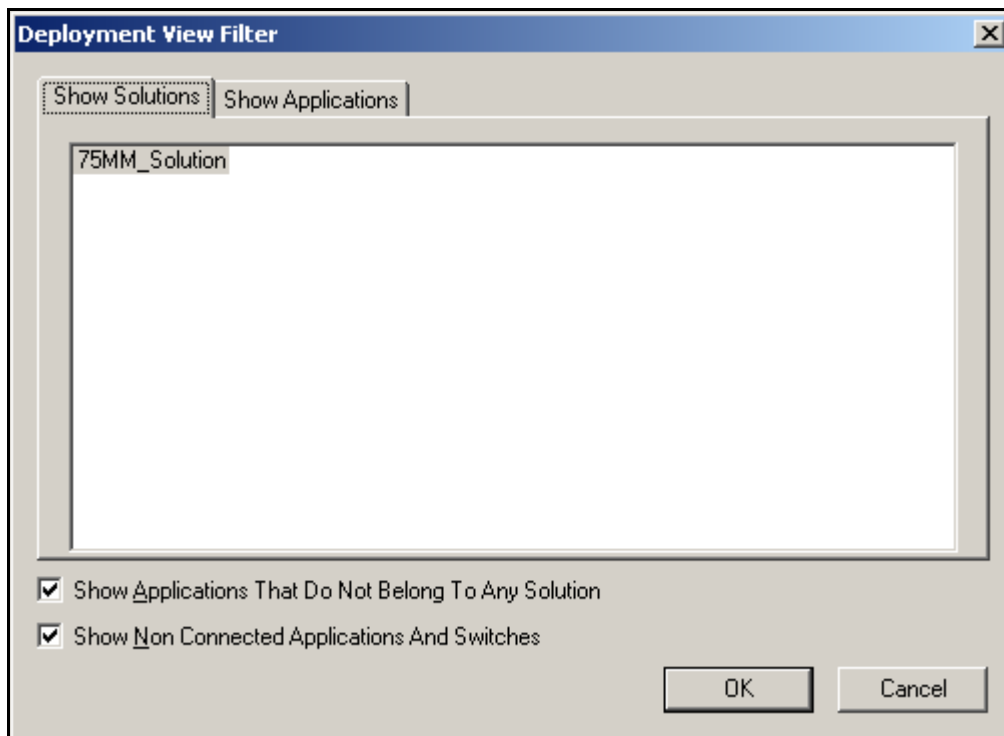


Figure 46: Deployment View Filter Dialog Box

- The Show Solutions tab lists all the Solutions that are configured in your Configuration Environment.
- The Show Applications tab lists all the Application types that are configured there. [Figure 47](#) shows an example.

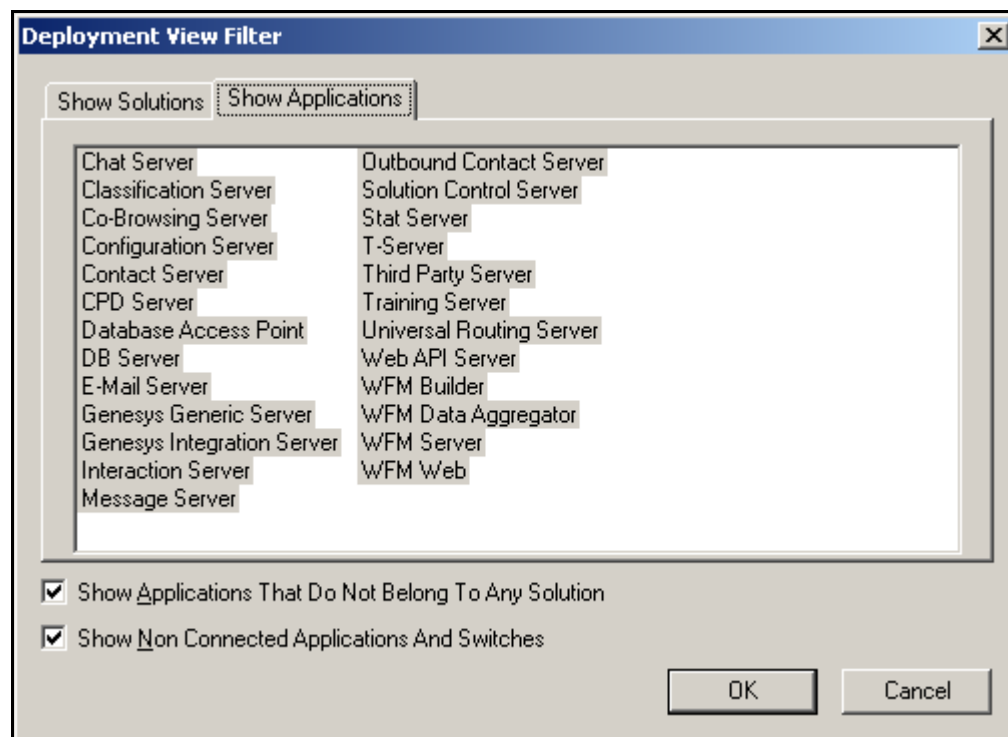


Figure 47: Deployment View Filter Dialog Box

Default Settings

The default settings are to show all Applications, including those that do not belong to a Solution, and to show Applications that are not connected to any other object (see Figure 45 on [page 66](#)).

- If you clear the Show Applications That Do Not Belong to Any Solution check box, only Applications that belong to the Solutions you select are shown in Deployment View.
- If you clear the Show Non-Connected Applications check box, only applications that are connected to another Application or a Switch appear in Deployment View.

Global View

The second view available in the Useful Views folder (see Figure 49 on [page 70](#)) is Global View.

Global View enables you to see all of the business processes you have created, the media servers you are using, and the relationships between them. [Figure 48](#) shows an example.

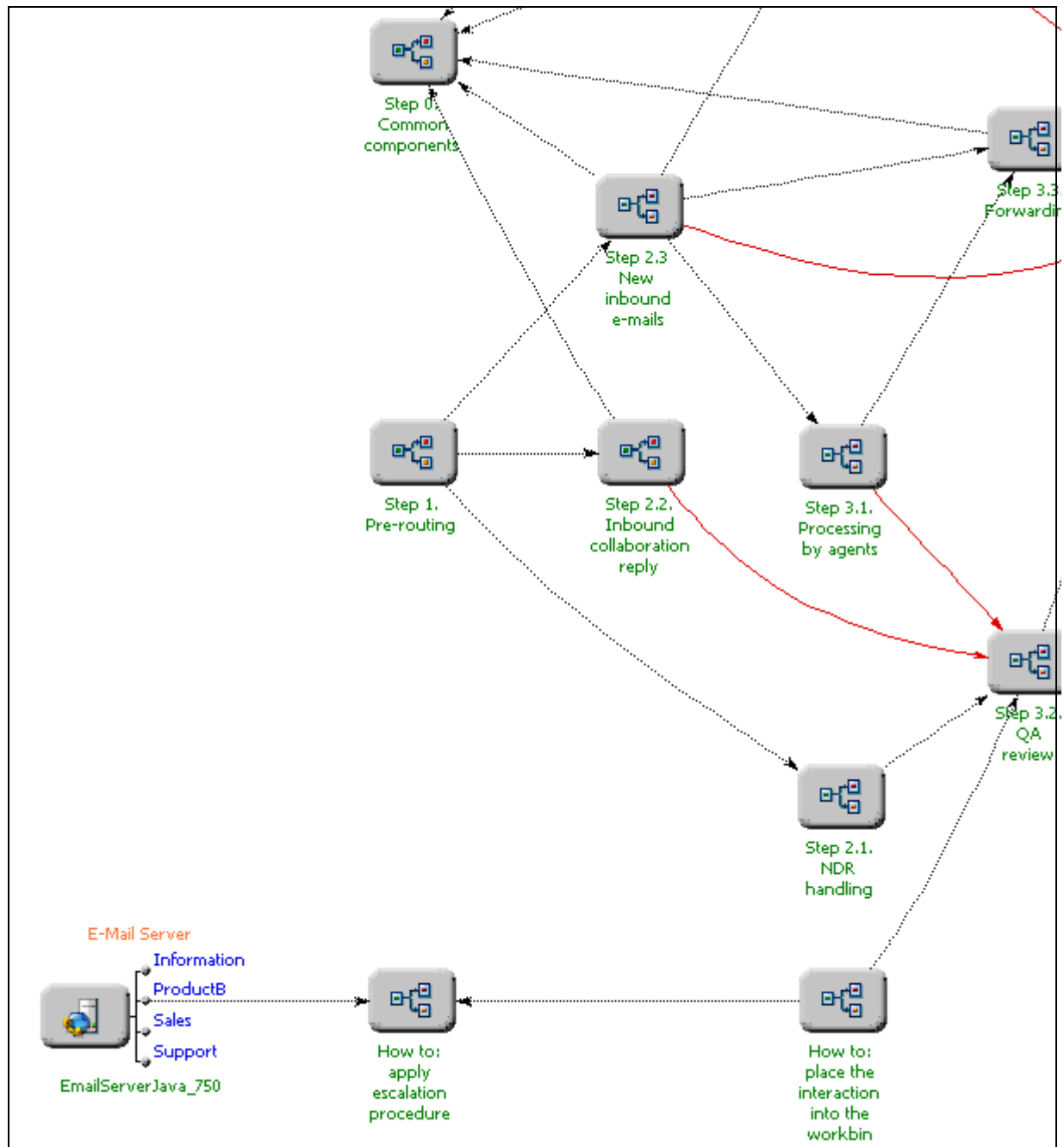


Figure 48: Global View Example

These relationships involve exchanges of interactions. Global View shows the big picture of how interactions are created and handled through the entire workflow sequence. There can be two arrows from one business process to another in the Global View, a red one and a black one. The black one means the business process is passing an existing interaction to the receiving business process. The red one means it is also passing a new interaction. You can open any business process in the Global View by double-clicking it.

Media Servers Folder

By default, the Genesys Multimedia (see [page 39](#)) media servers appear as Media Server objects in a Media Servers folder (see [Figure 49](#)).

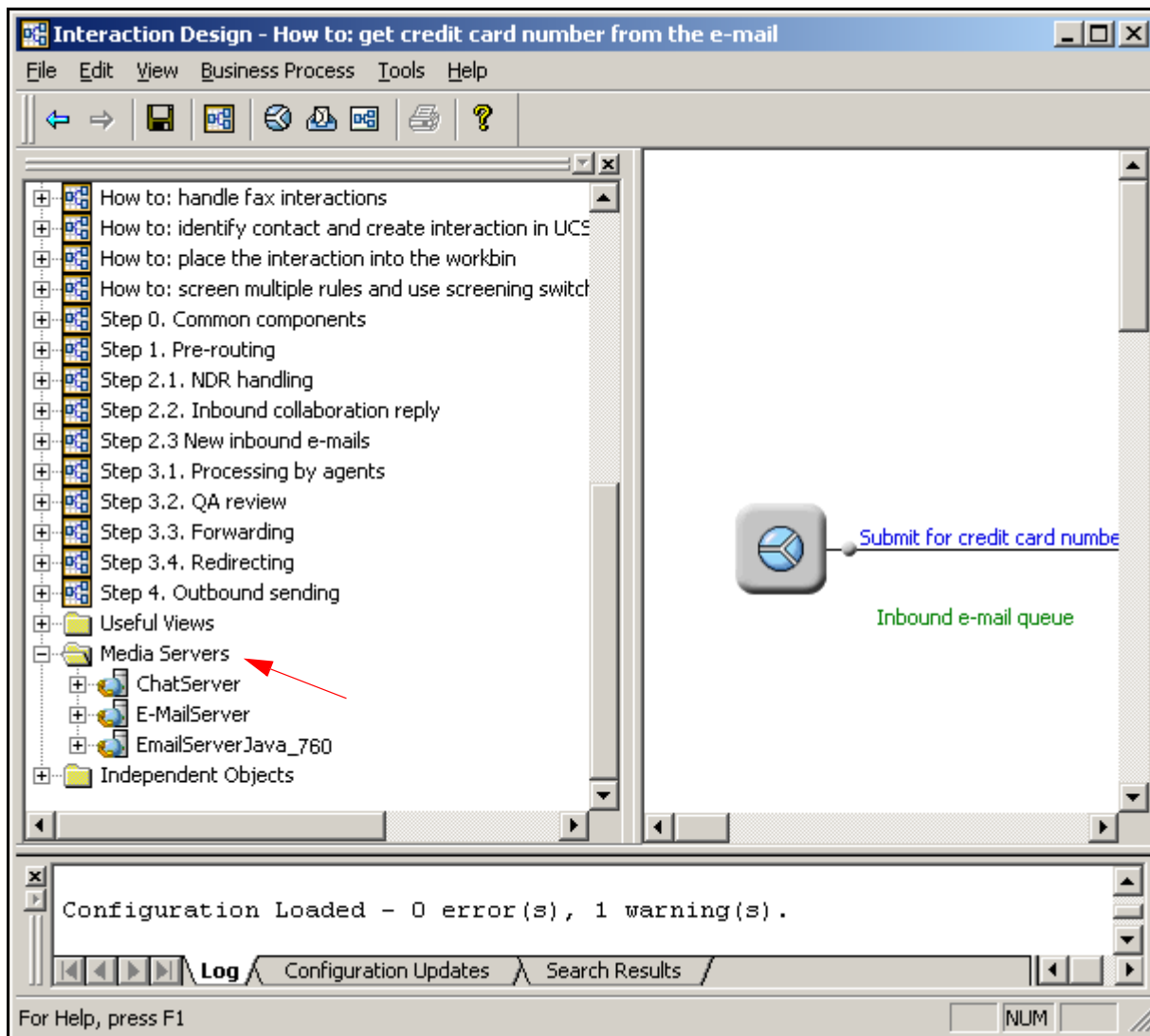


Figure 49: Media Servers Folder

For more information, see “Media Server Object” on [page 39](#). Also see “Using Media Server Objects” on [page 252](#).

Workflow Viewer

The workflow viewer (see [Figure 36](#) on [page 61](#)) displays the business process as a directed graph.

- You can drag objects from the object browser and drop them into the viewer.
- You specify the interaction flow by connecting the objects.
- You can reposition the elements as you wish.
- You can have IRD arrange elements in the viewer by choosing Business Process > Arrange Objects.

Viewers

The bottom of the Interaction Design window contains the following three tabs:

- Log
- Configuration Updates
- Search Results

Log Tab

The Log tab displays messages and warnings about business process configuration (see [Figure 50](#)).

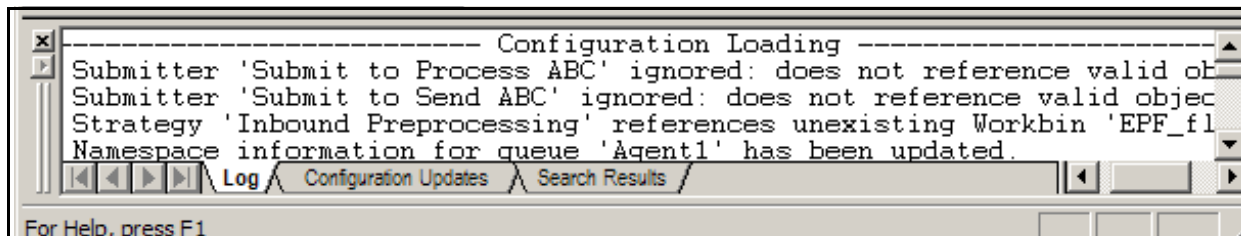


Figure 50: Log Viewer

The Log tab contains a running log of events that reflect actions that you have taken. The following are more examples:

```
----- Configuration Saving -----
Error: Queue2 conflicts with existing Data Collection
Configuration Saving Abandoned - 1 error(s), 0 warning(s).
```

Another example:

```
----- Configuration Loading -----
Warning: View 'Outbound ABC1' was assigned to business process 'ABC
Simple BP'
Warning: View 'Inbound ABC1' was assigned to business process 'ABC
Simple BP'
Configuration Loaded - 0 error(s), 2 warning(s).
```

Configuration Updates Tab

The Configuration Updates tab displays the status of changes to the configuration. For example:

```
----- Connected -----
5/24/2004 2:34:47 PM: Queue 'Queue1' has been deleted from
configuration server
```

Note: Interaction Design does not automatically reset values that are modified in Configuration Manager for Queue, View and Workbin objects. When the option values for these objects are changed in Configuration Manager, Interaction Design displays the following message in the Configuration Updates tab:

Interaction <object_name> has been changed. If you want to accept these changes, refresh workflow.

In order to save changes that are made in Configuration Manager, you must select **Lose the changes** and reload configuration in the Refresh Options dialog box.

Search Results Tab

The Search Results tab displays the result of using Find from the Edit menu (see [page 79](#)). [Figure 51](#) shows the Search Results tab after using Find.

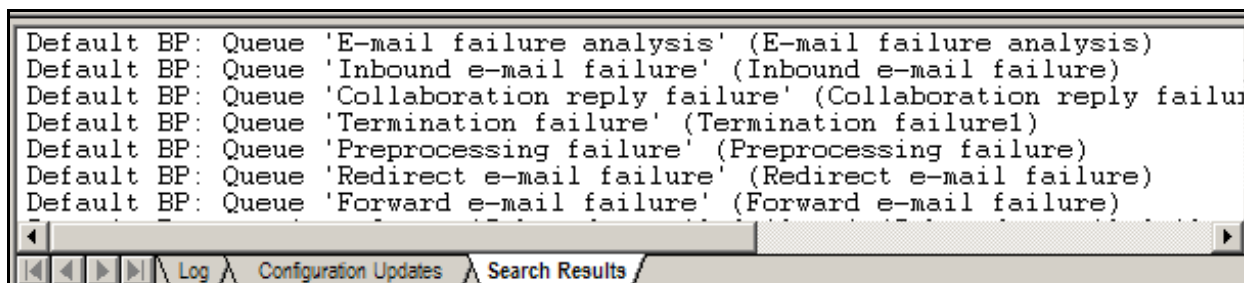


Figure 51: Search Results Tab

Viewer Context Menus

To clear, hide/unhide or dock the viewers (Log, Configuration Updates, and Search Results), right-click to bring up a context menu in which you can select **Hide** (see [Figure 52](#)).

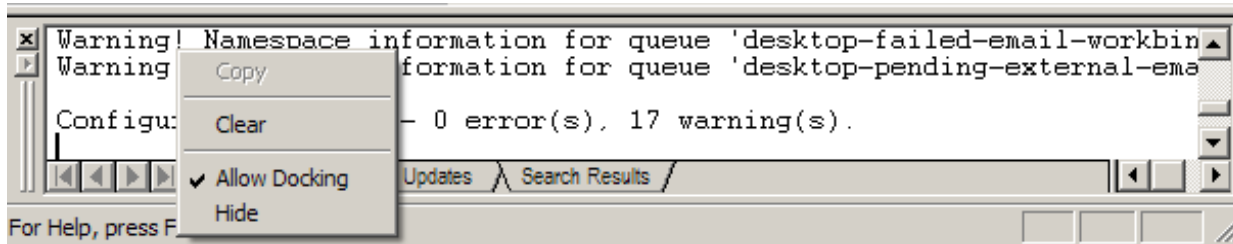


Figure 52: Viewer Context Menu

To redisplay, select Log from the View menu.

The menu bar (see Figure 36 on [page 61](#)) contains File, Edit, View, Business Process, Tools, and Help menus.

File Menu

The File menu contains the commands and keyboard shortcuts that are shown in [Figure 53](#).

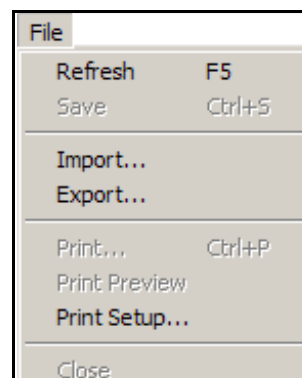


Figure 53: File Menu

Refresh Select to reload the Tenant's configuration information from the Configuration Database. If you made changes and did not save them, you will see the dialog box that is shown in [Figure 54](#).

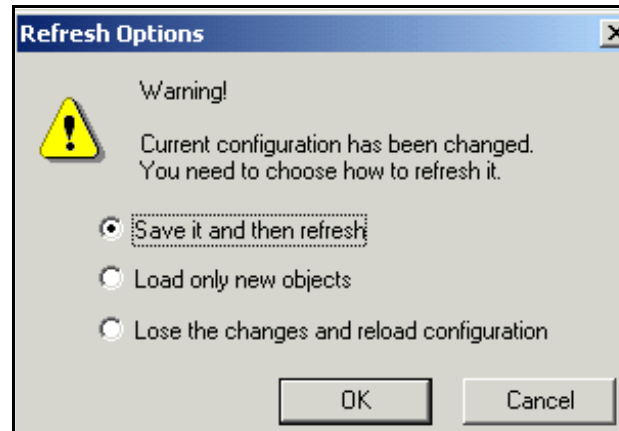


Figure 54: Refresh Dialog Box

Warning! If you select the **Lose the changes and reload configuration** radio button, a refresh occurs, but you lose any unsaved work.

Save	Select to save everything (not just the current business process) in the Configuration Server database.
------	---------------------------------------------------------------------------------------------------------

Warning! The workflow viewer shows the current configuration as it exists in a temporary buffer. To make the current editing session changes permanent, you must use the **Save** command from the **File** menu. If you exit without saving your edits, you lose them.

Export	Select to open the Export dialog box. Figure 55 shows an example completed dialog box.
--------	---------------------------------------------------------------------------------------------------------------

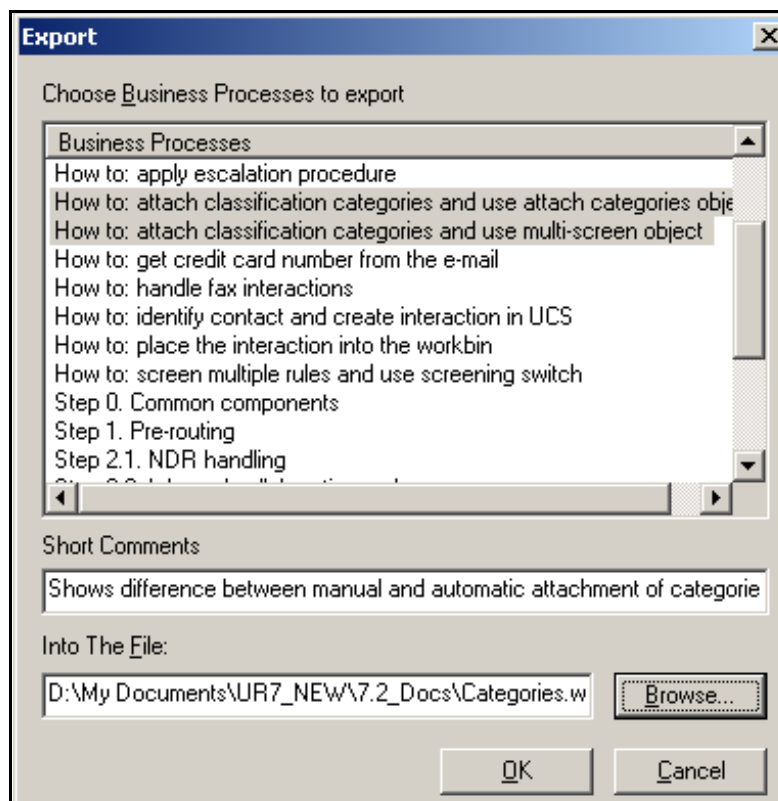


Figure 55: Export Dialog Box

For more information, see “Exporting a business process” on [page 307](#).

Import Select to open the Configuration Import Wizard. (see [Figure 56](#)).

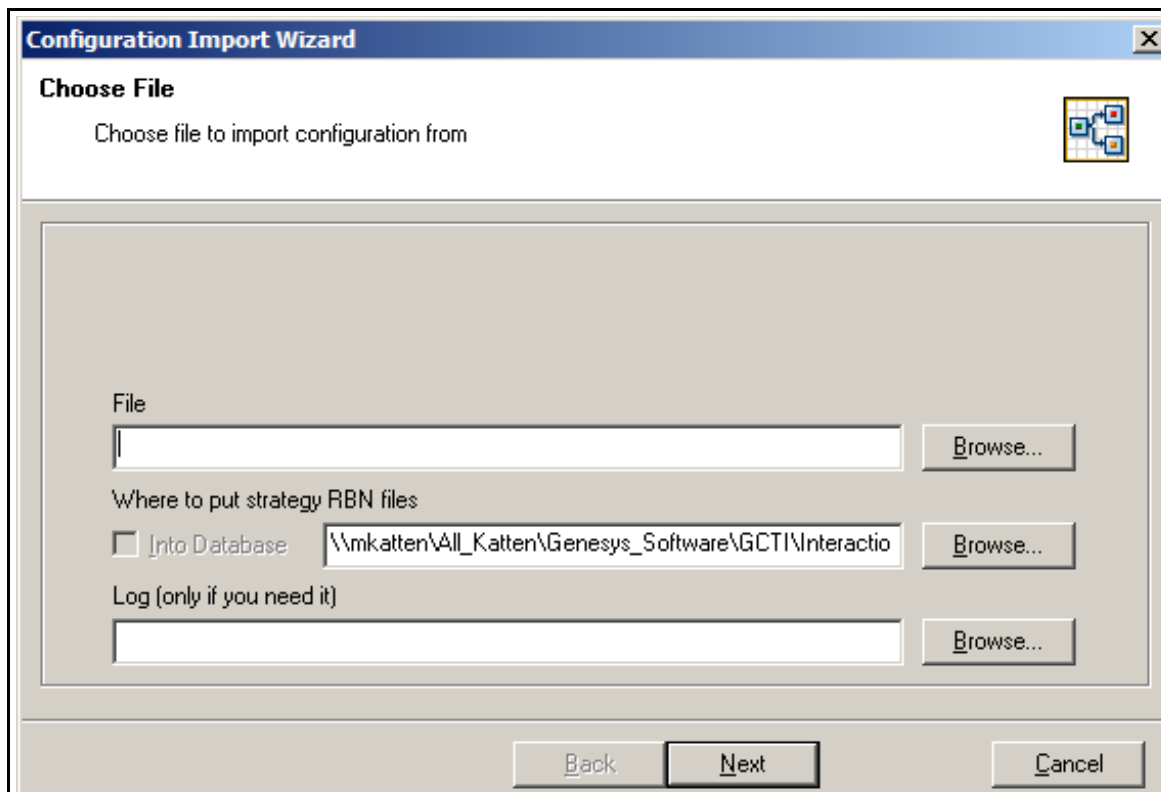


Figure 56: Configuration Import Wizard

Use to import a business process that was saved using the Export command. For more information, see “Importing a business process” on [page 310](#).

Printing a Business Process

Print, Print Preview, Print Setup

Using these Windows-standard menu selections from the File menu, you can print and print-preview the business process view seen in the Interaction Design window.

Note: To enable Print and Print Preview, first select any object in the business process.

Procedure: Printing large business processes

Purpose: To print a business process that is too large to fit on one page.

Start of procedure

1. First try **Zoom Out** from the **View** menu before printing.

If the business processes still does not fit on a single sheet of paper, you can print each area of the business process on a separate sheet of paper and then place the sheets together. For example, assume that you want to print the **Default BP** business process that is shown in Figure 340 on [page 388](#).

2. Select any object in the business process.
3. Select **Print Preview** from the **File** menu.

The resulting dialog box contains a page for each area of the business process. In the example in [Figure 57](#), the first print preview shows pages 1 and 2.

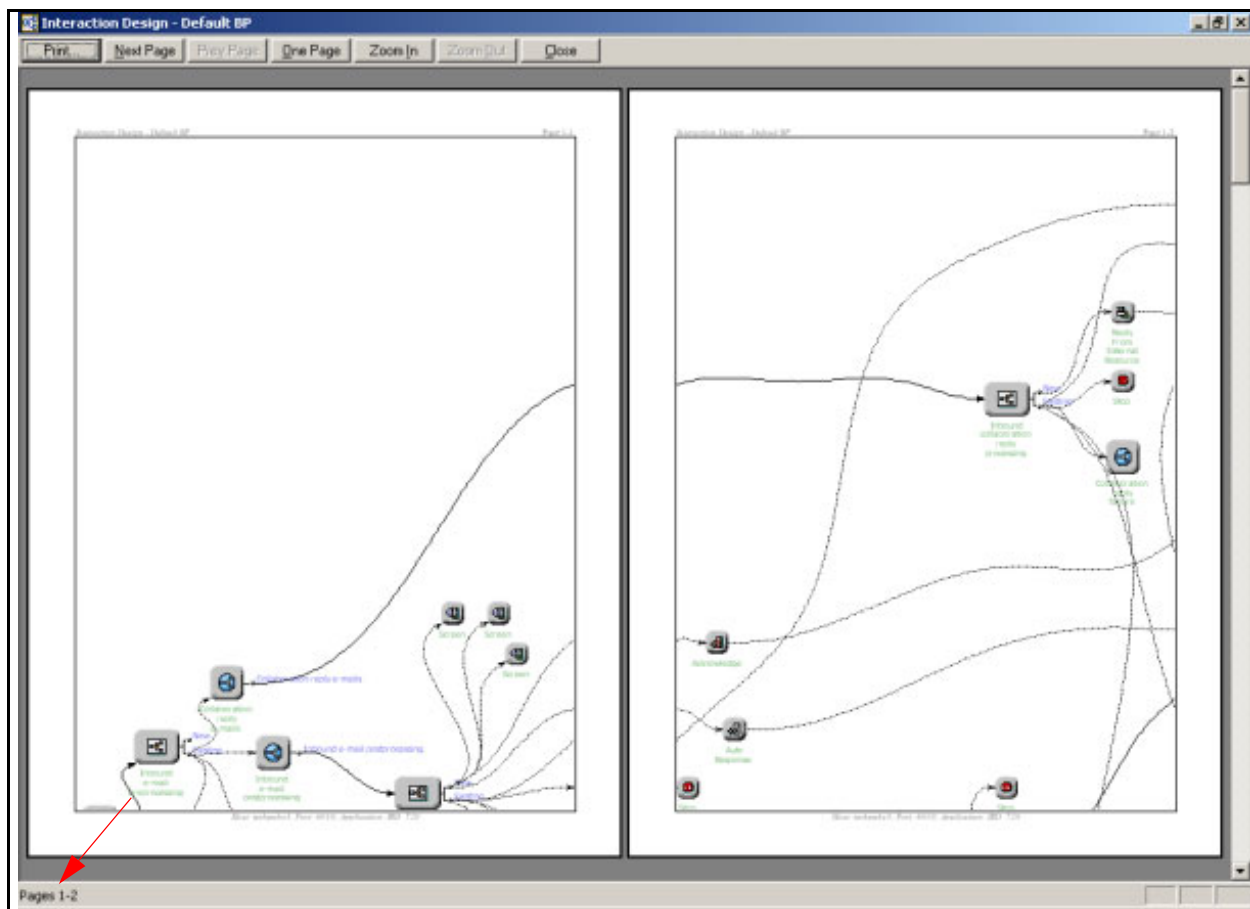


Figure 57: Print Preview of a Business Process (Pages 1 and 2)

3. Move the scroll bar on the right to view pages 2 and 3 (see [Figure 58](#)).

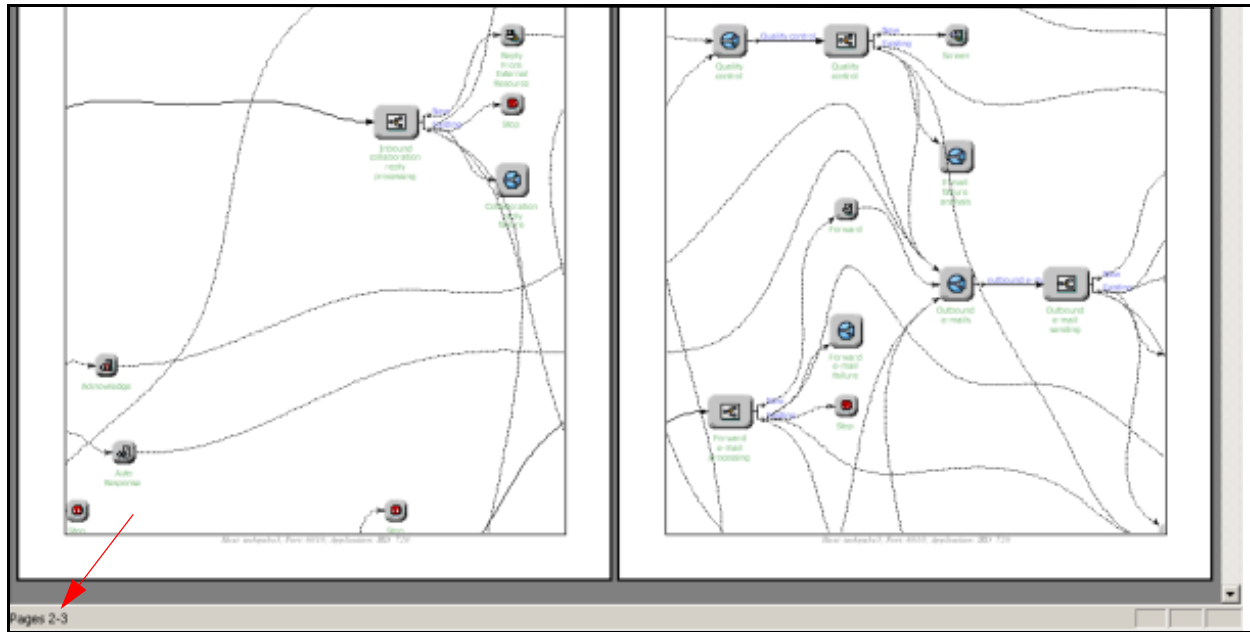


Figure 58: Print Preview of a Business Process (Pages 2 and 3)

4. Continue moving the scroll bar (or click **Next Page** in the **Print Preview** dialog box). You will see that this particular business process encompasses eight pages.
5. Use **Zoom In** in the **Print Preview** dialog box to get an enlarged view. This option only prints the current page.
6. Click **Print** in the **Print Preview** dialog box that is shown in Figure 57 on [page 77](#).
7. Place the printed pages together to view the entire business process.
8. If necessary, use **Namespace Relative** (see Figure 73 on [page 89](#)) in the **Options** dialog box to show the manually-edited name of an object, instead of the object's **Script** name in the Configuration Database.

End of procedure

The strategy interface has a similar functionality.

Edit Menu

Note: You cannot create a copy of a business process or save a business process under another name.

The **Edit** menu contains the commands and keyboard shortcuts that are shown in [Figure 59](#).

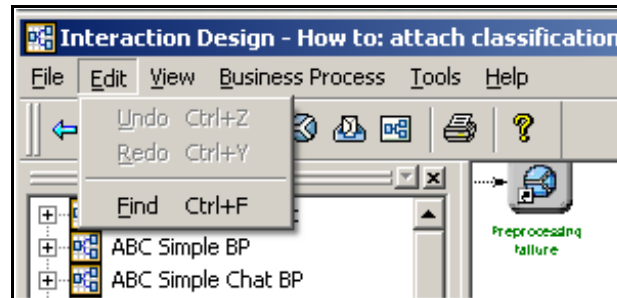


Figure 59: Edit Menu

Note: Menu wording can change depending on the action that is selected.

Undo Switch to Business Process *<action>*

Redo *<action>*

This menu item starts out as Undo. Depending on the type of edit you made, this wording changes.

It changes to Undo Creating after you select New *<object>* from the Business Process menu, but before you edit the item name. Select this option to remove the new item from the object browser so you can start over.

After you delete an object in the workflow viewer, the wording changes to Undo Hide. Selecting this command puts the deleted item back in the viewer.

After you disconnect an object in the workflow viewer, the wording changes to Undo Hide. Selecting this option restores the deleted connection.

Select Redo Updating after using Undo Updating to return to the current edit.

Warning! After selecting any of the preceding commands, save the business process. After you select an Undo or Redo command, the object browser shows the edit, which exists only in a temporary buffer. To make the change permanent, you must save the business process.

Find Brings up the Find dialog box (see [Figure 60](#)).

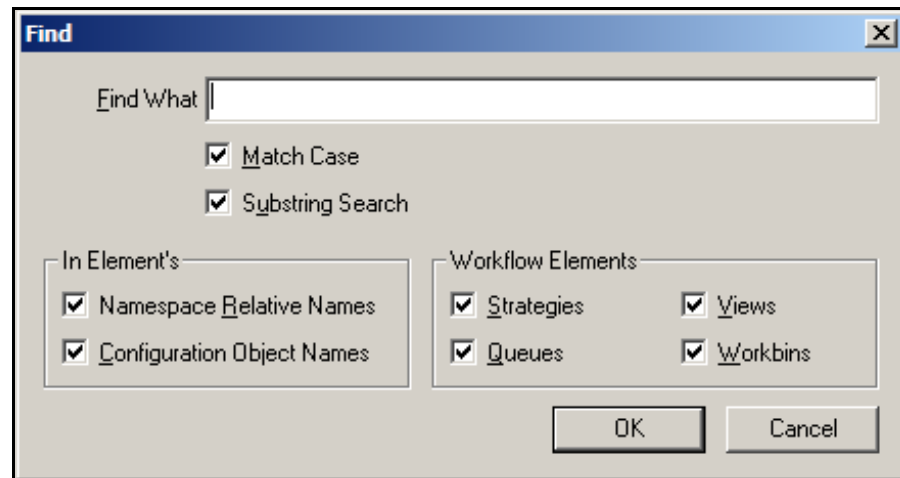


Figure 60: Find Dialog Box

For more information on using Find, see “Search Results Tab” on [page 72](#).

View Menu

The View menu contains the commands and keyboard shortcuts that are shown in [Figure 61](#).

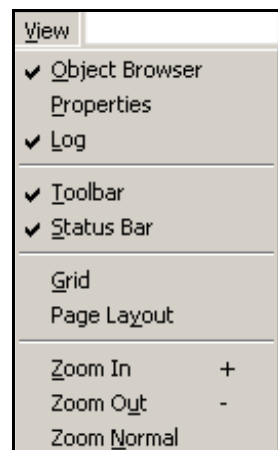


Figure 61: View Menu

Object Browser

Select to hide the object browser and enlarge the workflow viewer area. Reselect to redisplay the object browser.

Properties

Select an object in the object browser and select Properties to open the properties dialog box for the selected object.

Log

Select to hide the log viewer from view. Reselect to redisplay the log viewer.

Toolbar Select to hide the toolbar from view (see [Figure 62](#)).



Figure 62: Toolbar

Reselect to redisplay the toolbar.

Status Bar Select to hide the bottom status bar from view. Reselect to redisplay this bar.

Grid Select to remove the grid lines in the workflow viewer and set a white background. Reselect to redisplay the grid.

Page Layout Select to display a page indicator line in the workflow viewer. That line indicates how the workflow viewer display will be divided between pages when you print it.(see [Figure 63](#)).

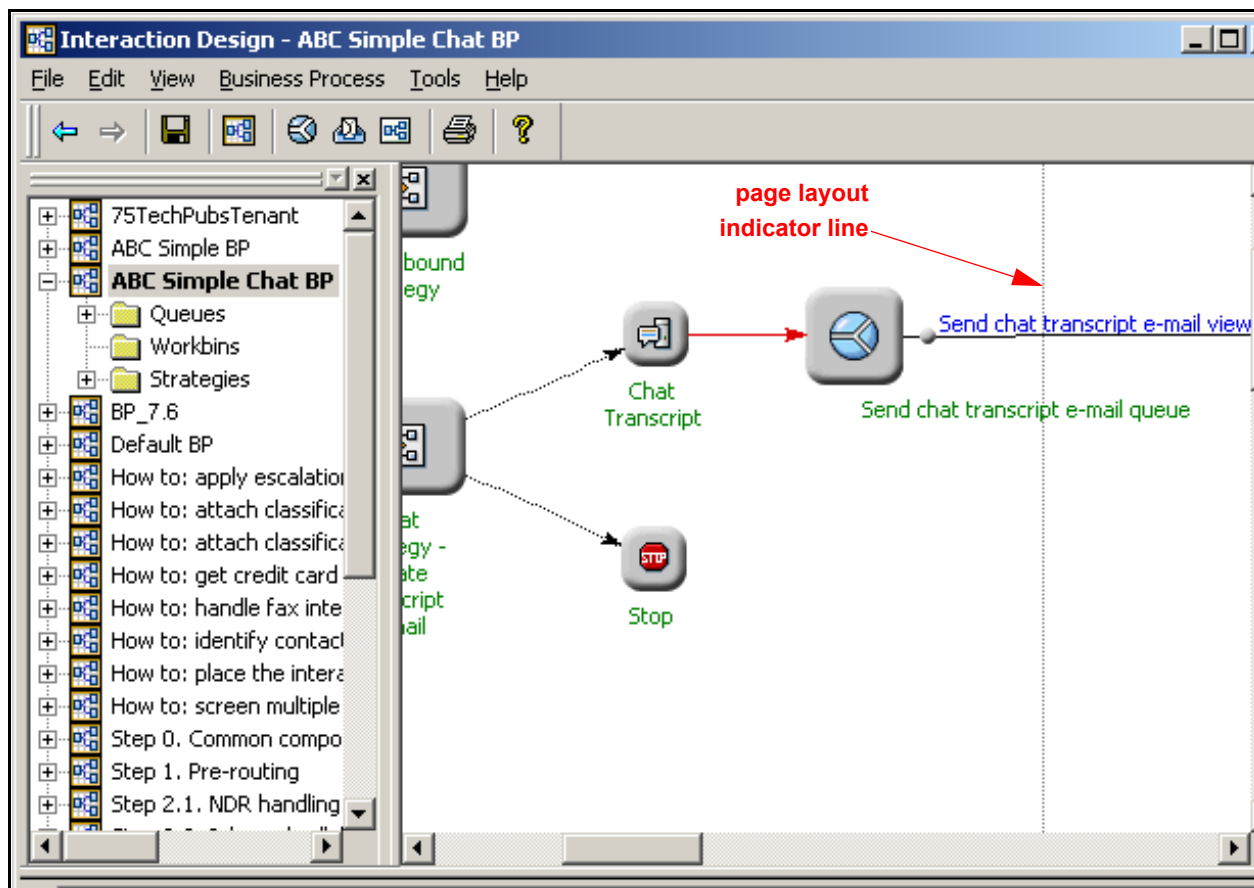


Figure 63: Page Layout Indicator

Zoom In Select to magnify the objects in the workflow viewer.

Zoom Out Select to return to the previous magnification. Useful when printing.

Zoom Normal Select after using Zoom In more than once to immediately return objects to normal viewing size.

Business Process Menu

The Business Process menu (when you click inside the object browser) contains the selections and keyboard shortcuts that are shown in [Figure 64](#).

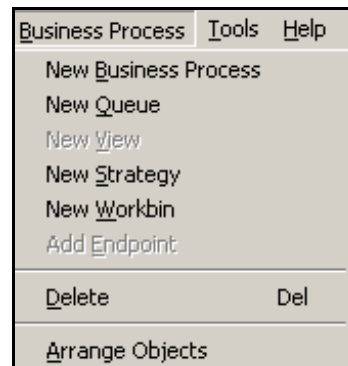


Figure 64: Business Process Menu

Note: If the selections appear inactive, click inside the object viewer.

New Business Process

Select to add a new business process. IRD assigns a temporary name, which you can change (see [Figure 196](#) on [page 249](#)).

New Queue

Select to define a new Queue object. IRD assigns a temporary name, which you can change (see [Figure 205](#) on [page 258](#)).

New View

Select to define a new View object (see [Figure 219](#) on [page 269](#)). Enabled only when a queue is selected in the workflow viewer or the object browser. IRD assigns the new view a temporary name, which you can change (see [Figure 219](#) on [page 269](#)), and attaches the new view to the selected queue.

New Strategy

Select to define a new routing strategy. See “Strategy Placeholder Option” on [page 299](#).

New Workbin

Select to define a new Workbin object. IRD assigns a temporary name, which you can change (see [Figure 244](#) on [page 294](#)).

Add Endpoint

Select to define a new Endpoint object (see [Figure 24](#) on [page 40](#)). Enabled only when a media server is selected in the object browser.

Disconnect And/Or Hide Del

Select to hide/delete the selected object. Confirmation dialog box does not pop up. Select the action from the Edit menu if you change your mind.

Arrange Objects

Select to organize and align the business processes in the workflow viewer. For more information, see “Arranging Options Tab” on [page 91](#).

Tools Menu

The Tools menu contains the commands and keyboard shortcuts that are shown in [Figure 65](#).

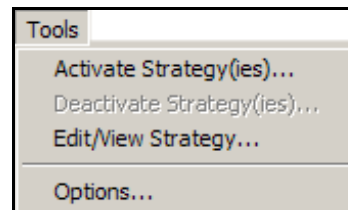


Figure 65: Tools Menu

Activate Strategy(ies)

Use to load a strategy on a virtual routing point using the Strategy Activation Wizard (see [Figure 66](#)).

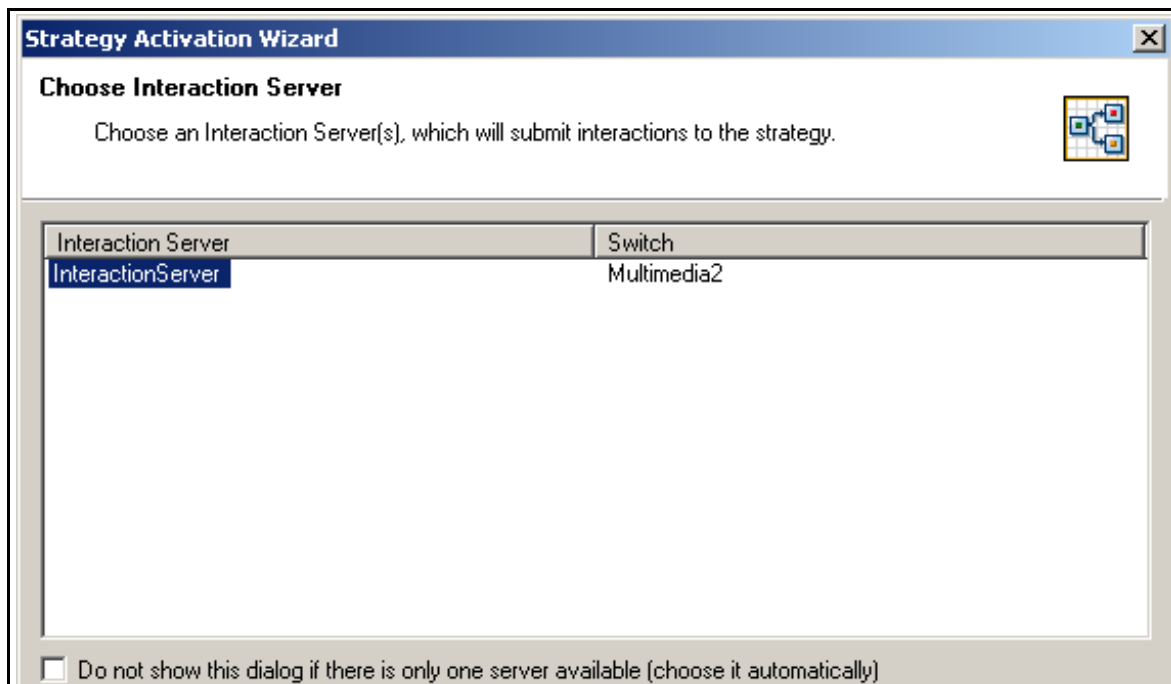


Figure 66: Strategy Activation Wizard

The Wizard provides a convenient way to create a virtual routing point on the Switch object for the purpose of loading/activating a multimedia routing strategy (see [Figure 67](#)). To distinguish the virtual routing points automatically created for multimedia strategies through the Wizard, their names will combine the prefix `asl` and the name of the strategy: `asl_ <strategy_name>`. `asl` stands for *active strategy loading*.

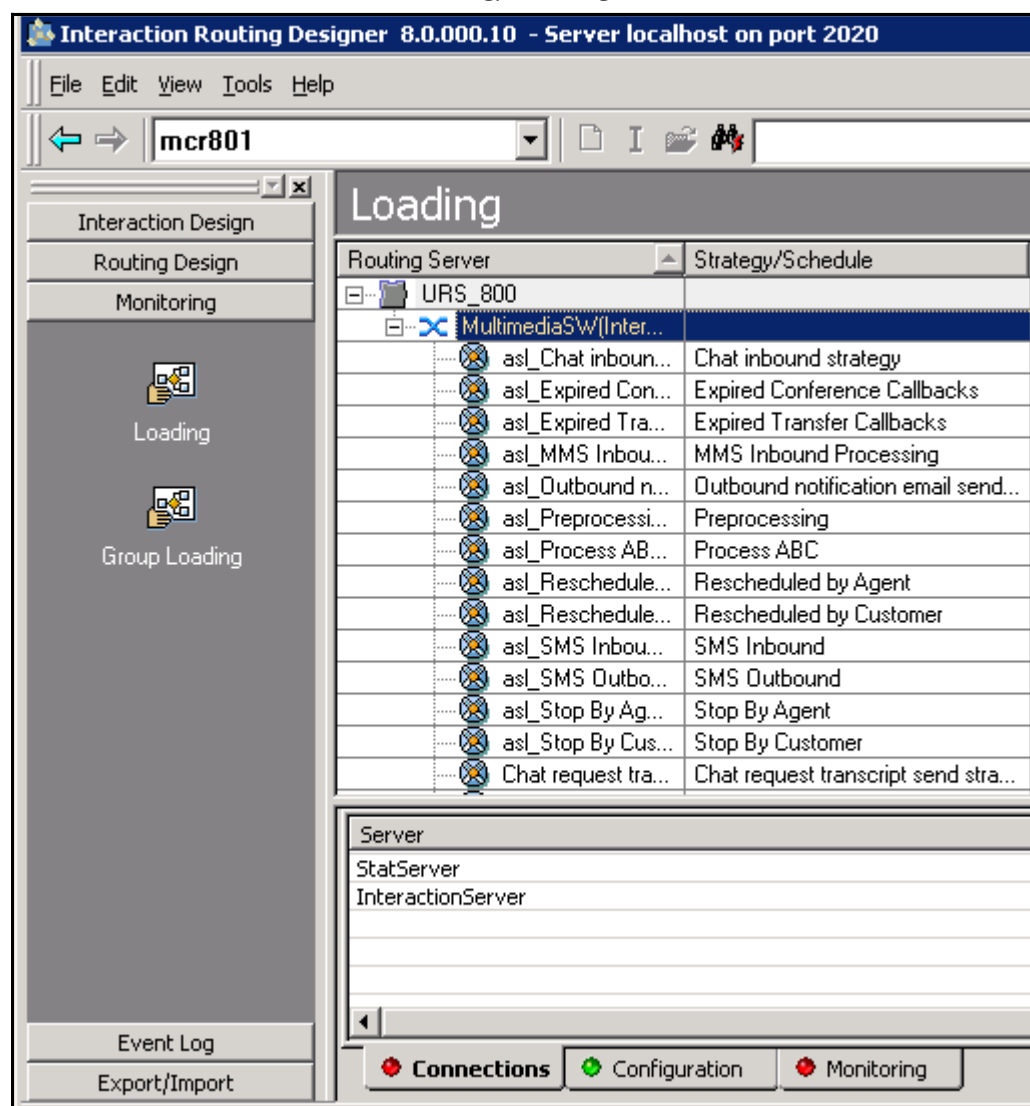


Figure 67: Strategies Loaded on Virtual Routing Points in Loading View

The Wizard requires that the Interaction Server specify a Switch connection (see [Figure 320](#) on [page 362](#)). If such a connection does not exist, the Wizard displays a message to this effect.

- For more information, see “Activating Strategies” on [page 361](#).

This section continues with the next item on the **Tools** menu (see [Figure 65](#) on [page 83](#)).

Deactivate Strategy (ies)

Select an activated routing strategy in the object browser to enable this option. Opens the Deactivate Strategies dialog box, where you can follow through with strategy deactivation, unloading it from the routing point, or cancel the procedure (see [Figure 68](#)).

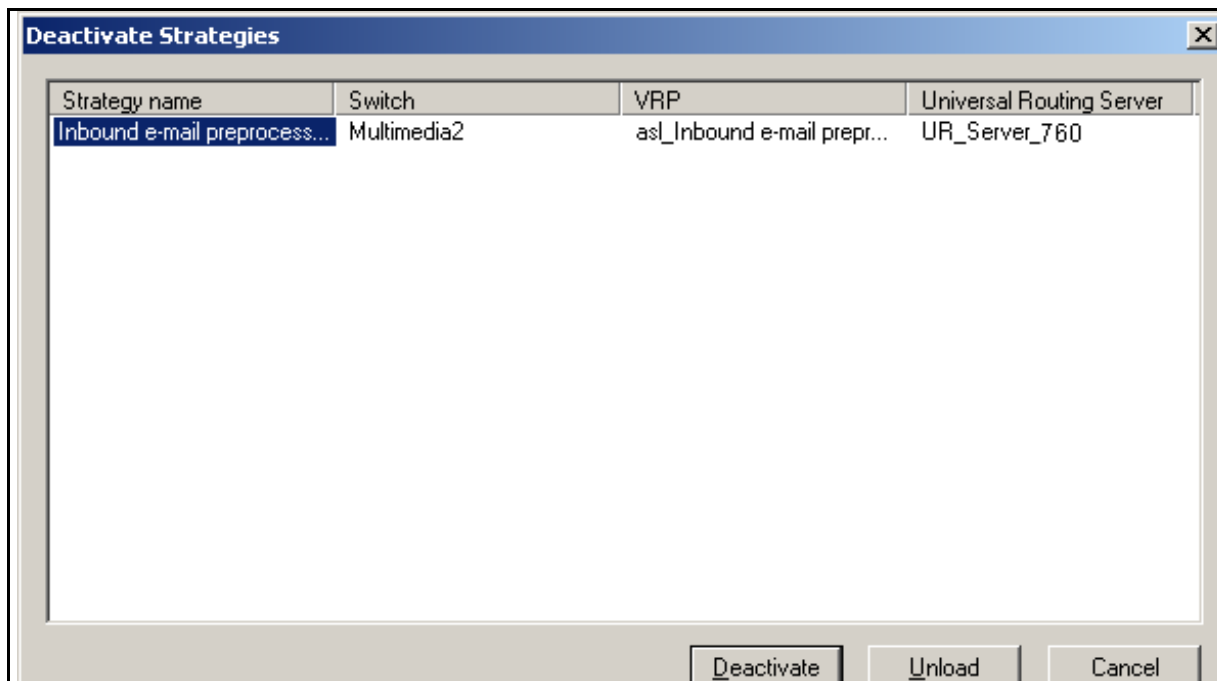


Figure 68: Deactivate Strategy Dialog Box

Note: You must deactivate a routing strategy before you can access it for editing or viewing. The icon in front of the strategy in the browser contains a green triangle that indicates a loaded strategy (see [Figure 69](#)).

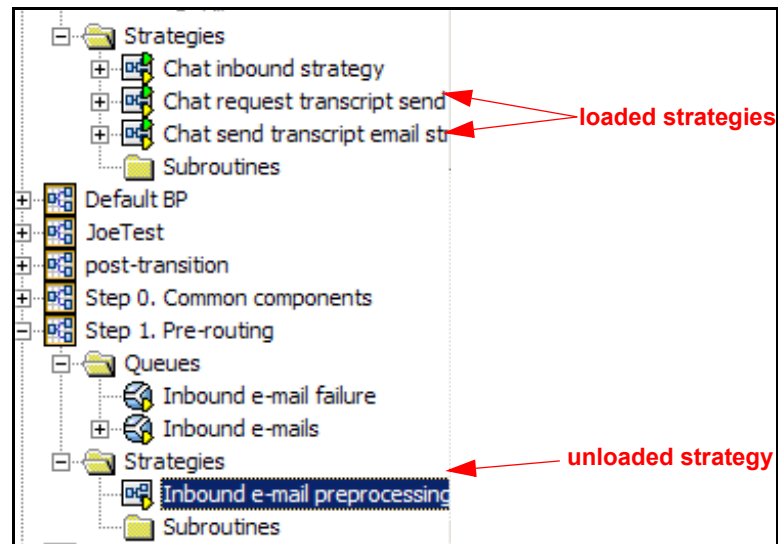


Figure 69: Loaded and Unloaded Strategies in Object Browser

Edit/View Strategy...

Select a routing strategy in the object browser to enable this Tools menu option. Opens the selected strategy for editing.

If the strategy is already loaded, the menu item is Deactivate Strategy(ies), which automatically removes the corresponding virtual routing point along and unloads the strategy.

Options Select to open the Options dialog box. (see [Figure 70](#)).

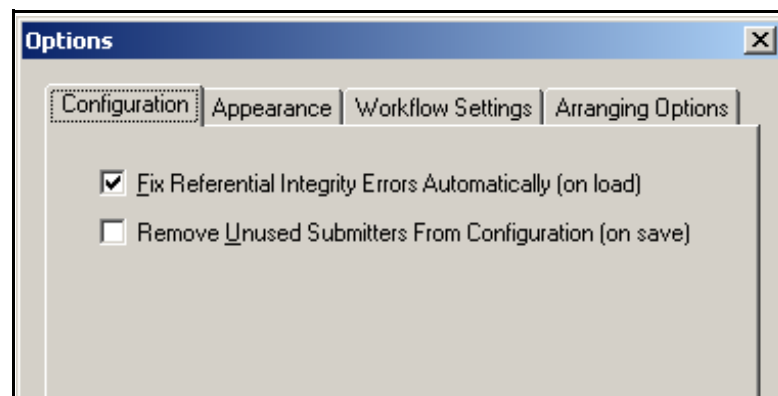


Figure 70: Options Dialog Box, Configuration Tab

The following options are available from the Configuration tab of the Options dialog box.

Configuration Tab

Fix Referential Integrity Errors Automatically (on Load)

Enable this option to allow IRD to assign configuration objects (such as Queue, View, Submitter, and Strategy objects) to the same business process, when it judges, during its initial loading, that referential integrity has been changed.

Disable (clear) this option to forbid the automatic corrections described above. During loading, IRD notifies you of possible problems and you must respond manually. Choose if you want to preserve intentional changes.

Remove Unused Submitters from Configuration (on save)

If you make changes outside IRD (for example, in Configuration Manager) a Submitter (see Figure 23 on [page 39](#)) in IRD may become disconnected—and invisible to the user. When you bring up the business process, you will see a "Submitter" is ignored... message in the log viewer if this has happened.

Enable this option to allow IRD to automatically remove Submitter objects that are invisible and disconnected. Notification of an automatic removal appears in the log viewer.

Disable this option to prevent this automatic removal of Submitters.

Appearance Tab

This section discusses the Appearance tab in the Options dialog box (see [Figure 71](#)).

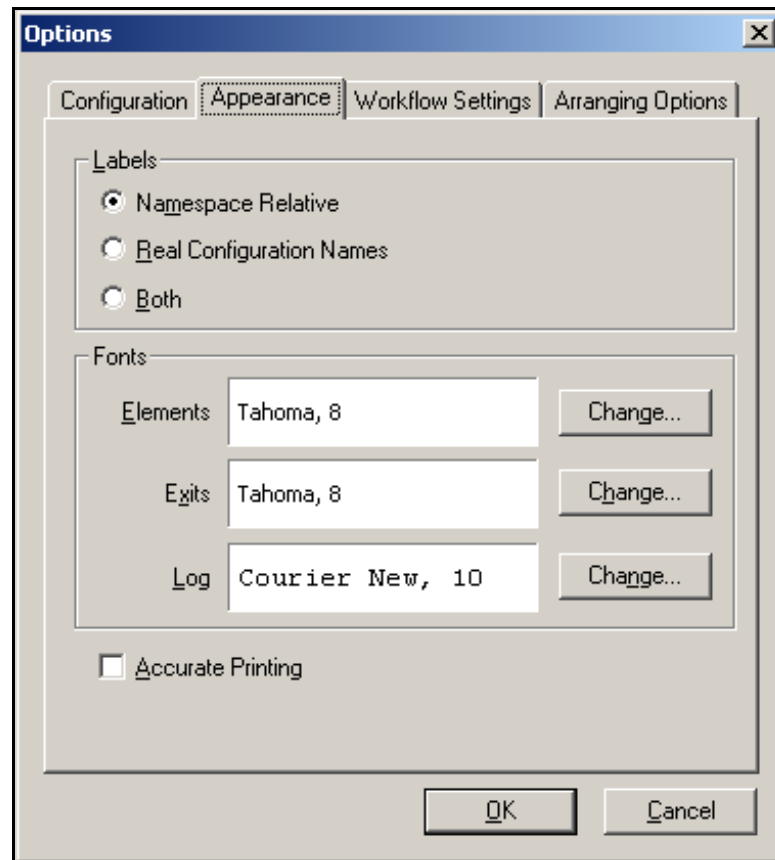


Figure 71: Options Dialog Box, Appearance Tab

Labels The on/off buttons in front of `Namespace Relative`, `Real Configuration Names`, and `Both` allow objects to have one name in the Interaction Design window, but a different name in the Configuration Database, a feature which can be very useful when you are designing complicated business processes.

For technical background information on this feature, see “Workflow Object Names” on [page 171](#).

Real Configuration Names

Select to have the browser or viewer show the object’s Script name. Assume that you define a queue that is named `Inbound e-mails1`, a view named `Inbound e-mails2`, save the definitions as Script objects in the Configuration Database, and then select the `Real Configuration Names` button as shown in Figure 71 on [page 88](#). The objects appear with their Configuration Database Script names as shown in [Figure 72](#).

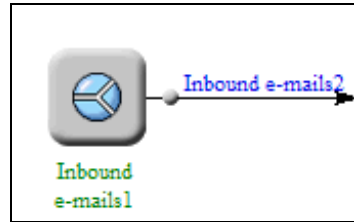


Figure 72: Real Configuration Names

Namespace Relative

Select to have the Interaction Design window show the result of manually editing a queue, view, or workbin name in the browser or viewer after the initial save as a Script object in the Configuration Database.

Assume that you edit the names that are shown in [Figure 72](#) and use the same name (Inbound e-mails) for both the queue and its view (which Configuration Server does not allow for Script objects). If you select the Namespace Relative button as shown in [Figure 71](#) on [page 88](#), the objects appear as shown in [Figure 73](#).

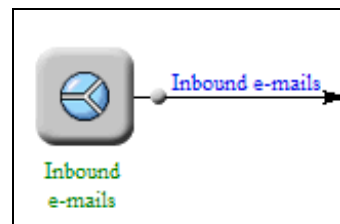


Figure 73: Namespace Relative

Both

Select to show both the decorative and internal Script name (with the internal name in parentheses).

If you select Both in [Figure 71](#) on [page 88](#), the objects appear as shown in [Figure 74](#).

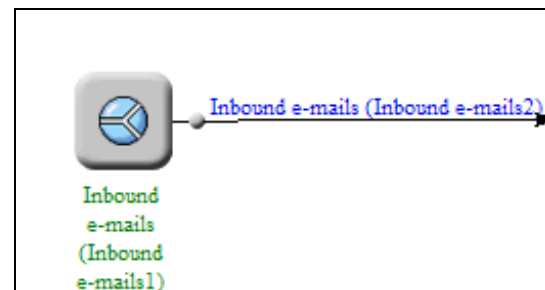


Figure 74: Both (Namespace Relative and Real Configuration Names)

Accurate Printing

When you are printing a business process that contains overlapping objects, use this option (see Figure 71 on [page 88](#)) to ensure that all object detail prints and tiny white spaces do not occur.

Workflow Settings Tab

This section discusses the third tab in the Options dialog box, Workflow Settings (see [Figure 75](#)).

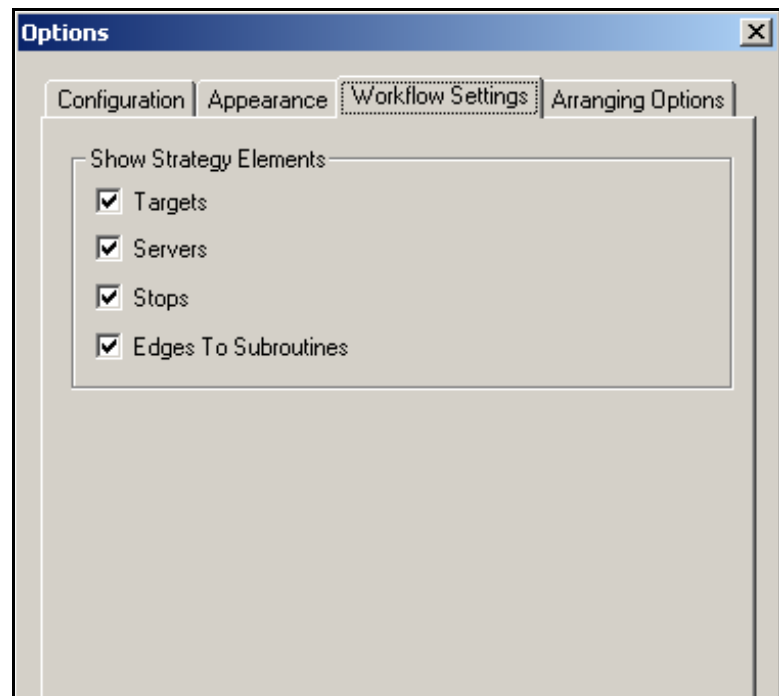


Figure 75: Options Dialog Box, Workflow Settings Tab

Targets

Enable to have the business process show routing strategy targets as strategy-linked nodes (see “Strategy-Linked Nodes” on [page 34](#) and Figure 20 on [page 37](#)).

Servers

Enable to have the business process show routing strategy actions (such as those performed by servers) as strategy-linked nodes (see “Strategy-Linked Nodes” on [page 34](#) and Figure 19 on [page 36](#)).

Stops

Enable to have the business process show routing strategy Stop Interaction objects as strategy-linked nodes (see “Strategy-Linked Nodes” on [page 34](#)).

Edges To Subroutines

Enable to remove lines showing connections from strategies to subroutines. Doing so reduces the complexity of the layout, making it easier to interpret.

Arranging Options Tab

When you select **Arrange** from the **Business Process** menu, IRD uses an algorithm that arranges nodes in the workflow viewer based on what you enter in the **Arranging Options** tab (see [Figure 76](#)).

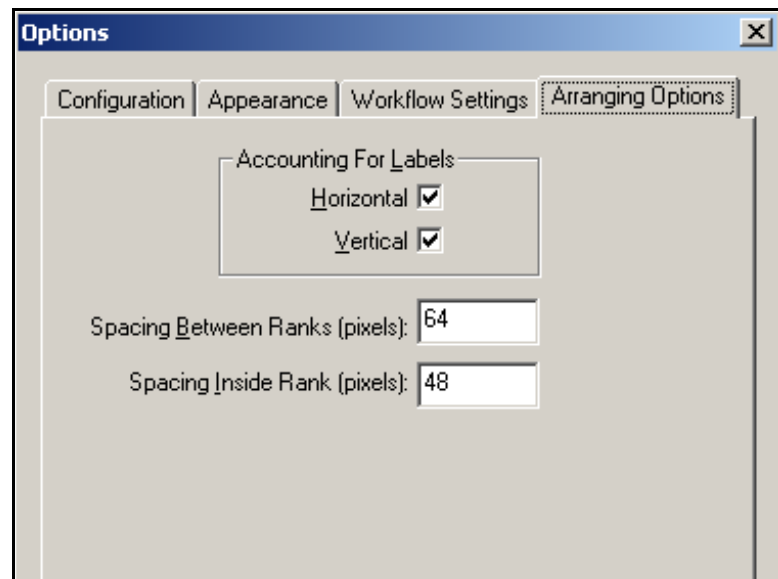


Figure 76: Options Dialog Box, Arranging Options Tab

The fields in the **Arranging Options** tab (see [Figure 76](#) on [page 91](#)) are summarized below.

Accounting for Labels

IRD places labels above nodes (type) and below nodes (name) nodes as well as on the right of nodes (for names of views). The end result of the arranging algorithm produces compact picture, but some labels may overlap. You can fix this by checking the **Horizontal** and **Vertical** fields in the **Arranging Options** tab.

Horizontal By checking the **Horizontal** checkbox, you are instructing IRD to account for horizontal dimension of labels in its arranging algorithm. In this case, IRD includes the horizontal positions of labels into the node size calculation, which spreads the nodes out more horizontally.

Vertical By checking **Vertical** checkbox, you are instructing IRD to account for the vertical dimension of labels in its arranging algorithm. In this case, IRD includes the vertical positions of

labels into the node size calculation, which spreads the nodes out more vertically.

Notes: Each rectangular node has a height and width. The default node sizes are 48x48 (for queue nodes), 64x48 (for strategy and media server nodes), and 32x32 (for stop, server and agent nodes). If you don't check either of the Accounting for Labels checkboxes, IRD defaults to these sizes.

If the Horizontal and Vertical boxes are both checked, the size of almost every node will be different (because labels usually have bigger dimensions than nodes). This spreads out the nodes and produces a nice looking picture, but of much bigger size.

Spacing Between Ranks (pixels)

Use this field to specify the separation of nodes in adjacent ranks. Allows you to adjust the spacing of nodes by setting the number of pixels between one column of nodes and the column of nodes beside it. Enter any number between 16 and 160.

For a definition of *rank*, see “[Arranging Algorithm](#)” below.

Spacing Inside Rank (pixels)

Use to specify the separation of nodes inside a rank. Allows you to adjust the spacing of nodes by setting the number of pixels between nodes in a single column. Enter any number between 16 and 96.

Arranging Algorithm

When arranging nodes, the arranging algorithm:

- First assigns ranking numbers. Rank number assignment depends on the relationship between nodes or, more specifically, it depends on edges between the nodes.

If two nodes are connected at an edge, the source of the edge will have a lesser rank than the destination edge. For example, assume:

You have nodes A, B, C and D.

The edge of A is connected to the edge of B.

The edge of A is also connected to the edge of C.

The edge of B is connected to the edge of D.

In this case, the algorithm assigns a ranking of 0 for A, 1 for B and C, and 2 for D.

- After assigning rank numbers, the algorithm arrange nodes in ranks (levels) in order to minimize edge crossing. Sometimes changing nodes in a rank will lower edge crossing between nodes in adjacent ranks.

- Finally, after the relative positions between nodes is calculated (when it is known which node is left, which node is right, which node is above and below, and so on), the algorithm gives exact positions to nodes. In this step it uses the size of nodes and the specified amount of space between nodes of adjacent ranks and between adjacent nodes in same rank.

Help Menu

The Help menu contains the commands and keyboard shortcuts that are shown in [Figure 77](#).

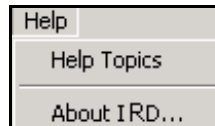


Figure 77: Help Menu

Help Topics

Displays the *Universal Routing 8.1 Interaction Routing Designer Help*.

About IRD

Displays a dialog box containing the Genesys logo, the software title, version number, copyright notice, and warning.

Shortcut Menus

[Figure 78](#) shows an example shortcut menu when you right-click a business process in the object browser (not in the currently open business process).

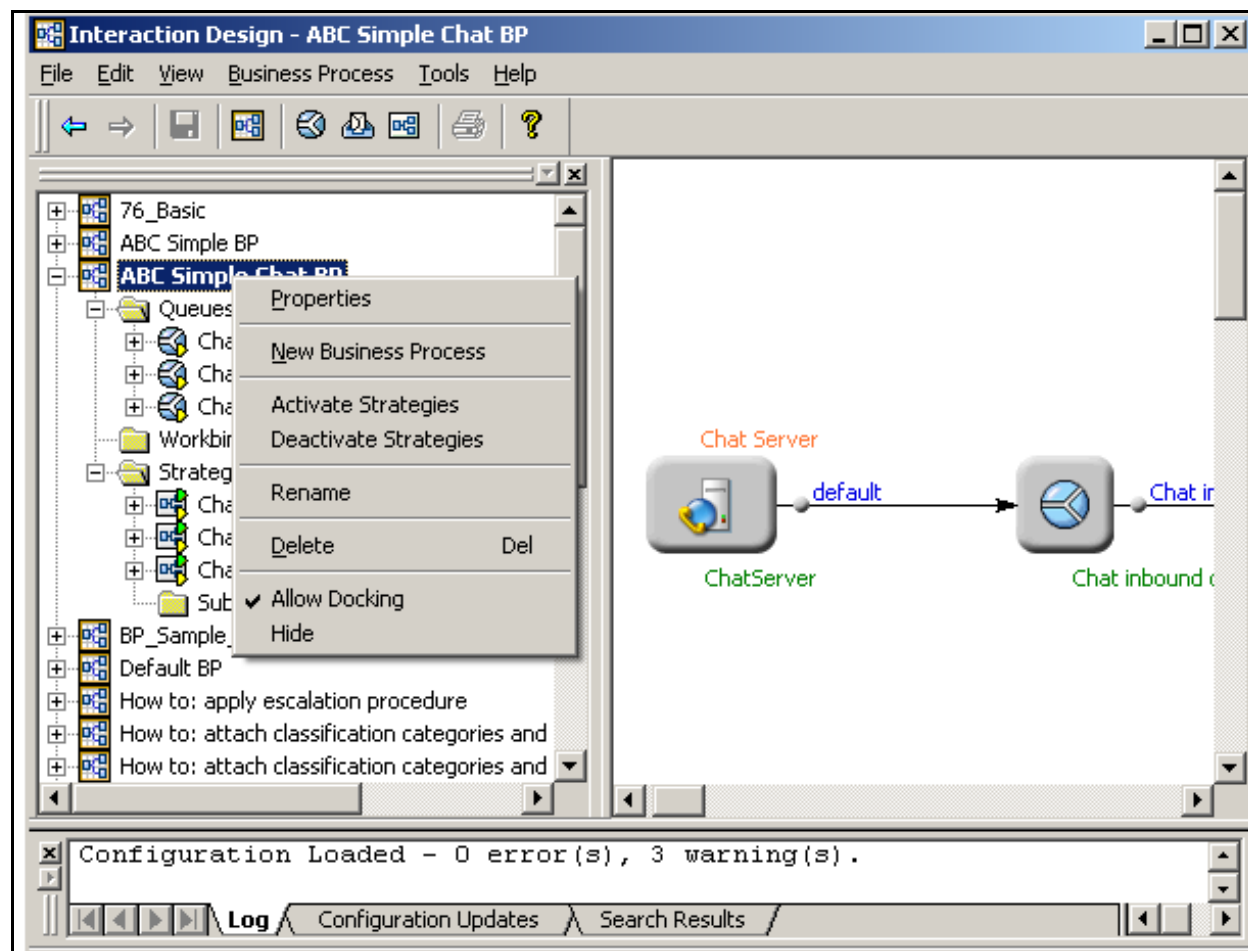


Figure 78: Browser Shortcut Menu

The content of the shortcut menus vary, depending on which object you select in the tree.

Business Process Shortcut Menu

If you select a business process (see Figure 78 on [page 94](#)), the shortcut menu lists:

- Properties (opens the properties dialog box).
- New Business Process (see [page 247](#)).
- Open the Process appears if you right-click a business process other than the one that is currently selected. Use to switch to another business process. This menu item is not listed when you right-click the active business process.
- Activate Strategies (see [page 83](#)).
- Deactivate Strategies (see [page 84](#)).

- **Rename** highlights the selected object. Click inside the highlighted text and type the new name.
- **Delete** removes the selected object after a confirmation message.
- **Allow Docking** allows you to reposition the object browser or the log viewer elements—select the element’s double line in its header and drag. You can dock an element at different places inside the window, or you can allow it to float as a separate window.
 - Right-click inside the object browser to display a drop-down menu and select **Allow Docking** to enable (check) or disable (uncheck) this feature.
 - When **Allow Docking** is disabled, the element is always a separate “floating” window.
 - When **Allow Docking** is enabled (the default setting), you can dock the element at various locations or create a separate window.
- **Hide** removes the object browser from view. Select **Object Browser** from the **View** menu to redisplay the object browser.

Media Servers Shortcut Menu

If you select an item under the **Media Servers** folder, the shortcut menu lists:

- **Properties** (see the various properties dialog boxes discussed in “Business Process Objects” on [page 27](#)). Reads **Properties** of if you select it in the workflow viewer and there are several branches.
- **Locate** (highlights the object in the workflow viewer).
- **Add Endpoint** (see “Adding Endpoints” on [page 254](#)).
- **Allow Docking** (see above description).
- **Hide** (see above description).

Queue Object Shortcut Menu

If you select an item under the **Queues** folder, the shortcut menu lists:

- **Properties** (see the various properties dialog boxes discussed in “Business Process Objects” on [page 27](#)). Reads **Properties** of if you select it in the workflow viewer and there are several branches.
- **Locate** (highlights the object in the workflow viewer).
- **New View** lets you create a new view (see [page 267](#)).
- **Rename** highlights the selected object. Click inside the highlighted text and type the new name.
- **Delete** removes the selected object.
- **Allow Docking** (see above description).
- **Hide** (see above description).

Strategy Object Shortcut Menu

If you select an item under the Strategies folder, the shortcut menu lists:

- Properties (see the various properties dialog boxes discussed in “Business Process Objects” on [page 27](#)).
- Locate (highlights the object in the workflow viewer).
- Edit/View Strategy (see [page 86](#)).
- Activate Strategy (see [page 83](#)).
- Deactivate Strategy (see [page 84](#)).
- Rename highlights the selected object. Click inside the highlighted text and type the new name.
- Delete removes the selected object.
- Allow Docking. See description under “Business Process Shortcut Menu” on [page 94](#).
- Hide removes the object browser from view. Select Object Browser from the View menu to redisplay the object browser.

View Object Shortcut Menu

If you select a view under Queue object, the shortcut menu lists:

- Properties (see the various properties dialog boxes discussed in “Business Process Objects” on [page 27](#)).
- Locate (highlights the object in the workflow viewer).
- Rename highlights the selected object. Click inside the highlighted text and type the new name.
- Delete removes the selected object.
- Allow Docking. See description under “Business Process Shortcut Menu” on [page 94](#).
- Hide removes the object browser from view. Select Object Browser from the View menu to redisplay the object browser.

Workbin Object Shortcut Menu

If you select an item under the Workbins folder, the shortcut menu lists:

- Properties (see the various properties dialog boxes discussed in “Business Process Objects” on [page 27](#)).
- Locate (highlights the object in the workflow viewer).
- New View. Select to create rules for extracting interactions from workbins as described in “Adding Workbins” on [page 292](#).
- Rename highlights the selected object. Click inside the highlighted text and type the new name.

- **Delete** removes the selected object.
- **Allow Docking**. See description under “Business Process Shortcut Menu” on [page 94](#).
- **Hide** removes the object browser from view. Select **Object Browser** from the **View** menu to redisplay the object browser.

Workflow Viewer Shortcut Menus

The menu items that are listed depend on whether an object is selected.

Object Not Selected

If you right-click inside the workflow viewer without selecting an object, the shortcut menu lists:

- **New** has branches for adding a new queue, workbin, or strategy.
- **Grid** (hides/shows workflow viewer grid lines).
- **Page Layout** (hides/shows workflow viewer page break indicator).
- **Zoom In** (magnifies icons in workflow viewer).
- **Zoom Out** (moves workflow viewer display away from icons).
- **Zoom Normal** (sets workflow viewer to normal zoom).

Object Selected

If you right-click an object inside the workflow viewer, the shortcut menu lists:

- **Properties of** if a Queue or Media Server object is selected. There are **Queue** and **View** branches.
- **Reads Properties** if a Strategy object is selected.
- **Reads Add Endpoint** if a Media Server object is selected.
- **Locate** (highlights the object in the Workflow Viewer).
- **Edit/View Strategy** if a Strategy object is selected.
- **Activate or Deactivate Strategy** if a Strategy object is selected.
- **New View** if a Queue or View object is selected.
- **Disconnect** and/or **Hide** if a Queue object is selected.
- **Grid** (hides/shows workflow viewer grid lines).
- **Page Layout** (hides/shows workflow viewer page break indicator).
- **Zoom In** (magnifies icons in workflow viewer).
- **Zoom Out** (moves workflow viewer display away from icons).
- **Zoom Normal** (sets workflow viewer to normal zoom).
- **Bring Forward** changes the position (brings forward) of the selected object relative to the others in the stack. Use for overlapping objects.

- **Send Back** changes the position (sends back) of the selected object relative to the others in the stack. Use for overlapping objects.
- **Label/Group** for any group of objects or object selected. See “[Grouping and Labels](#)” section below.

Grouping and Labels

You can create a group of objects within a business process and then label it. This enables you to mark out a set of objects that have something in common. [Figure 79](#) shows an example.

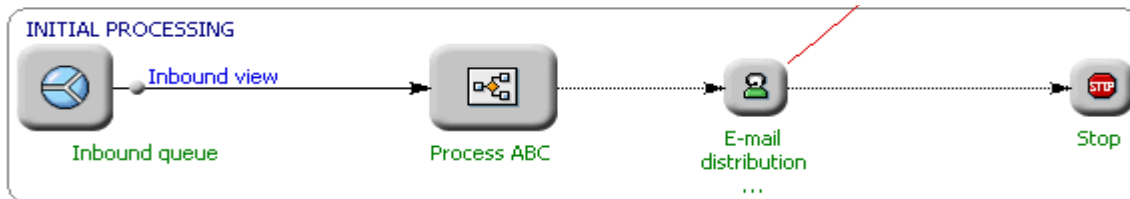


Figure 79: Labeled Group of Objects

Procedure:

Grouping objects within a business process

Purpose: To group together a set of objects within a business process either for visual purposes or to apply the same set of properties to the group.

Start of procedure

1. Select the objects to group by clicking each one as you hold down the [Ctrl] key. Or hold down the mouse button and select the entire group with the mouse cursor so they all appear highlighted.
2. Right-click any of the selected objects and select **Label/Group** from the shortcut menu. The **Group Properties** dialog box opens (see [Figure 80](#)).

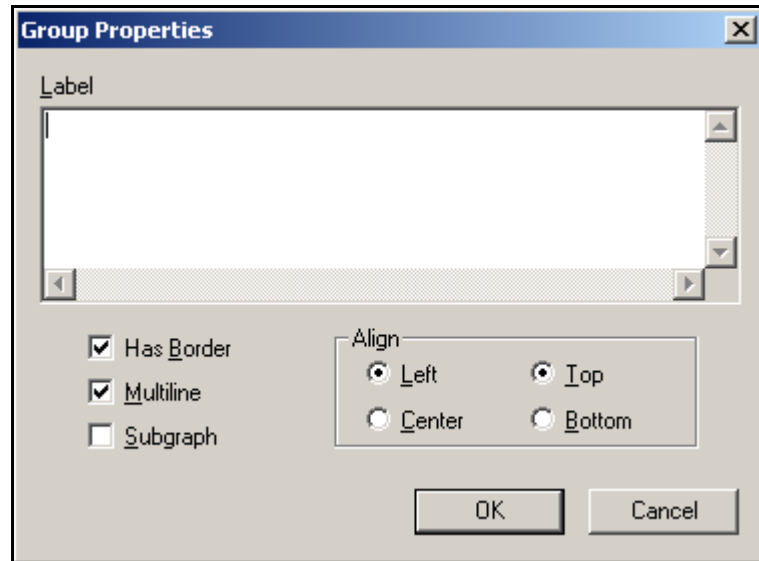


Figure 80: Group Properties Dialog Box

3. Type the label text into the `Label` text box.
4. Optionally, you can also perform other operations:
 - You can have the group set off by a border by selecting `Has Border`. This check box is selected by default.
 - If you want the text to wrap, select `Multiline`. This check box is selected by default.
 - To have the group actually handled and arranged as a unit, select the `Subgraph` check box. When you select `Subgraph`, `Has Border` is also selected automatically.
 - To `Align`, select the radio buttons that set the label where you want it. You can select either `Left` or `Center` and either `Top` or `Bottom`. `Top` and `Left` are selected by default.
5. When through in the dialog box, click `OK`. The new group, with its label, appears in the workflow viewer.
 - To remove an object from a group, right-click the object and select `Remove from Group` from the shortcut menu. To remove a group, you must remove all the objects from the group.
 - To change the properties of a group, right-click the group label and select `Properties` from the shortcut menu.
 - To add an object to a group, create a new group that includes all the objects you want grouped.

End of procedure

Note: You cannot put an object into more than one group. You cannot create nested groups (where one group contains another group).

Viewer Context Menus

The Log, Configuration Update, and Search Result tabs in the lower portion of the Interaction Design window also bring up context menus. See Figure 52 on [page 73](#).

Interaction Design Shortcut Bar

When IRD starts up, it checks for an eServices (formerly, Multimedia) solution that was installed by the Multimedia Configuration Wizard. If one is not found, the main IRD window or the window that is shown in Figure 35 on [page 60](#) does not display an Interaction Design shortcut bar and you cannot open the Interaction Design window (shown in [Figure 36](#)).

Use the following workaround if Multimedia components were manually configured in the Configuration Database without using the Wizard or if the Interaction Design shortcut bar does not display.

Procedure: Displaying the Interaction Design shortcut bar

Start of procedure

1. Log into IRD as described on [page 57](#).
2. Click to Tools menu and select Routing Design Options.
3. Click the Views tab in the IRD Options dialog box.
4. Uncheck the Default check box.
5. Verify that the following are checked:
 - Interaction Design
 - Business Processes
6. Click OK to save your changes.

End of procedure

Summary

The intent of this chapter is to introduce the business process interface. For step-by-step instructions on using the interface, see “Creating Business Process Objects” on [page 247](#).

4

Strategy Interface

This chapter describes the interface for creating routing strategies that are contained within business processes. Find step-by-step instructions for creating routing strategies on [page 323](#).

This chapter includes the following sections:

- [Shortcut Bars in IRD Main Window, page 104](#)
- [IRD Menus, page 106](#)
- [Reusable Objects, page 115](#)
- [Strategy-Building Objects, page 122](#)
- [Routing Design Toolbar, page 123](#)
- [Using the Strategy-Building Objects, page 129](#)
- [Properties Dialog Boxes, page 132](#)
- [Building Logical Expressions, page 135](#)
- [Comment Object, page 139](#)
- [Other Design View Operations, page 140](#)
- [Routing Design Options, page 142](#)
- [Database Wizard, page 147](#)
- [Defining Variables, page 150](#)
- [IRD Security, page 152](#)

Note: The information in this section assumes that you have already installed IRD, as described in the *Universal Routing 8.1 Deployment Guide*.

Start IRD, as described on [page 58](#). After you complete the login fields, click OK, the Strategies list pane opens (see Figure 34 on [page 59](#)).

The remainder of this chapter discusses strategy interface elements, both in the IRD main window and in the Routing Design window.

Shortcut Bars in IRD Main Window

Note the shortcut bars in Figure 34 on [page 59](#). The shortcut bars access the various views and objects of IRD.

- Clicking the Interaction Design shortcut bar in Figure 34 on [page 59](#) displays a Business Processes icon on the left. Clicking this icon brings up the Business Process list pane (see Figure 35 on [page 60](#)).
- Clicking the Routing Design shortcut bar and then a reusable object icon on the left displays that object's list pane. For examples, see Figure 91 on [page 116](#) and Figure 92 on [page 116](#).
- Clicking Event Log followed by Event Viewer brings up Event Log view where you can see the history of your actions in IRD (see [Figure 81](#)).

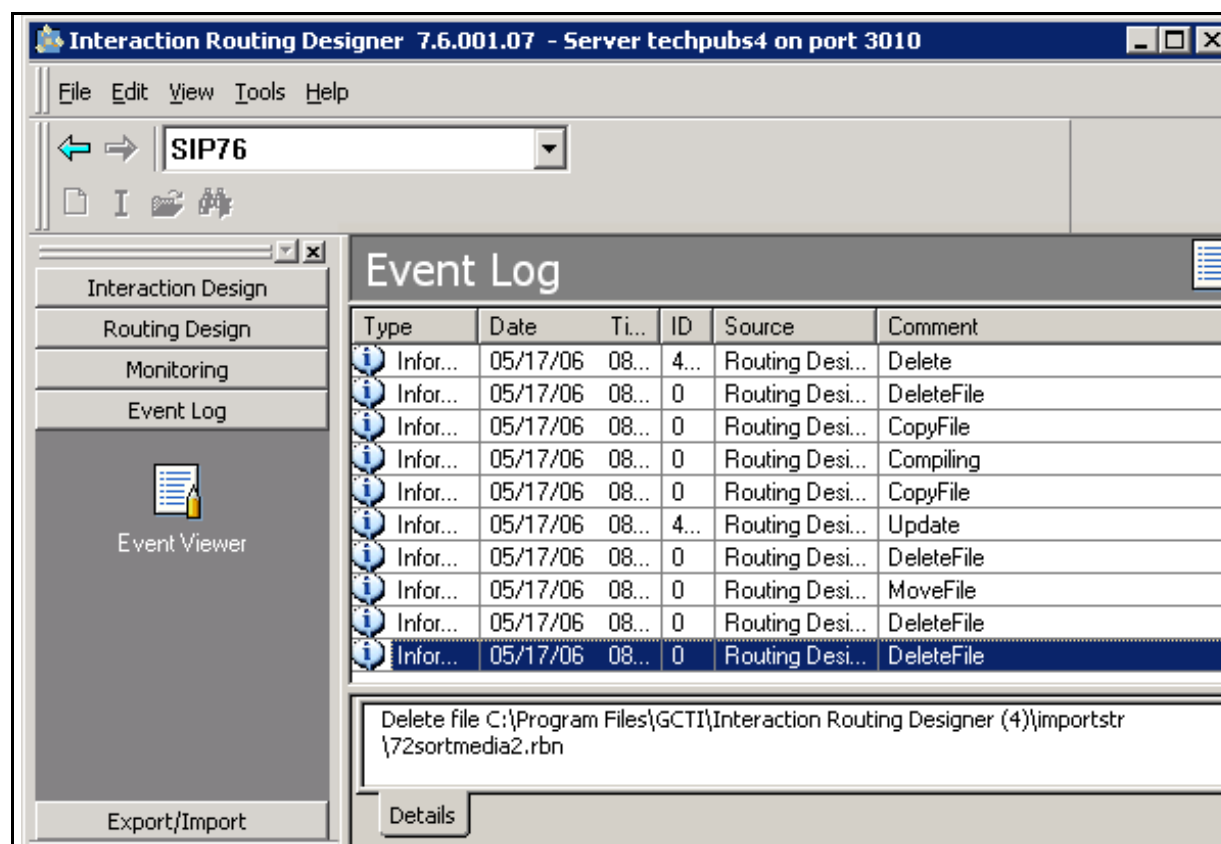


Figure 81: Event Log

For log location, see Working Directory (Figure 133 on [page 145](#)).

- Clicking Monitoring displays the Loading and Group Loading icons. Clicking Loading brings up Loading view. Here you can view routing points (including virtual routing points) and the names of strategies loaded on those routing points (see Figure 67 on [page 84](#)).

Clicking Group Loading brings up a view for loading the same strategy on multiple DNs.

- Clicking Export/Import brings up Solution export and Solution import icons.

Clicking Solution export brings up a view that allows you to export a group of strategies or subroutines. Figure 82 shows the shortcut menu for putting an object on a export list.

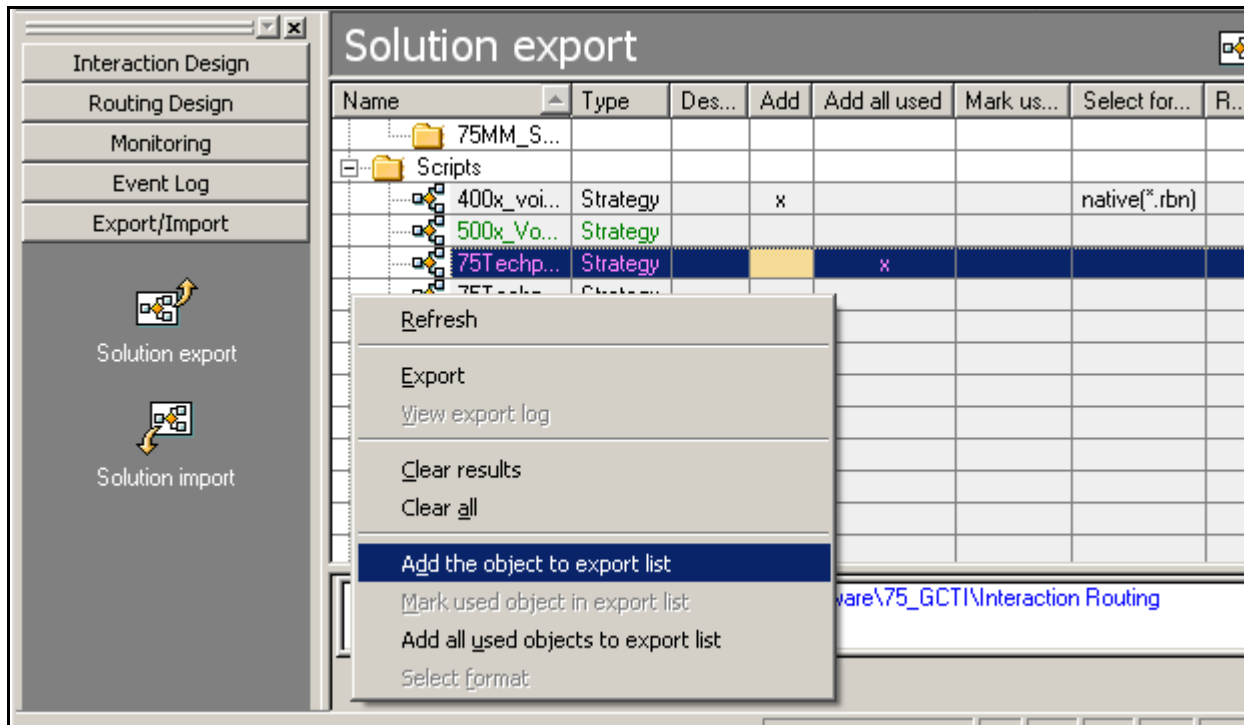


Figure 82: Solution Export View

Note: Strategies and subroutines can be exported using any one of four formats: archive (*.zcf), native (*.rbn), open (*.xml), and text (*.kvl) format. All other objects are exported in text (*.kvl) format.

You can also use this view to export only objects (routing rules, business rules, interaction data, statistics, macros, and so on) without the strategies that use them.

Clicking Solution import brings up a view for importing the results of an export operation. For detailed information on using these views, refer to the *Universal Routing 8.1 Interaction Routing Designer Help*.

IRD Menus

Note: The menus below are available in IRD when not working in the Interaction Design window (see Figure 36 on [page 61](#)).

The following menus are available in the IRD main window: File, Edit, View, Tools, and Help. The current view controls what menu items are enabled and disabled. The enabled menu items that are shown in [Figure 83](#) are those that are available when you click the Strategy Design shortcut followed by the Strategies icon, which displays the Strategies list pane (see Figure 34 on [page 59](#)).

File Menu

The File menu contains the commands and keyboard shortcuts that are shown in [Figure 83](#).

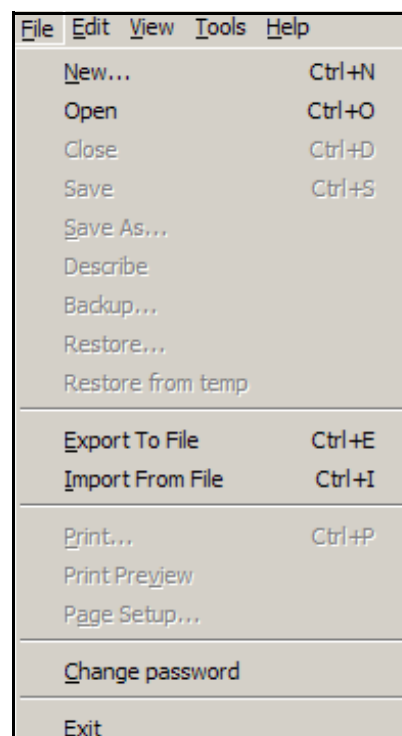


Figure 83: File Menu

The File menu includes the following commands:

New Creates a new object based on the current view.

Note: In order to enable New, you must first select a folder for the reusable object on the list pane.

Open	Opens the selected object. If you select Open when a strategy is selected, the Routing Design window opens. When other types of objects are selected (subroutine, routing rule, business rule, attribute, interaction data), the corresponding dialog box opens.
Close	Enabled when in the Routing Design window. Closes only the Routing Design window.
Save	If you are creating a new strategy in the Routing Design window, selecting Save from the File menu opens the Save dialog box (see Figure 84).

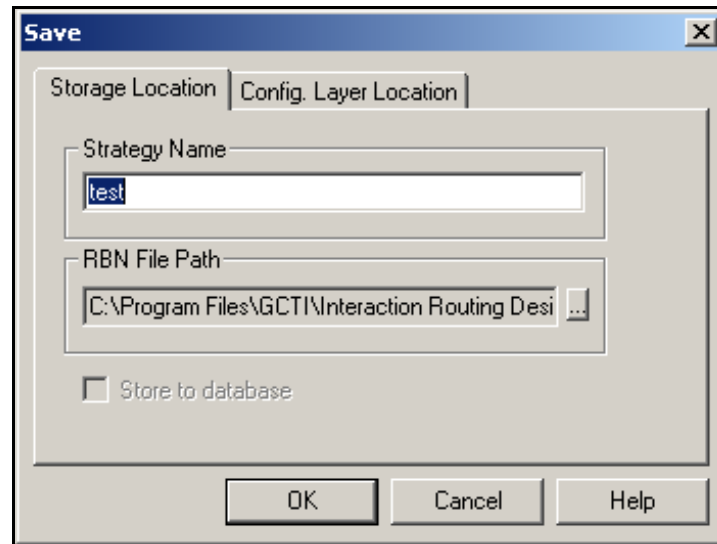


Figure 84: Save Dialog Box

Here you can specify the .rbn file save location (see “Graphical Portion of a Strategy” on [page 172](#)). The Script object save location is the Scripts folder you specify in the list pane in order to enable **New** from the **File** menu.

Note: If you are editing an existing strategy and select **Save** from the **File** menu, the save action occurs, but the Save dialog does not appear.

Save As	Enabled in Routing Design window. Opens the Save As dialog box where you have the option of changing the name and/or storage location for the .rbn file and Script object in the Scripts folder of Configuration Manager.
Describe	Enabled in Routing Design window. Opens the Describe dialog box where you can add or change the description of a strategy or subroutine or the input/output parameters of a subroutine (see Figure 85).

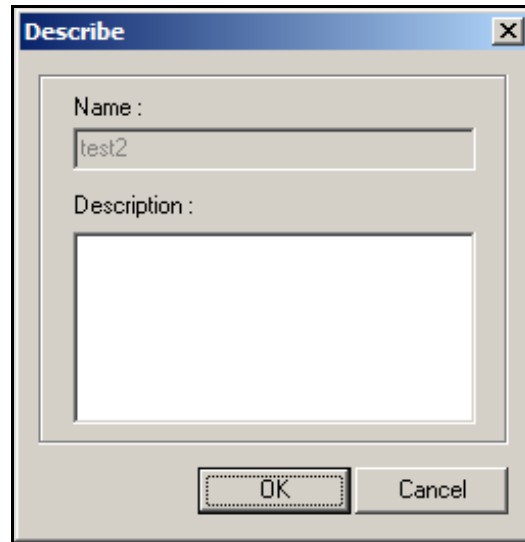


Figure 85: Describe Dialog Box

- Backup Enabled in the Routing Design window. Backs up the current strategy by creating a version.
- Restore Enabled in the Routing Design window. Restores one of the backup versions of a strategy. You can select which version to restore.
- Restore from temp Enabled in the Routing Design window. Restores a strategy saved by IRD when the Autosave timer feature is activated (see Figure 133 on [page 145](#)).
- Export to File Exports a strategy that you have selected in the Strategies list pane. For another person to view a strategy you have created, they must have access to both the Script file and the .rbn file (see “Graphical Portion of a Strategy” on [page 172](#)). For more information, see the section on automatically packaging a strategy in *Universal Routing 8.1 Reference Manual*.
- Import From File Imports a strategy file and creates a Script object for a strategy and its subroutines (if any), business rules, routing rules, attributes, interaction data, statistics, list objects, and macros in the Configuration Layer for the strategy. For more information, see the section on importing a strategy file in *Universal Routing 8.1 Reference Manual*.
- Print, Print Preview, Page Setup Using these Windows-standard menu selections, you can print and print-preview the strategy view seen in the Routing Design

window. You can print to a PDF file if you have the appropriate print driver installed.

When printed, some strategies may not fit on a single sheet of paper. In this case, you can print each area of the strategy on a separate sheet of paper, and then place the sheets together. For example, assume that you want to print the Classify customer inquiry att-ct strategy that is shown in Figure 357 on [page 414](#).

Procedure: Printing large strategies

Start of procedure

1. Open the strategy.
2. Select **Print Preview** from the **File** menu. The resulting dialog box contains a page for each area of the strategy. The print preview example in [Figure 86](#) shows the strategy on two pages.

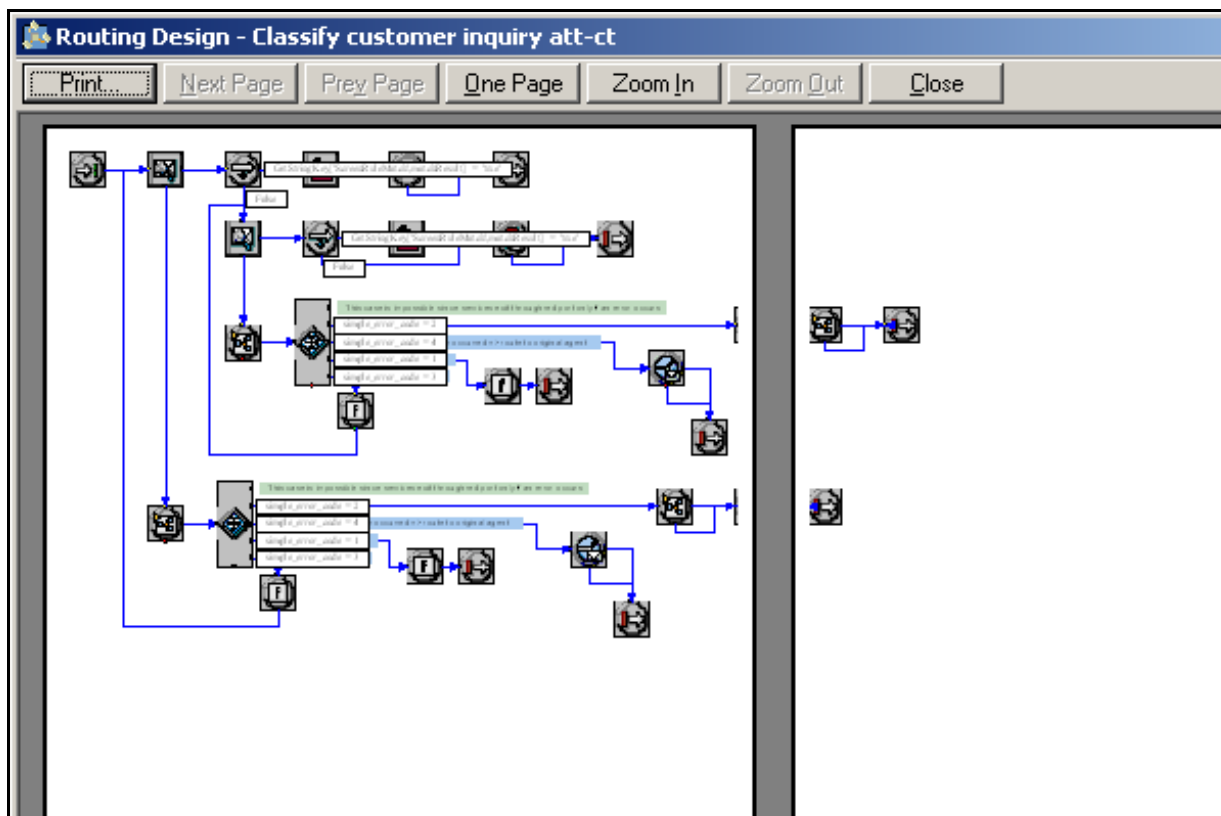


Figure 86: Print Preview of a Strategy (Pages 1 and 2)

3. If the strategy exceeds two pages, move the scroll bar (or click **Next Page** in the **Print Preview** dialog box) to view the remaining pages.

Note: Use **Zoom In** in the **Print Preview** dialog box to get an enlarged view. This option only prints the current page. Use **Zoom Out** to fit more on a page.

4. Click **Print** in the **Print Preview** dialog box that is shown in Figure 86 on [page 109](#).

Note: To avoid printing blank pages, in the **Print** dialog box, specify the **To** and **From** pages .

5. Place the printed pages together to view the entire strategy. In the **Print** dialog box, specify the **to** and **from** pages.
6. To get a better idea of interaction flow before printing, use **Comment** objects (see [page 139](#)) or manipulate **Graph Settings** in the **Routing Design Options** dialog box (see Figure 127 on [page 142](#)).

End of procedure

This section now continues with the next item on the **File** menu, **Change Password**.

Change Password

Brings up a dialog box that allows you to change your password, which is used to gain access to GUI applications.

Exit

Exits IRD if used in the IRD main window. Closes the opened strategy if used in the **Routing Design** window. If there are any unsaved changes in the current strategy, a confirmation dialog box prompts you to save those changes.

Edit Menu

The **Edit** menu contains the commands and keyboard shortcuts that are shown in [Figure 87](#).



Figure 87: Edit Menu

This menu includes the following commands:

Undo Reverses the last action. This command is not available for all actions.

Redo	Repeats the last action. This command is not available for all actions.
Cut	Removes selected objects from the Routing Design window and moves the objects to the clipboard.
Copy	In the Routing Design window, copies selected objects to the clipboard. This action cannot be undone. You can also copy an object using a context menu. Note: Copying in the Strategies list pane cannot be done from the Edit menu.
Paste	Creates copies of objects currently in the clipboard.

View Menu

The View menu contains the commands and keyboard shortcuts that are shown in [Figure 88](#).

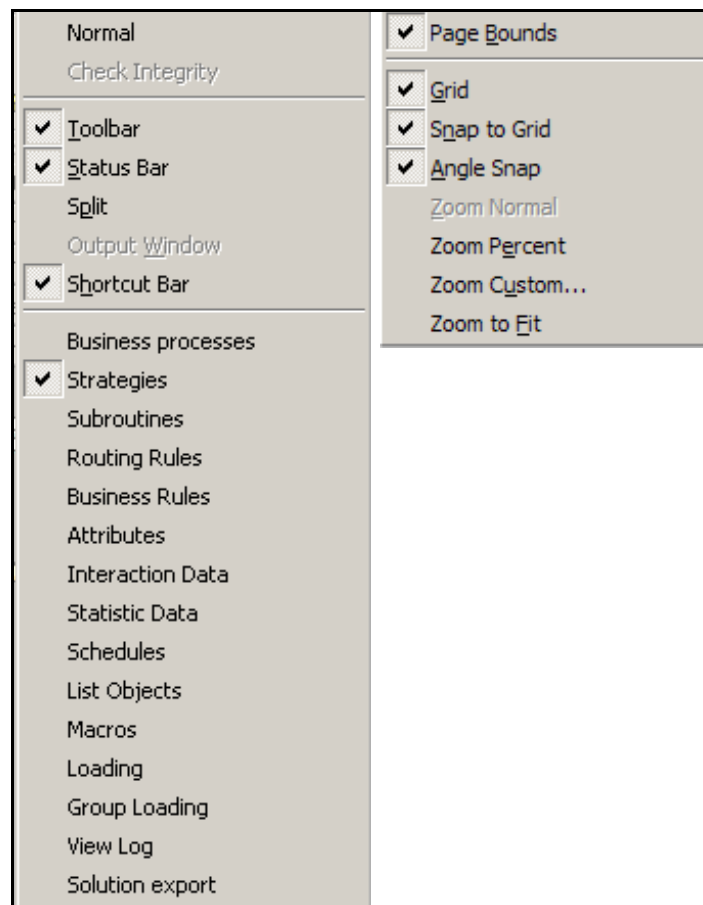


Figure 88: View Menu

Note: The View menu appears as one long vertical column, not two columns as shown in [Figure 88](#). The second group of menu items appears when the view menu is open from IRD's Interaction Design window.

Normal	When this command is selected, the Check Integrity tool (see page 354) is de-activated. This is the default setting. The Normal command functions with the Check Integrity command to de-activate/activate the Check Integrity tool.
Check Integrity	When this command is selected, the Check Integrity tool is activated (see page 354). When activated, all strategies and objects in IRD are checked with the exception of objects used in the object browser of the Interaction Design window (see page 62). As IRD performs the check, no other operation can be performed. The progress bar indicates the progress of the integrity checking.
Toolbar	Displays/hides the toolbar.
Status Bar	Displays/hides the status bar.
Split	Splits the active window with a horizontal divider.
Output Window	When a strategy is open, displays the an output area that contains the Find in Strategy and Errors in Strategy tabs. These tabs appear automatically when compiling or checking integrity.
Shortcut Bar	Displays/hides the shortcut bars (see page 104).
Strategies	Displays the Strategies list pane (see Figure 34 on page 59). The Strategies list may also be displayed by selecting the Strategies icon on the shortcut bar.
Subroutines	Displays the Subroutines (see page 117) list. The Subroutines list may also be displayed by selecting the Subroutines icon on the shortcut bar.
Routing Rules	Displays the Routing Rules (see page 117) list. The Routing Rules list may also be displayed by selecting the Routing Rules icon on the shortcut bar.
Business Rules	Displays the Business Rules (see page 119) list. The Business Rules list may also be displayed by selecting the Business Rules icon on the shortcut bar.
Attributes	Displays the Attributes (see page 118) list. The Attributes view may also be displayed by selecting the Attributes icon on the shortcut bar.
Interaction Data	Displays the Interaction Data (see page 119) list. The Interaction Data list may also be displayed by selecting the Interaction Data icon on the shortcut bar.

Statistic Data

Displays the Statistics (see [page 120](#)) list. The Statistics list may also be displayed by selecting the Statistics icon on the shortcut bar.

Schedules Displays the Schedules (see [page 120](#)) list. The Schedules list may also be displayed by selecting the Schedules icon on the shortcut bar.

List Objects Displays the List Objects (see [page 121](#)) list. The list may also be displayed by selecting the List Objects icon on the shortcut bar.

Macros Displays the Macros (see [page 121](#)) list. The Macros list may also be displayed by selecting the Macros icon on the shortcut bar.

Loading Displays the Loading view (see Figure 67 on [page 84](#)). The Loading view may also be displayed by selecting the Loading icon on the shortcut bar.

Group Loading Displays the Group Loading (see [page 104](#)) view. The Group Loading view may also be displayed by selecting the Group Loading icon on the shortcut bar.

View Log Displays the Event Log view that is shown in Figure 81 on [page 104](#).

Solution export

Displays the Solution export view that is shown in Figure 82 on [page 105](#).

Solution import

Displays the Solution import view that is described on [page 105](#).

Routing Design Window Menu Items

The following View menu items are only active in the Routing Design window (see Figure 98 on [page 122](#)):

Page Bounds Shows the page boundaries.

Grid Displays a grid in the Routing Design window.

Snap to Grid Snaps objects to the grid.

Angle Snap Snaps objects on an angle.

Zoom Normal Displays the window at 100% zoom.

Zoom Percent Zooms the window to a predefined percentage.

Zoom Custom Zooms the window to a custom percentage. The allowable range of integers for entry into the Magnification% field is 5 to 1500. However, if you need to bring magnification down to

5%, Genesys recommends you turn off the `Grid` menu item. This prevents a negative impact on IRD performance.

`Zoom to Fit` Zooms Routing Design to fit in the window.

Tools Menu

The `Tools` menu contains the commands and keyboard shortcuts that are shown in [Figure 89](#).

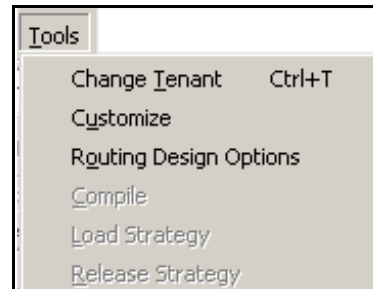


Figure 89: Tools Menu

This menu includes the following commands:

Change Tenant

Opens the `Tenant` menu. The tenant can be changed anywhere except in the `Routing Design` window.

Customize

Opens the `Toolbars` dialog box. Toolbars can be enabled or disabled except for the menu toolbar.

Routing Design Options

Opens the `Options` dialog box (see “Routing Design Options” on [page 142](#)). The `Options` command is accessible in the IRD main window.

Compile

Compiles the strategy, displaying progress in the `Status Bar` and error messages as message boxes. This command is only active in the `Routing Design` window. See [page 353](#) for more information.

Load Strategy

Opens the `Select Strategy` dialog box. Allows you to load a voice strategy to the selected routing points (see [Figure 67](#) on [page 84](#)). Use the `Strategy Activation Wizard` (see [Figure 66](#) on [page 83](#)) for loading multimedia routing strategies on virtual routing points. This command is only active in the `Loading` view (see [page 104](#)).

Release Strategy

Releases a strategy from the selected route points. This command is only active in the `Loading` view.

Help Menu

See “Help Menu” on [page 93](#).

Reusable Objects

With IRD, you can define the following *reusable objects* and data, which any strategy can then use:

- Strategies
- Subroutines
- Routing Rules
- Business Rules
- Attributes
- Interaction Data
- Statistics
- Schedules
- List Objects
- Macros

Note: The GUI elements that you can work with are affected by settings in the View tab of the Options dialog box (see Figure 135 on [page 147](#)).

For more detailed information than presented here on reusable objects, see *Universal Routing 8.1 Reference Manual* or *Universal Routing 8.1 Interaction Routing Designer Help*. [Figure 90](#) shows the buttons for reusable objects in the left pane of the IRD main window (not all buttons shown).

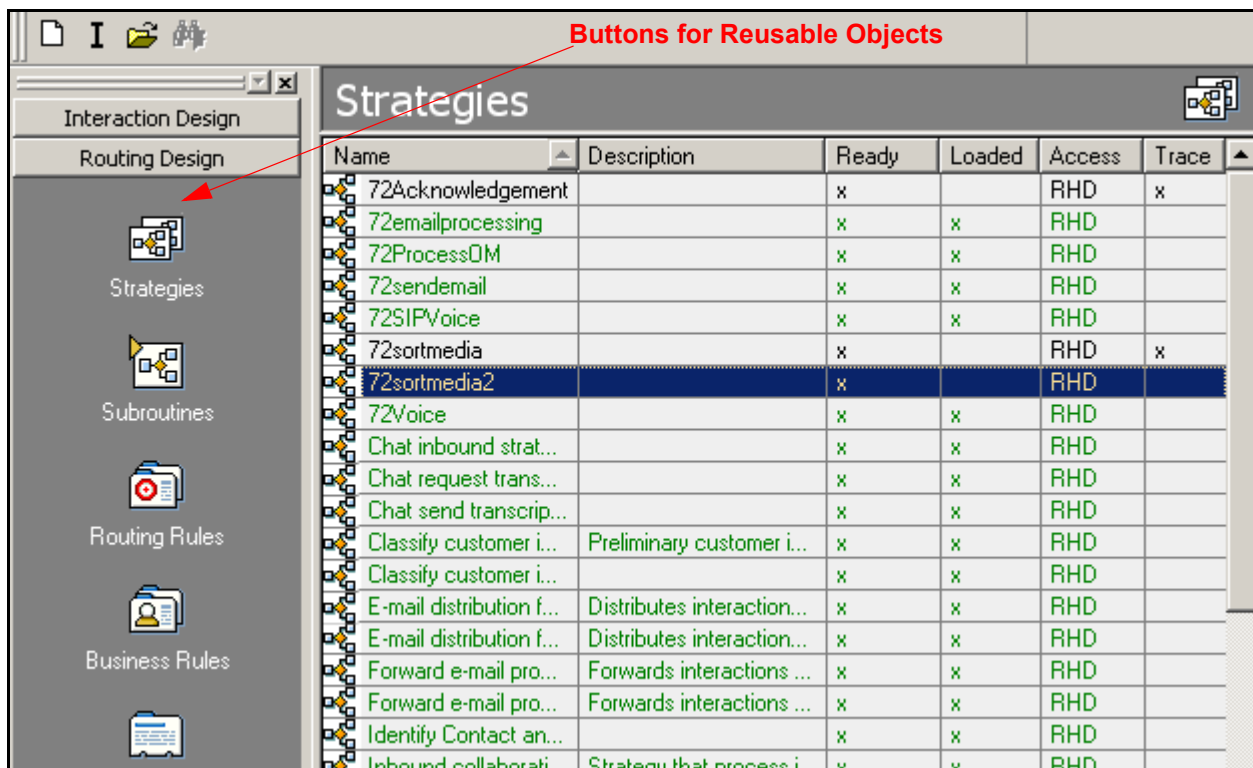


Figure 90: Reusable Object Buttons (Not All Shown)

Clicking a button for a reusable object brings up a list of those objects. For example, clicking Subroutines brings up the Subroutines list (see Figure 91).

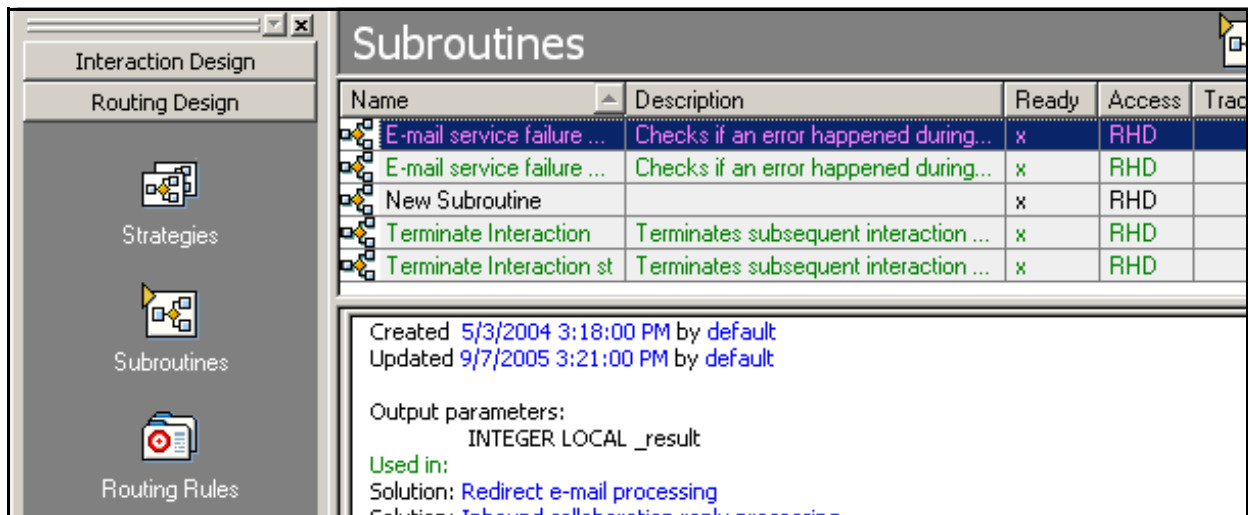


Figure 91: Subroutines List

Similarly, clicking Statistics shows the Statistics list (see Figure 92).

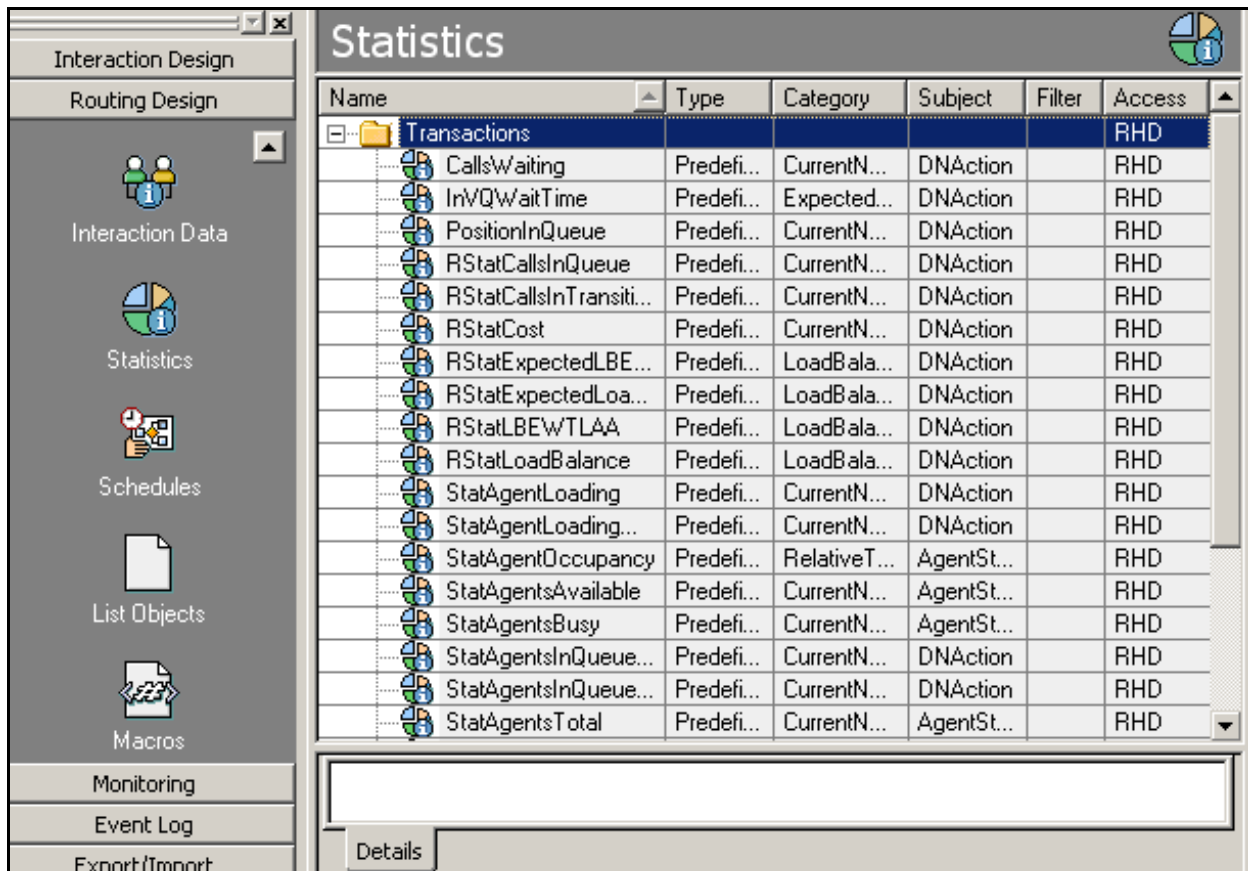


Figure 92: Statistics List

Summary information about each reusable object is presented in the following section. The information includes whether the reusable object applies to non-voice interactions. Detailed information can be found in *Universal Routing 8.1 Reference Manual* and *Interaction Routing Designer 8.1 Help*.

Strategies

A *strategy* is a set of decisions and instructions that tell Universal Routing Server how to handle and where to direct interactions under different circumstances (see Figure 28 on [page 44](#)).

- You load a voice routing strategy in IRD Monitoring view by clicking the Monitoring shortcut (see Figure 90 on [page 115](#)) followed by the Loading or Group Loading shortcut (not shown). In the case of Loading view, you select the switch and routing point, right-click, select Load Strategy from the menu, and select a strategy from a dialog box.
- You load non-voice (multimedia) strategies on virtual routing points (see Figure 67 on [page 84](#)) by using the Strategy Activation Wizard (see Figure 322 on [page 363](#)).

Subroutines

A *subroutine* (previously called a *substrategy*) is a strategy called from within a strategy using the Call Strategy object (see Table 13 on [page 209](#)) or another subroutine. Like a strategy, a subroutine provides instructions to URS on how to route an interaction. A subroutine can contain any of the IRD objects, routing rules, or functions, including another subroutine.

- Subroutine names appear in the Subroutines list, instead of in the Strategies list. You get to this list by clicking the Subroutines icon that is shown in Figure 90 on [page 115](#).
- When in IRD's Interaction Design window, the object browser (see Figure 36 on [page 61](#)) lists any subroutines associated with strategies in a Subroutines folder.

For more information on subroutines, including the dialog boxes that are used for subroutine input and output parameters, see *Universal Routing 8.1 Reference Manual*. The “Business Process Samples” on [page 369](#) include sample subroutines.

Routing Rules

Used only by voice routing strategies in 7.6, *routing rules* specify the method of target selection. [Figure 93](#) shows an example routing rule.

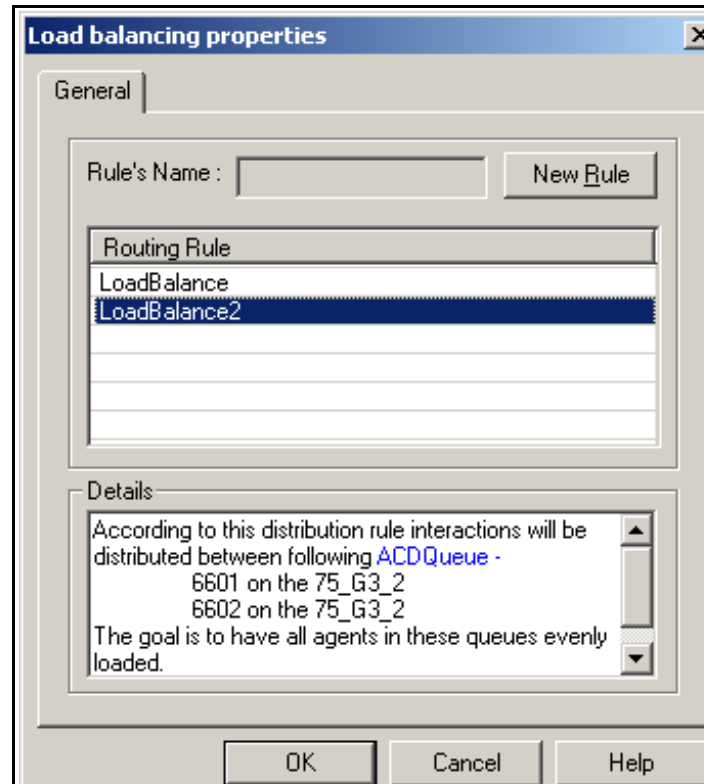


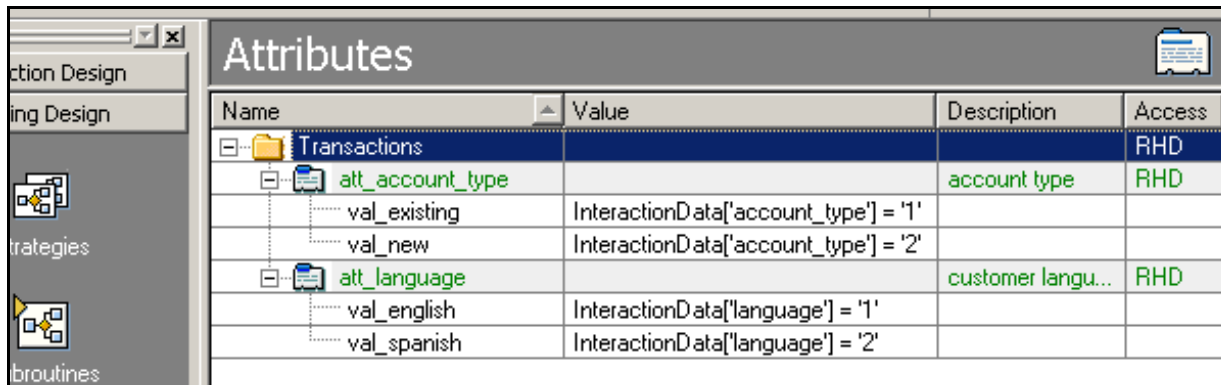
Figure 93: Example Routing Rule

Many voice Routing objects (see “Buttons for Routing Objects” on [page 125](#)) use routing rules in their properties. These include: Force, Load Balancing, Percentage, Service Level, Statistics, Switch to Strategy, and Workforce.

The Route Interaction object that is discussed on [page 126](#) does not use routing rules. Other objects that do not use routing rules are the Default object and the Routing Selection object (see [page 125](#)).

Attributes

Used mostly by voice routing strategies, *attributes* are pieces of call or customer data and all possible values. In order to use each piece of data for strategy decisions, you must first define each piece of data in IRD as an attribute. You can then use the attributes to create business rules. [Figure 94](#) shows some example attributes.



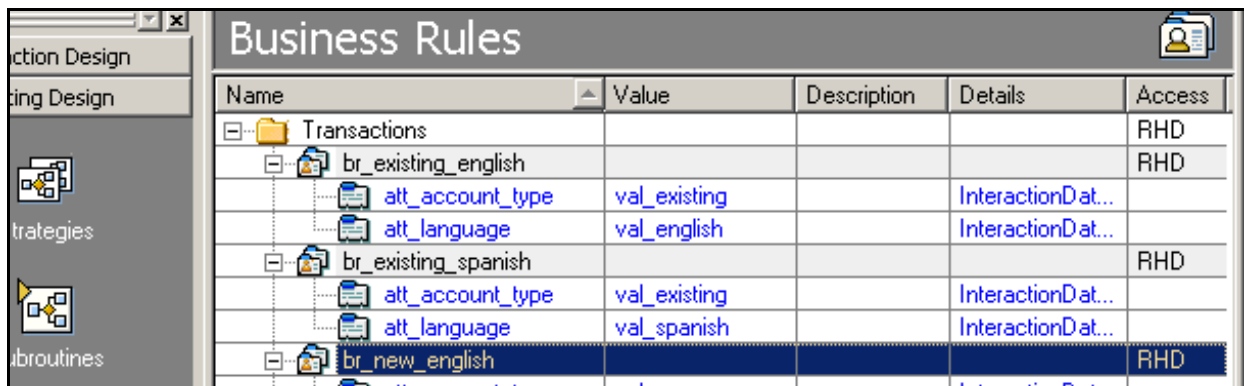
Name	Value	Description	Access
Transactions			RHD
att_account_type		account type	RHD
val_existing	InteractionData['account_type'] = '1'		
val_new	InteractionData['account_type'] = '2'		
att_language		customer langu...	RHD
val_english	InteractionData['language'] = '1'		
val_spanish	InteractionData['language'] = '2'		

Figure 94: Example Attributes

Do not confuse attribute reusable objects that you define in IRD with Configuration Manager Business Attributes that are used by non-voice routing strategies (see [page 161](#)).

Business Rules

Used mostly by voice routing strategies, *business rules* are created from the attributes just discussed. Business rules and their attributes enable you to create logical expressions for segmentation. [Figure 95](#) shows some example business rules.



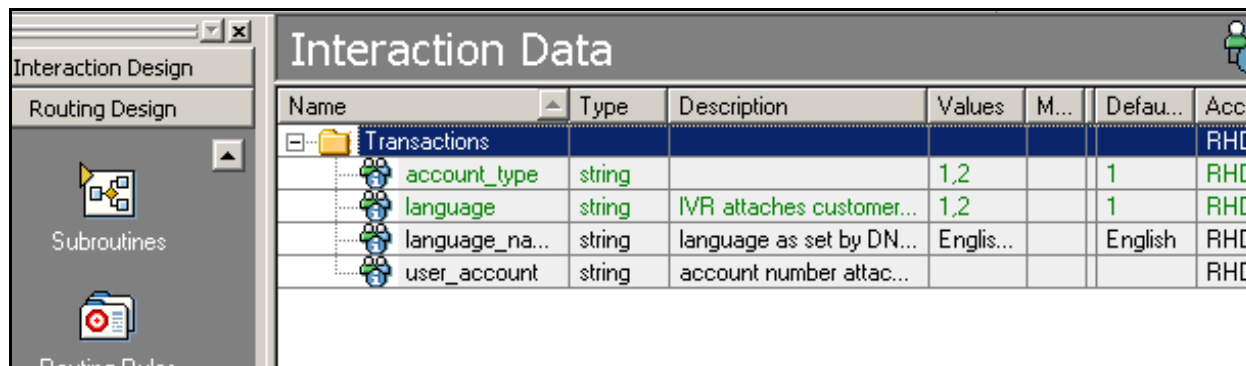
Name	Value	Description	Details	Access
Transactions				RHD
br_existing_english				RHD
att_account_type	val_existing		InteractionDat...	
att_language	val_english		InteractionDat...	
br_existing_spanish				RHD
att_account_type	val_existing		InteractionDat...	
att_language	val_spanish		InteractionDat...	
br_new_english				RHD

Figure 95: Example Business Rules

The advantage of using them is that they allow you to reuse the same business decision multiple times in the same strategy and in many different strategies. See *Universal Routing 8.1 Strategy Samples* for more information.

Interaction Data

Used by both voice and non-voice routing strategies, *interaction data* defines attached data keys used in a strategy (see [Figure 96](#)).



Name	Type	Description	Values	M...	Defau...	Acc...
Transactions						RHD
account_type	string		1,2		1	RHD
language	string	IVR attaches customer...	1,2		1	RHD
language_na...	string	language as set by DN...	Englis...		English	RHD
user_account	string	account number attac...				RHD

Figure 96: Example Interaction Attributes

You define interaction data in order to allow strategies to gather attached data. You can use interaction data in the following Miscellaneous objects discussed ahead (see [page 126](#)): Assign, If, and Function.

Statistics

You can define a custom *statistic* for use in within a strategy or subroutine. Or you can use or edit one of IRD's predefined statistics (see Figure 92 on [page 116](#)). For more information, see the chapter on routing statistics in the *Universal Routing 8.1 Reference Manual*.

When creating routing strategies that will be called by business processes, there is one particular predefined statistic that business process designers may find useful: StatAgentLoadingMedia.

The StatAgentLoadingMedia statistic works like StatAgentLoading with one difference: StatAgentLoadingMedia returns data about the current media (not the whole agent). For example, assume Stat Server reports for some agent vector state:

- voice - one busy agent, one available agent
- e-mail - three busy agents, two available agents

In this case, StatAgentLoading will return four available agents.

StatAgentLoadingMedia, if executed for call with media type of voice, will return 1; if executed for call with media type of e-mail, will return 3.

For information about calculating the minimum or maximum value of this statistic, see the E-mail object description in *Universal Routing 8.1 Routing Reference Manual*.

Schedules

Used mostly for voice routing strategies, a *schedule* instructs Universal Routing Server when to load/release a specific voice routing strategy automatically, including the switch and DN's to use. You can specify times for loading and releasing schedules using seconds, minutes, hours, dates, months,

years, and days. After saving, the schedule definition is stored in Configuration Manager as a Script object of type Schedule. See the *Universal Routing 8.1 Interaction Routing Designer Help* for more information.

List Objects

Used mostly for voice routing strategies, a list object contains strings of any nature (for example, DNIS or ANI strings), which can be used in strategies and are included in integrity checking. [Figure 97](#) shows an example.

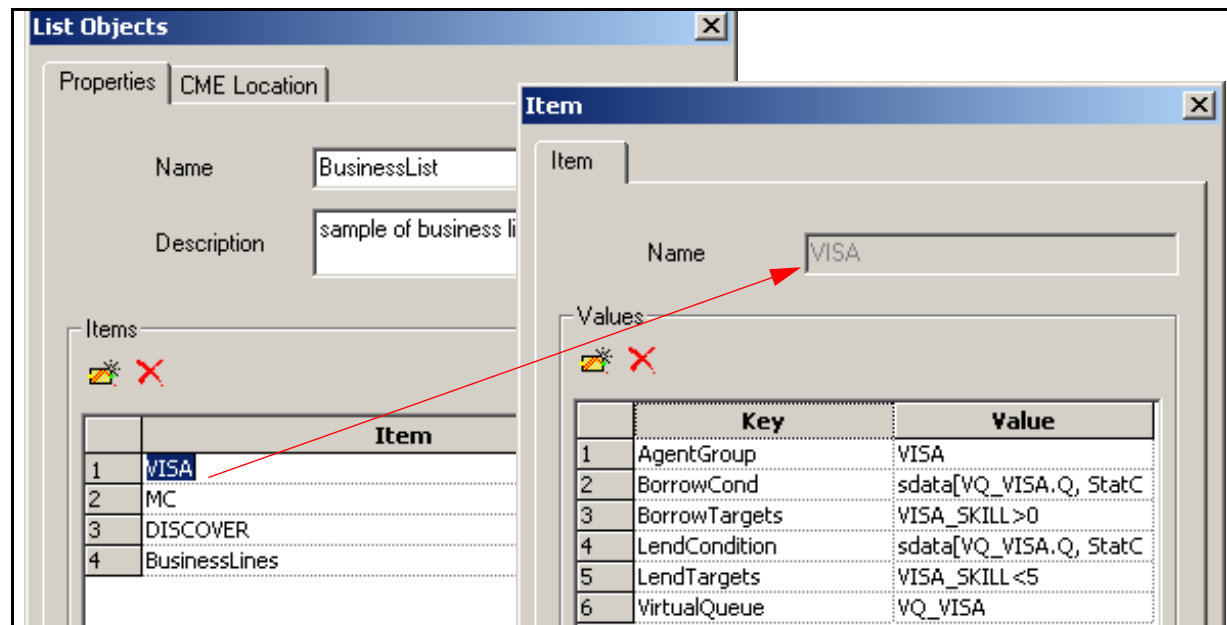


Figure 97: Example List Object

May be used to create lists of toll-free numbers. Rather than reference each individual 800 number in a strategy, you can logically group numbers together and name the group. Then, when you need to add/edit numbers, the strategy does not need changing; you just add to/edit the list object. See the *Universal Routing 8.1 Interaction Routing Designer Help* for step-by-step instructions. For examples of list object use, see the chapter on Share Agent by Service Level Agreement Routing in the *Universal Routing 8.0 Routing Application Configuration Guide*.

Macros

A macro is a Miscellaneous object (see [page 126](#)) that allows you to combine several objects and expressions in one re-usable block. This block works as a user-defined function. IRD supplies the following predefined macros: DelimitTargetList, ComplexSample, MakeAgentNotReady, RedirectCall, RedirectCallMakeNotReady, and SimpleSample. For more information, see *Universal Routing 8.1 Reference Manual*.

Strategy-Building Objects

Besides the reusable objects just discussed, IRD also provides strategy-building objects. Icons for each object category appear on the objects toolbar in the Routing Design window when you create or edit a strategy or subroutine. [Figure 98](#) shows the Routing Design window with only the starting Entry object, which appears when you start a new strategy.

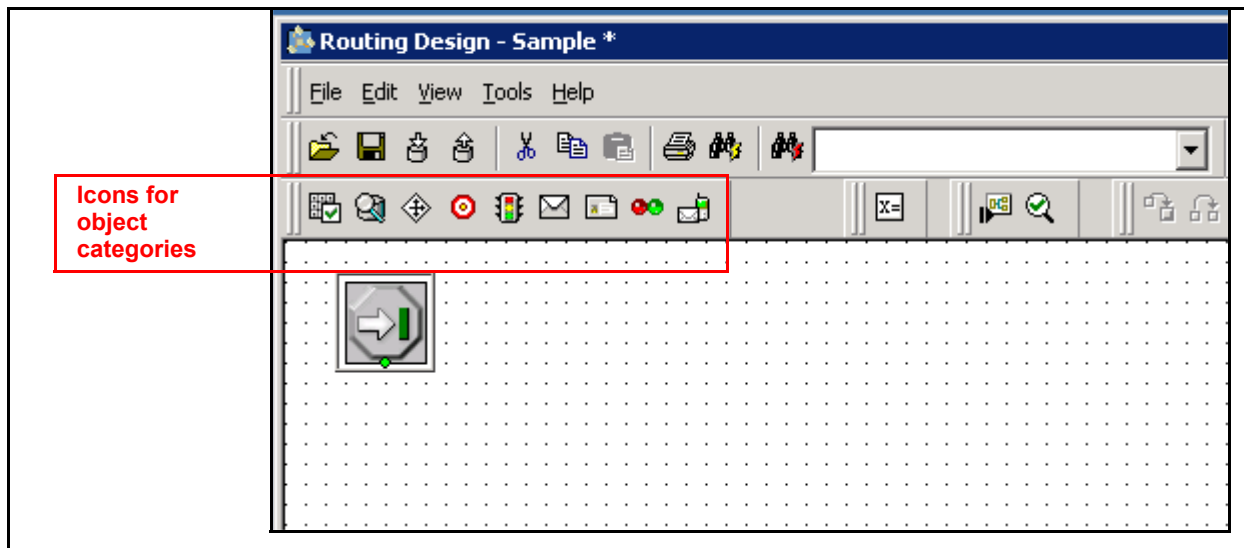


Figure 98: Routing Design Window with Entry Object

When you click an icon in the toolbar that represents an object category, buttons for all objects that belong to that category drop into view. For example, if you click the third icon (Segmentation) in [Figure 98](#), buttons for all Segmentation objects drop into view (see [Figure 99](#)).

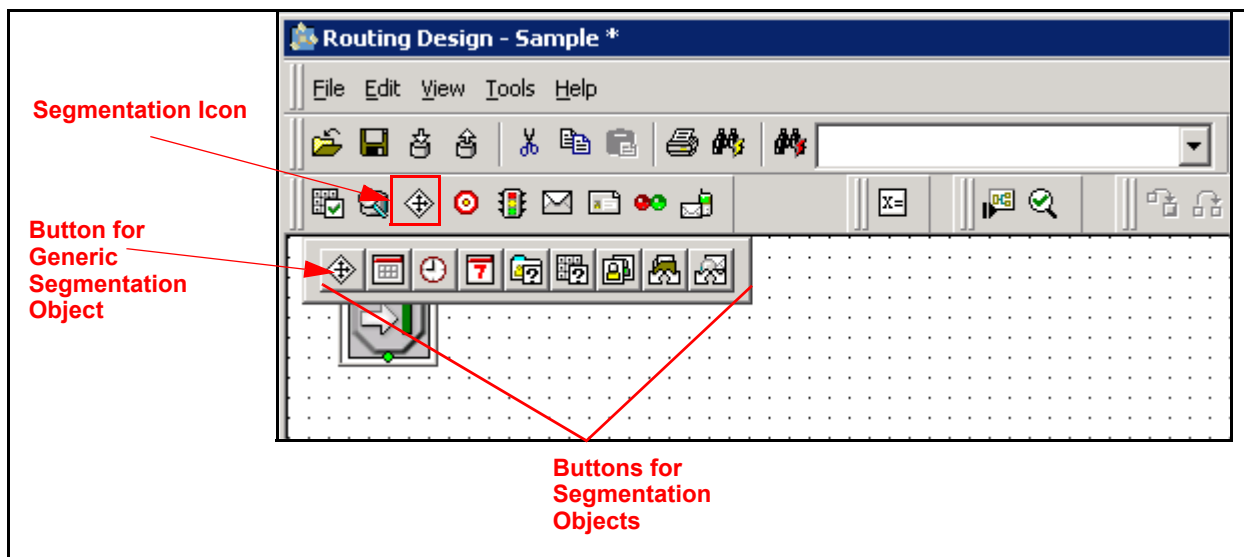


Figure 99: Dropdown Buttons for Segmentation Objects

Routing Design Toolbar

Figure 100 shows the Routing Design window toolbar for each strategy-building object category.

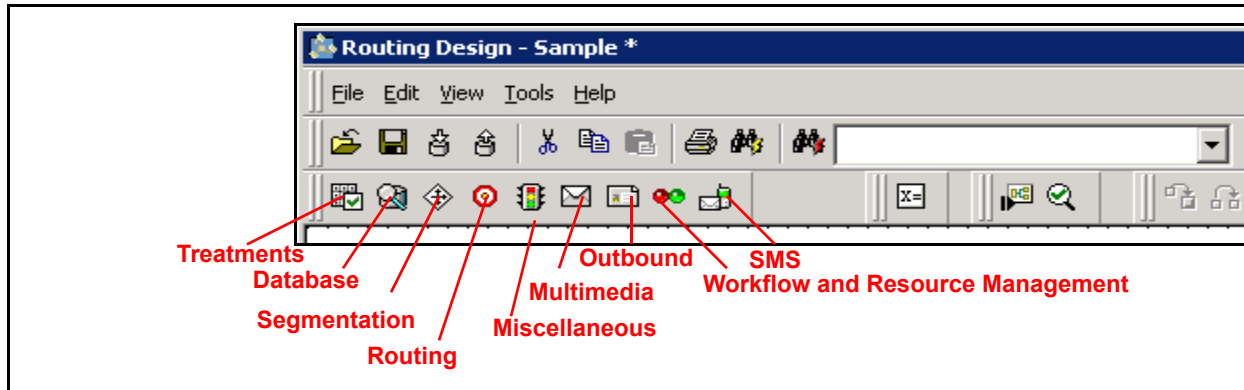


Figure 100: Strategy Building Object Categories

Note: When you are working in the Routing Design window (see Figure 114 on page 132), the strategy-building objects toolbar is dockable. It can be removed from its current position and be placed anywhere within the Routing Design window.

Object Buttons Associated with Toolbar Icons

Clicking an icon on the toolbar drops down a button bar for placing objects in your strategy. The next section describes the object buttons associated with each object category. The object buttons are listed in toolbar order.

Buttons for Treatment Objects

Treatment objects apply to voice interactions. Figure 101 shows the buttons that come into view when you click the Treatments icon in Figure 100.



Figure 101: Buttons for Treatment Objects

Treatment objects specify an action that is to be performed with the current interaction, such as playing music for the caller.

The Treatment objects from left to right are the following: Collect digits, Play announcement, Play announcement and collect digits, Play application, Record user announcement, Verify digits, Busy, Fast busy, Cancel call, Delete user

announcement, IVR, Music, Ringback, Set default destination, Silence, Text to speech, Text to speech and collect digits, Pause, RAN (Play recorded announcement). See the section on treatment objects in the *Universal Routing 8.1 Reference Manual* for more information.

Button for Data & Services

Figure 102 shows the buttons that come into view when you click the Data and Services icon in Figure 100 on [page 123](#).



Figure 102: Buttons Under Data & Services

- Clicking the first button in [Figure 102](#) and placing the object in your strategy opens the Database Wizard used for database lookups.
- The second button, External Service, enables you to exchange data with third party (non-Genesys) process servers that use the Genesys Interaction SDK or any other server/application that complies with Interaction Server communication protocol.
- The third button, Web Service, enables you to interact with Web-based applications outside of Genesys applications.

Note: For more information on the above strategy-building objects, as well as the strategy-building objects summarized in the pages ahead, see “IRD Objects Used in Business Processes” on [page 201](#).

Buttons for Segmentation Objects

Clicking the third button on the objects toolbar in Figure 100 on [page 123](#) reveals additional buttons for various types of Segmentation objects (see [Figure 103](#)).



Figure 103: Buttons for Segmentation Objects

Segmentation objects separate incoming interactions and put them on different paths based on criteria that you select. The buttons from left to right are the following:

- Generic (dialog box brings up Expression Builder that is shown in Figure 119 on [page 136](#))

- Date
- Time
- Day of the Week
- ANI (originating phone)
- DNIS (number dialed)
- Business
- Classify (Classification Switch)
- Screen

Note: The ANI and DNIS objects are intended for voice interactions. The Classify and Screen Segmentation objects are intended for multimedia interactions.

Buttons for Routing Objects

Clicking the fourth button on the objects toolbar (see Figure 100 on [page 123](#)) reveals additional buttons for various types of Routing objects (see [Figure 104](#)).



Figure 104: Buttons for Routing Objects

Routing objects specify a routing action that is to be performed with the current interaction, such as connecting a customer to a specific agent group. The buttons from left to right are the following:

- Service Level
- Load Balancing
- Percentage
- Statistics
- Switch to Strategy
- Default
- Force
- Selection
- Workforce
- Route Interaction
- Workbin
- Queue Interaction

Note: The Route Interaction, Queue Interaction, and Workbin objects are intended for routing strategies that are called by business processes. The remaining objects apply to voice routing strategies.

Buttons for Miscellaneous Objects

Clicking the fifth button on the objects toolbar (see Figure 100 on [page 123](#)) reveals additional buttons for various types of Miscellaneous operations (see [Figure 105](#)).



Figure 105: Buttons for Miscellaneous Objects

Miscellaneous objects are used for flow control or for performing operations, such as executing a function or directing interactions that are based on an If statement. The buttons from left to right are the following:

- Entry (IRD automatically places it as the first object in a strategy)
- Exit
- If
- Assign
- Function
- Macro
- Error Segmentation
- Call Subroutine
- Multi-Assign
- Multi-Attach
- Multi-Function

Buttons for Multimedia Objects

Clicking the sixth button on the objects toolbar (see Figure 100 on [page 123](#)) reveals additional buttons for Multimedia objects (see [Figure 106](#)).



Figure 106: Buttons for Multimedia Objects

The buttons from left to right are the following:

- Stop Interaction
- Acknowledgement
- Autoresponse
- Chat Transcript
- Send E-mail
- Redirect E-mail
- Forward E-mail
- Reply from External Resource
- Screen
- Multi-Screen
- Classify
- Attach Categories
- Create Interaction
- Create E-mail Out
- Create Notification
- Create SMS
- Identify Contact
- Update Contact
- Render Message Content
- Find Interaction
- Update Interaction
- Update UCS Record
- Submit New Interaction
- Distribute Custom Event

See Table 8 on [page 201](#) for summary information on these objects.

Buttons for Outbound Objects

Clicking the seventh button (Outbound) on the objects toolbar reveals additional buttons to support the Genesys Outbound product including proactive interaction routing (see [Figure 107](#)).



Figure 107: Buttons for Outbound Objects

The buttons from left to right are the following:

- Add Record
- Do Not Call
- Processed
- Update Record
- Reschedule Record

Note: The Outbound objects are designed to be used in strategies that are configured for proactive routing functionality, which are Open Media interactions that are processed with the `outbound_preview` media type. For more information, see the *Genesys 7.6 Proactive Routing Solution Guide*.

Buttons for Workflow and Resource Management Objects

Clicking the eighth button (Workflow and Resource Management) on the objects toolbar reveals additional strategy-building objects that enable you to control certain settings for strategies, Places, and Agents (see [Figure 108](#)).

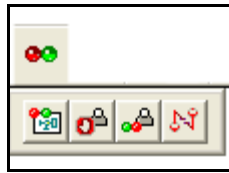


Figure 108: Buttons for Workflow and Resource Management Objects

The buttons from left to right are the following:

- Set Multimedia Strategy State
- Set Agent DND State
- Set Agent Media State
- Force Logout

See Table 9 on [page 206](#) for summary information on these objects.

Buttons for SMS Objects

Clicking the ninth button (SMS Objects) on the objects toolbar reveals buttons used for creating and sending SMS messages (see [Figure 109](#)).



Figure 109: Buttons for SMS Objects

The buttons from left to right are the following:

- Create SMS Out
- Send SMS Out

See Table 10 on [page 207](#) for summary information on these objects.

Using the Strategy-Building Objects

This section explains how you define interaction processing in a strategy by using strategy-building objects.

Procedure:

Placing an object in a strategy, configuring its properties, and connecting it to another object

Purpose: To define an interaction processing step within a strategy.

Start of procedure

Using the Generic Segmentation strategy-building object as an example:

1. Click the icon for Segmentation objects to drop down the button toolbar (see Figure 103 on [page 124](#)).
2. Click the button for the Generic Segmentation object on the toolbar (first button in Figure 99 on [page 122](#)).
3. Click inside the Routing Design window (see Figure 98 on [page 122](#)) to place the object inside the strategy.
4. Connect the Entry object to the Generic Segmentation object by connecting (drawing a line from) the bottom port of Entry object to the left input port of the Generic Segmentation object.
5. Double-click the Segmentation object in the Routing Design window to open its dialog box (see [Figure 110](#)).

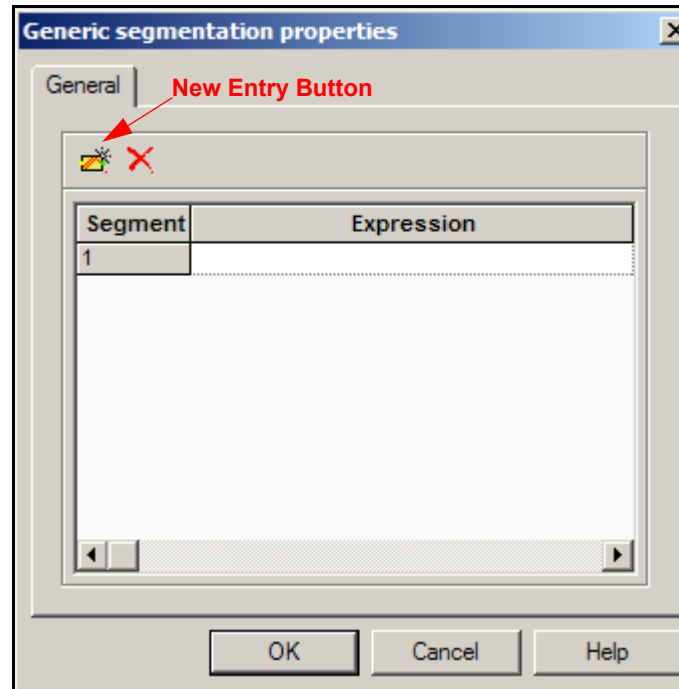


Figure 110: Generic Segmentation Properties Dialog Box: Starting

- Assign properties in the dialog box. For this object, properties are expressions created in Expression Builder. To keep things simple, details on Expression Builder are not included here (but are included in “Segmenting Interactions” on [page 328](#)). Assume, after creating expressions, that the dialog box appears as shown in [Figure 111](#).

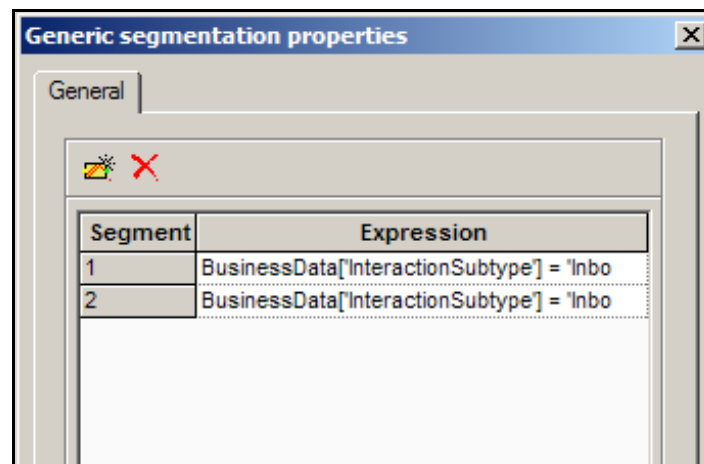


Figure 111: Generic Segmentation Properties Dialog Box: Completed

- Click OK to close the Generic Segmentation Properties dialog box.

End of procedure

Next Steps

- The next step is to define the strategy-building object that is to be used when each expression in [Figure 111](#) is true. For example, you might want the Generic Segmentation object to send interactions to two different queues. In this case, you would place two Queue Interaction objects in the strategy as described on [page 337](#).
- After this is done, connect the green output ports of the Generic Segmentation object to the input ports of the Queue objects. At this point, the strategy would appear as shown in [Figure 112](#).

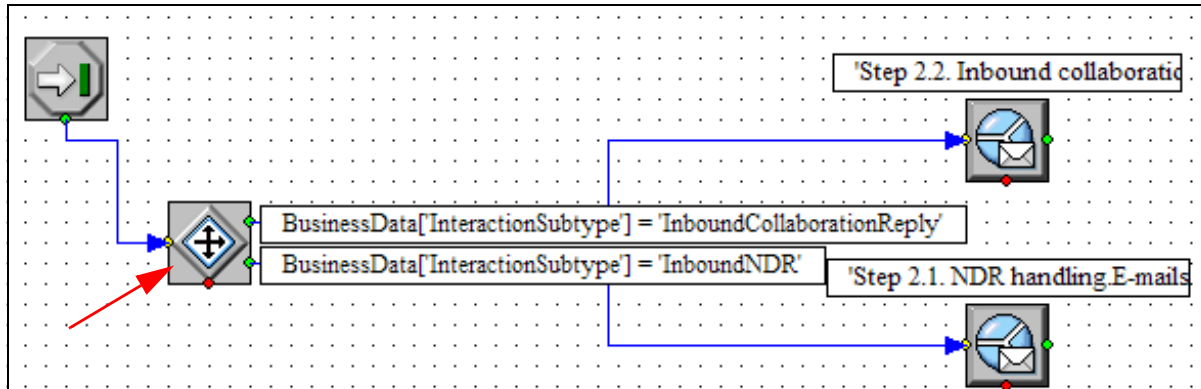


Figure 112: Example Strategy with Four Objects

Directing Strategy Flow

Typically, a choice-point is represented graphically in a strategy by an object with one yellow entry port (left side), one red error port (bottom), and one or more green exit ports (right side).

Note: You can customize port locations and connector shapes in the Routing Design window by right-clicking an object and selecting **Port Location** from the context menu. This brings up a dialog box for changing the location of the input, output, and error (default) ports. For more information see the Setting Options book in *Universal Routing 8.1 Interaction Routing Design Help*.

Look again at the Generic Segmentation object [Figure 112](#). This particular instance has a yellow input port, a red error port, and two green exit ports (see [Figure 113](#)).

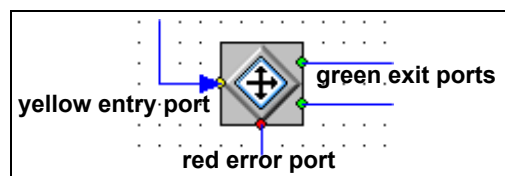


Figure 113: Generic Segmentation Object Ports

The Generic Segmentation object routes based on the true/false value of expressions in its properties dialog box (see Figure 111 on [page 130](#)). It uses the ports as follows:

- If the expression is true, the interaction goes out the applicable green side port to the next object.
- If the expression is false (or none of the expressions are true), the interaction goes out the red bottom port to the next object as described below.

Figure 114 shows the example strategy after creating objects for the red error port and connecting them.

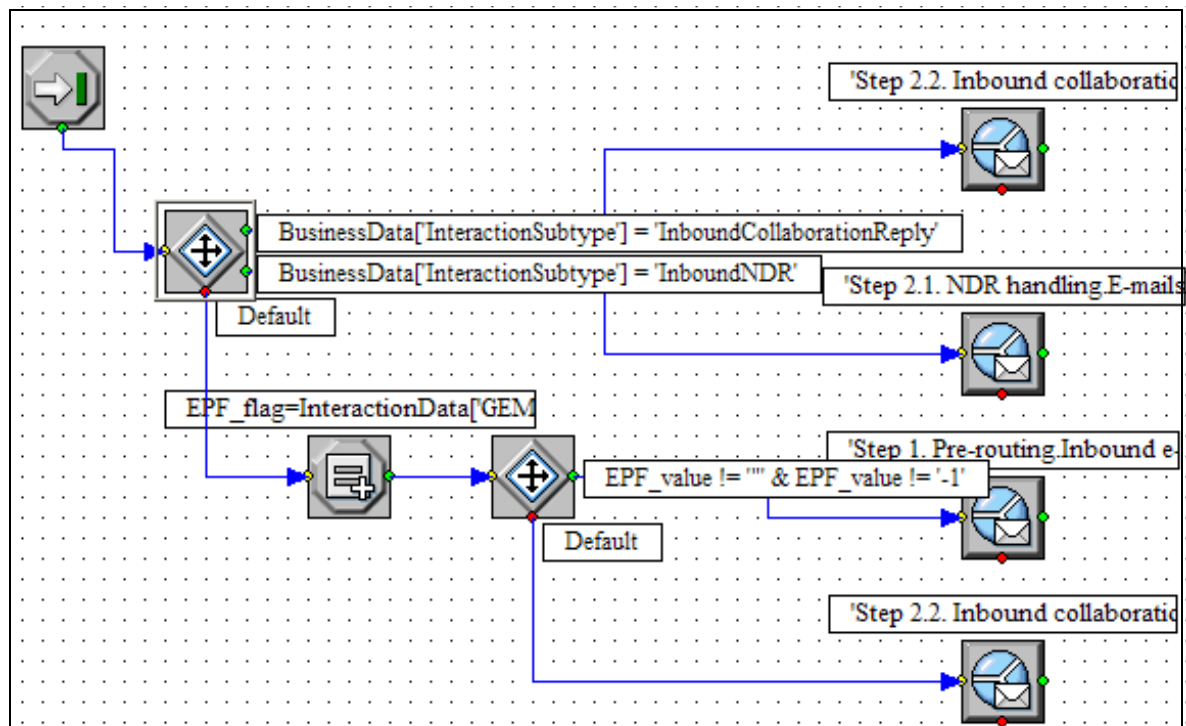


Figure 114: Inbound E-mail Preprocessing Strategy

As you can see from Figure 114, a strategy is made up of objects and the connections between objects. All strategies have an Entry object. The other objects you choose define the actions that IRD performs, and the connections that you make between objects define the sequence in which each object is executed. IRD selects only one connection to follow after handling an object. For detailed instructions on creating strategies, see “Creating Strategies” on [page 323](#).

Properties Dialog Boxes

When a strategy-building object is in the Routing Design window, double-clicking the object opens its properties dialog box. Here you can assign

values to the object's parameters. The content of the properties dialog box varies based on the object. Different examples are presented below. [Figure 115](#) shows an example completed properties dialog box for the Route Interaction object.

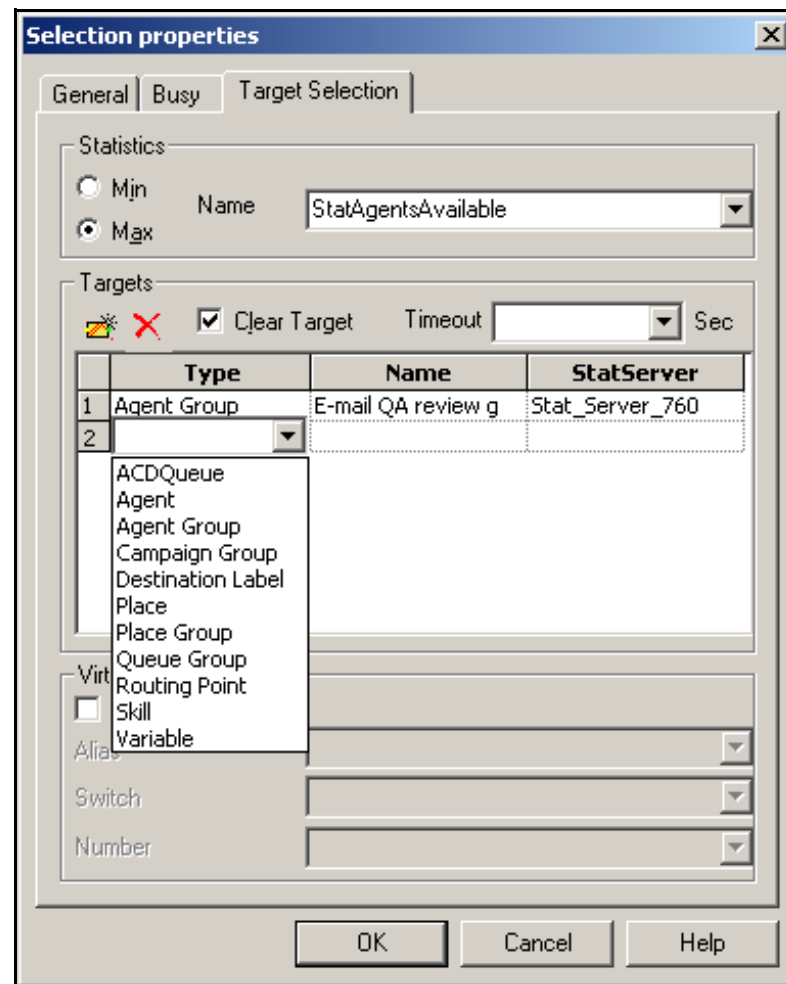


Figure 115: Example Route Interaction Properties Dialog Box

The selectable parameters in properties dialog boxes are object-specific. For example:

- When you use the Route Interaction object that is shown in [Figure 115](#), the parameters in the Target Selection tab are the routing targets that are shown in the drop-down menu.

In contrast, when you use the Workbin routing object (see [page 292](#)), targets are limited to Agent, Agent Group, Variable, or Skill.

- The parameters of some Segmentation objects are logical expressions (see “Building Logical Expressions” on [page 135](#)). [Figure 116](#) shows the Assign Properties dialog box in which the expression is assigned to a variable.

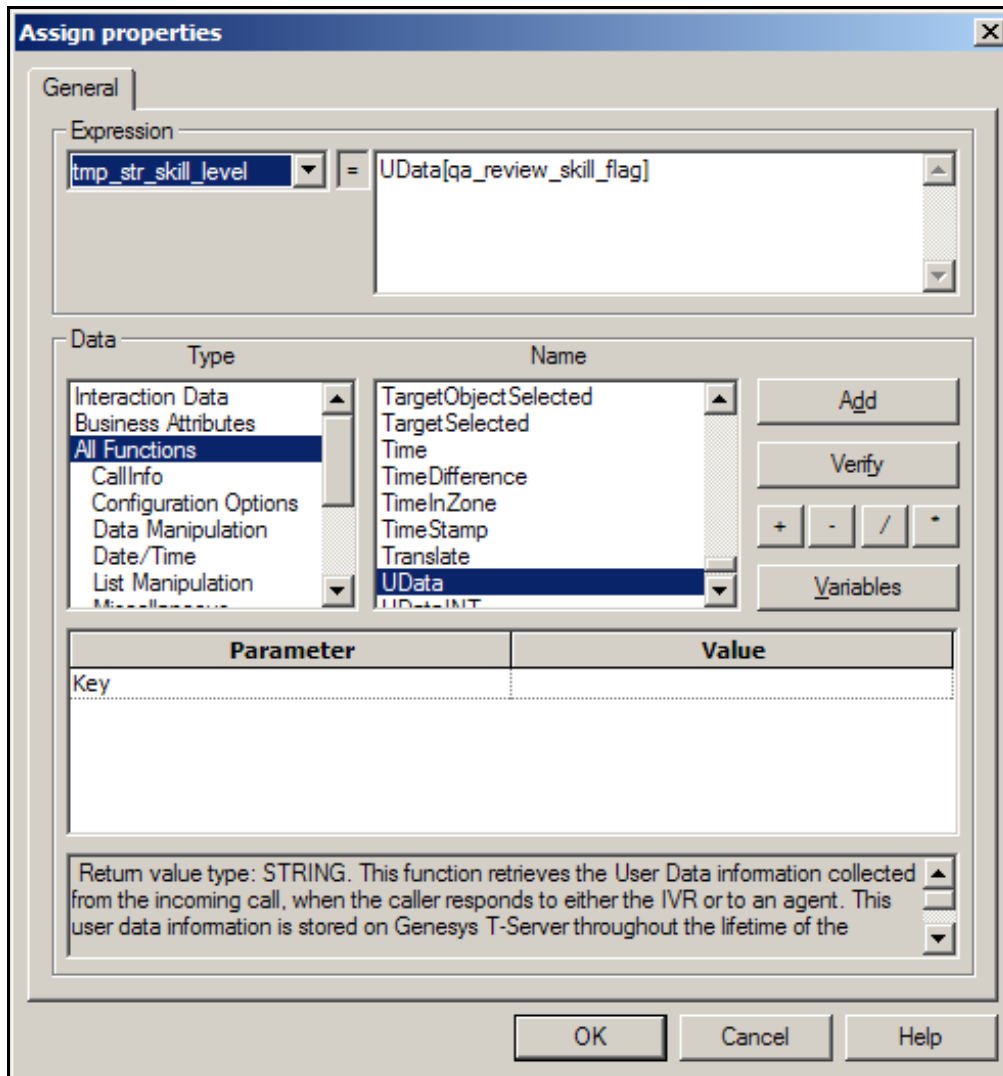


Figure 116: Example Assign Properties Dialog Box

Note: See [page 150](#) for information about defining and assigning variables.

- The properties dialog box for the Function object includes the function name, parameters and values. [Figure 117](#) shows an example.

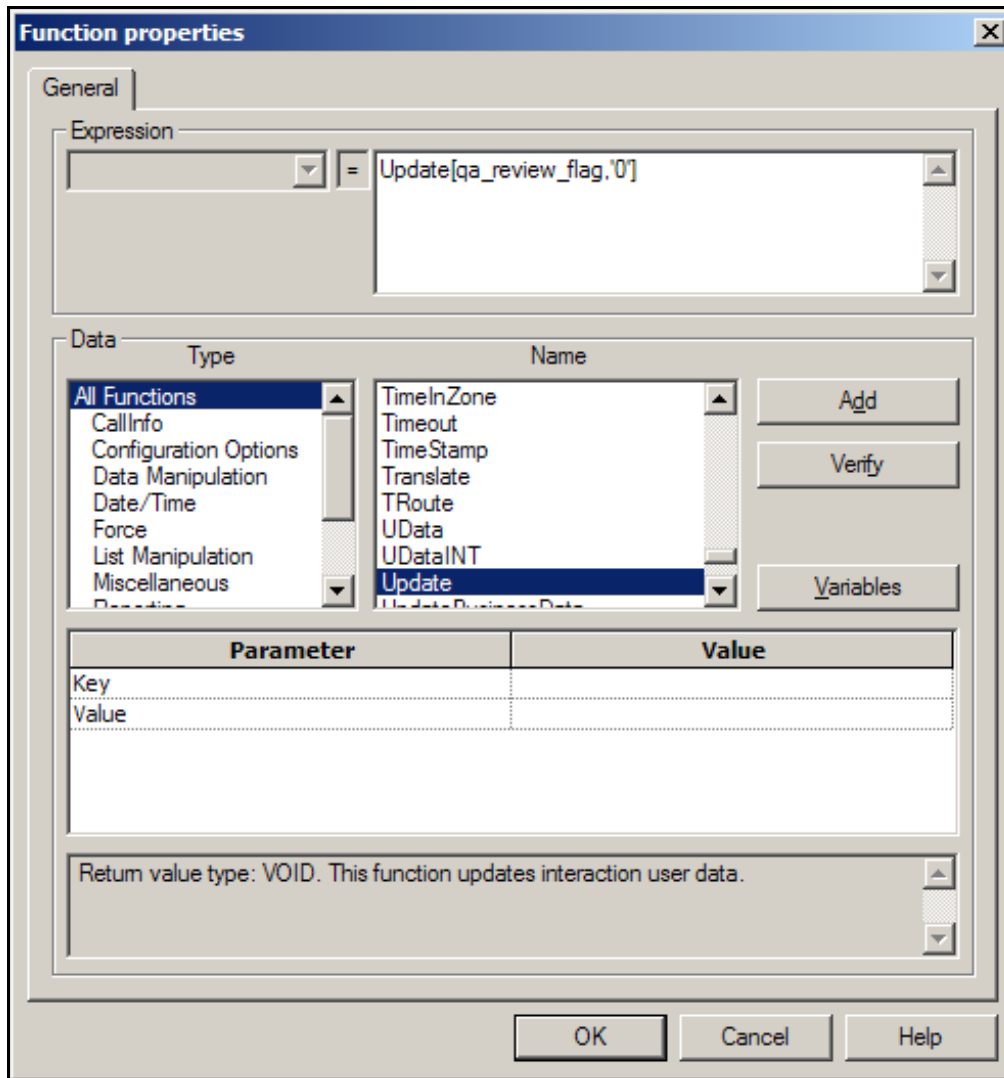


Figure 117: Example Function Properties Dialog Box

In summary, parameters entered in properties dialog boxes are object-specific and vary with each object.

Note: Almost every IRD object opens its own properties dialog box. The exceptions are: Entry, Exit, Default Route, and Treatment Cancel Call, and a few Function objects.

Building Logical Expressions

The properties of several IRD objects are defined as logical expressions. When creating a logical expression, you use `Expression Builder`.

For example, if you are using the Generic Segmentation object, click the down arrow that appears when you click under Expression in the object's properties dialog box (see [Figure 118](#)).

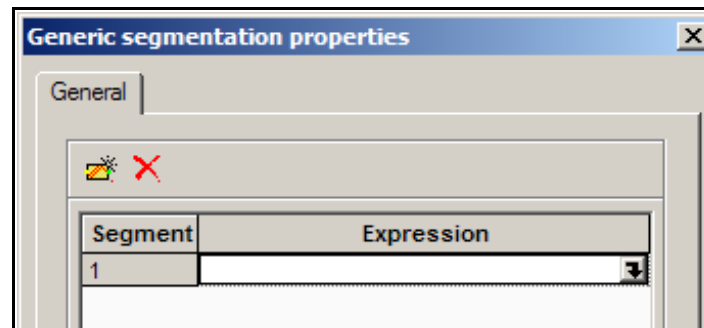


Figure 118: Generic Segmentation Object Down Arrow

Clicking the arrow that is shown in [Figure 118](#) brings up the Expression Builder. [Figure 119](#) shows the Expression Builder after construction of an expression.

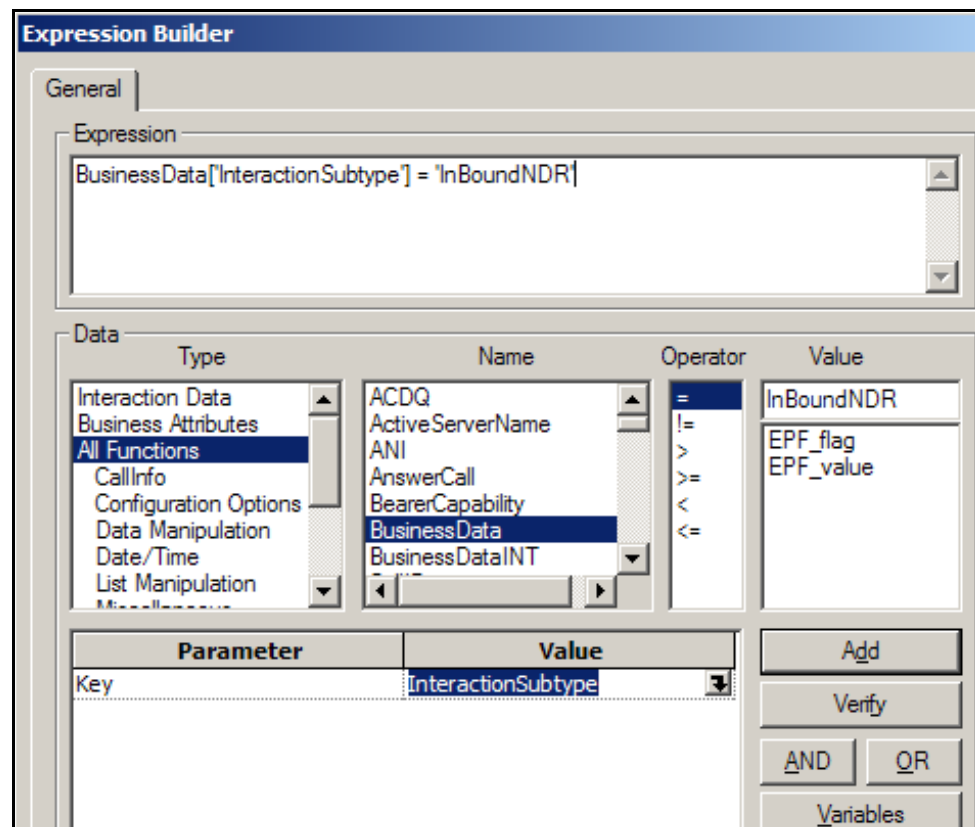


Figure 119: Expression Builder Dialog Box

Miscellaneous Objects and Logical Expressions

Under the Miscellaneous icon (see [Figure 105](#) on [page 126](#)), the If, Assign, and certain Function objects (see [Figure 140](#) on [page 152](#)) all use logical

expressions. The area for constructing the expression in these objects is the same as Figure 119 on [page 136](#). [Figure 120](#) shows an example completed If Expression Properties dialog box.

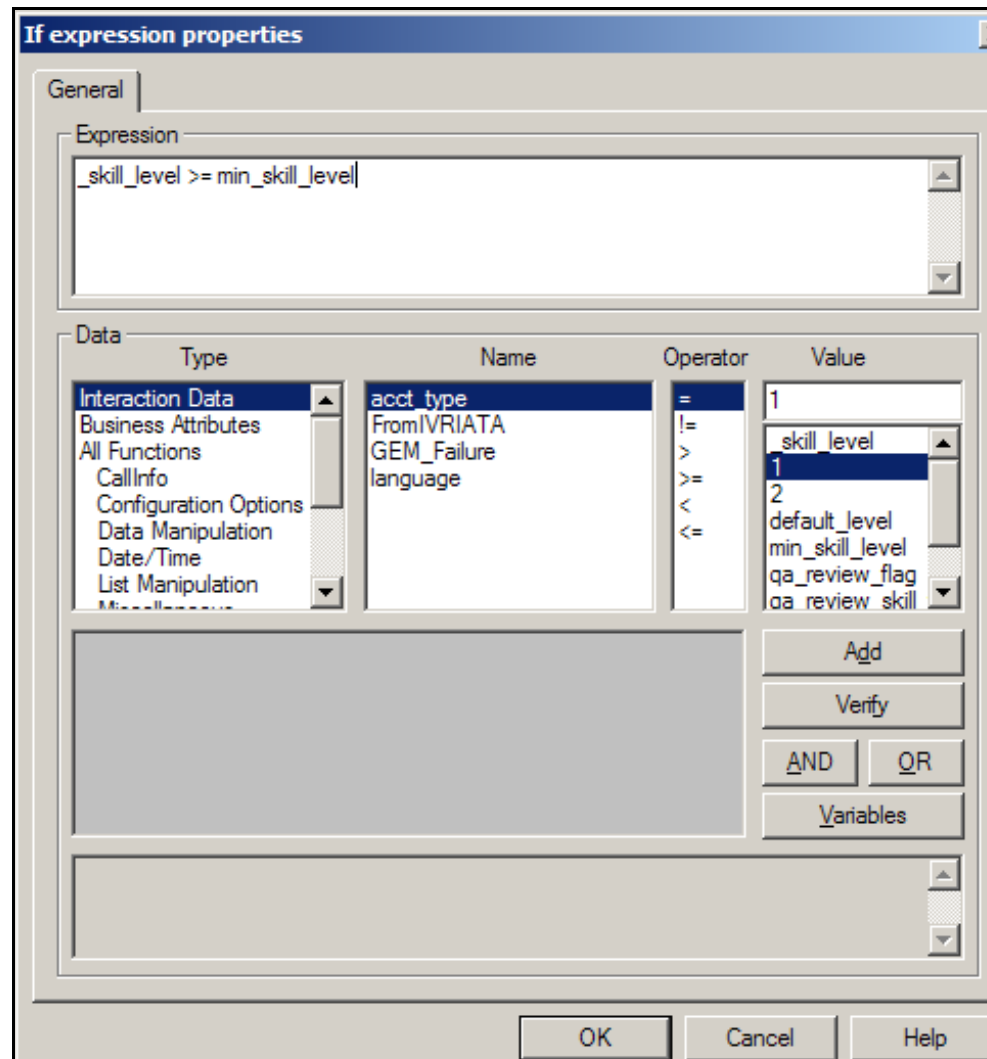


Figure 120: If Expression Properties Dialog Box

When placed in a strategy, the true/false value of the expression causes interactions to take different paths.

- If the expression is true, the interaction goes out the applicable green port to one object.
- If the expression is false, the interaction goes out the applicable red port to another object.

Routing Objects and Logical Expressions.

Under the Routing icon (see [Figure 104](#) on [page 125](#)), the target Selection and Route Interaction objects use logical expressions in the form of a *skill*

expression. These two objects use the Skill Expressions dialog box, which opens when you select Skill as a target type and click the arrow under Name. [Figure 121](#) shows an example Route Interaction Properties dialog box with a skill expression.

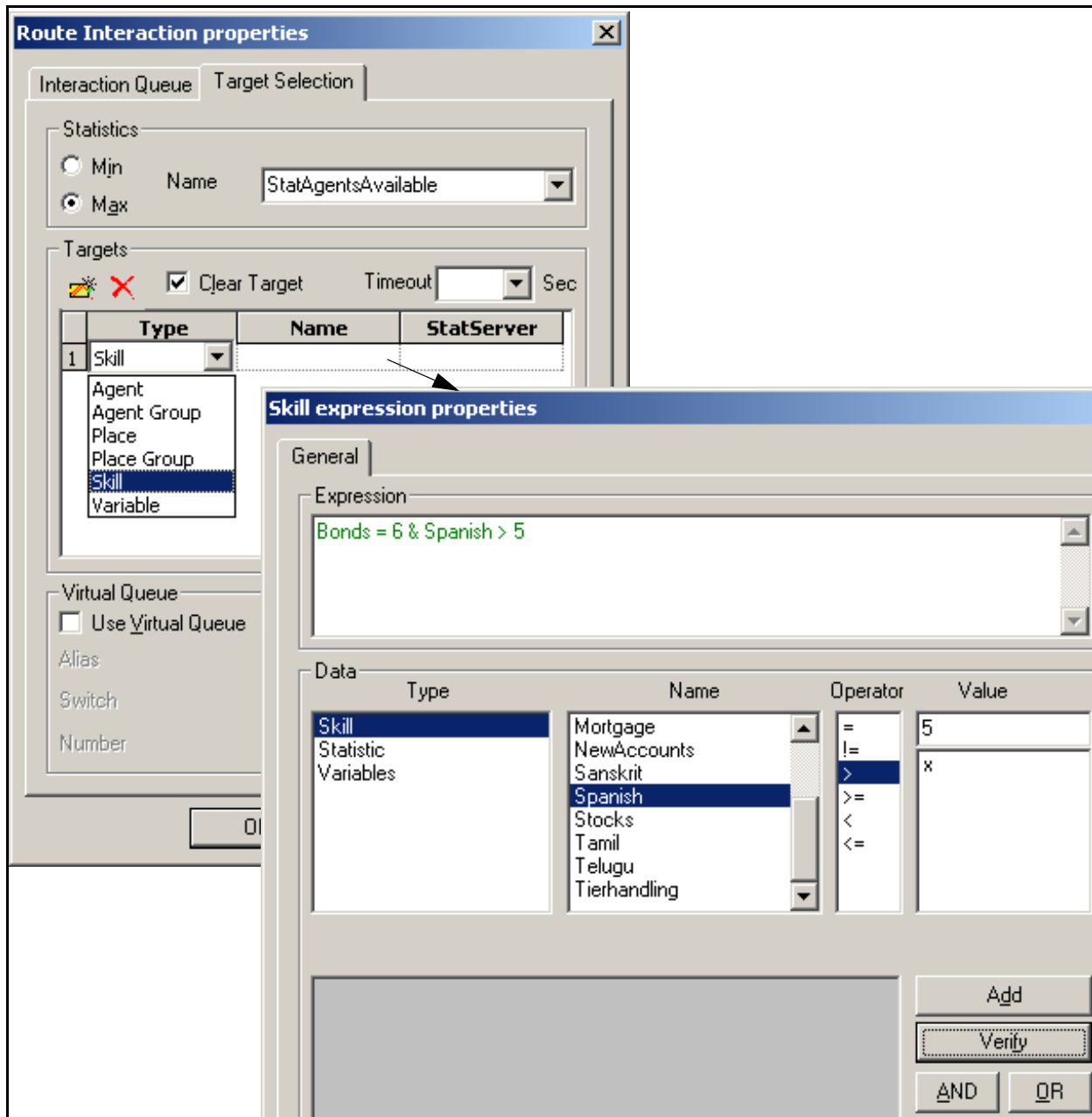


Figure 121: Skill Expression Properties Dialog Box

Functions for use in the Function object (see [Figure 105](#) on [page 126](#)) that support skill expressions include `CreateSkillGroup` and `Multiskill`.

For more information on functions and creating valid expressions, see the *Universal Routing 8.1 Reference Manual*.

Comment Object

Use a Comment object to annotate a strategy. You can insert a comment by right-clicking anywhere in the strategy and selecting **Insert Comments** (see [Figure 122](#)).

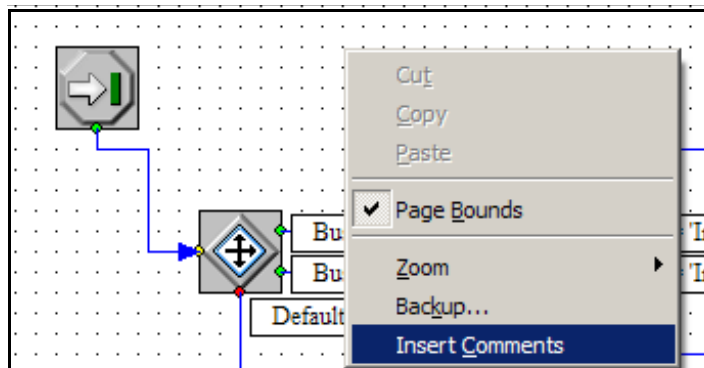


Figure 122: Insert Comments from Context Menu

A text box appears in the Routing Design window, which you can edit (see [Figure 123](#)).

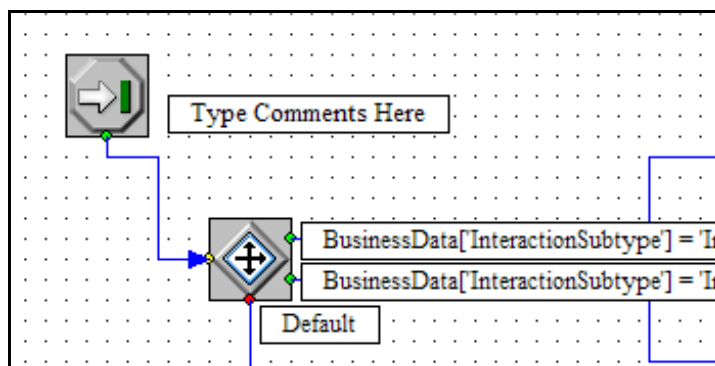


Figure 123: Comments Text Box

Other Design View Operations

You can perform other operations in the Routing Design window: close strategy, save strategy, backup, restore from previous version, cut, copy, paste, print, find, replace, and search. Use the toolbar that is shown in [Figure 124](#).

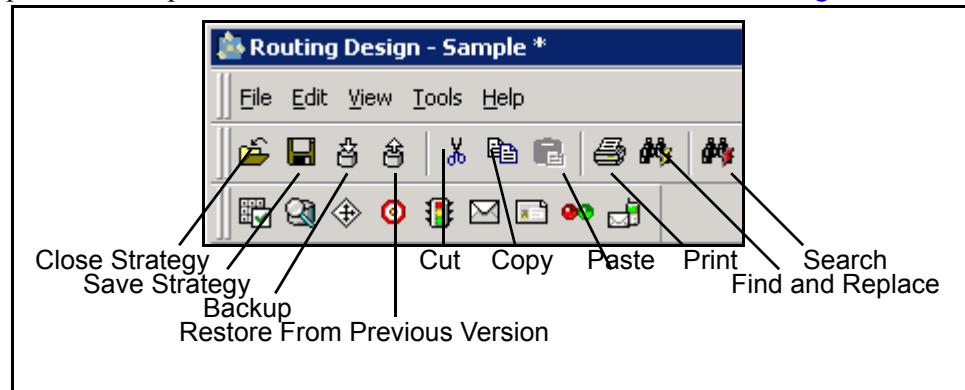


Figure 124: Toolbar: Other Strategy Operations

Procedure: Searching for text strings

The Search button allows you to search for text strings used in a strategy including objects, rules, functions, and so on. You can only search one strategy at a time. Within a strategy, you can limit the search to multiple selected objects.

Start of procedure

1. Open the strategy from the Strategies list pane.
2. Click the Search button in the toolbar (see [Figure 124](#)). The Find dialog box opens.
3. Type the name of the object into the Find what field. This feature is case sensitive so type the name exactly as it appears in the strategy. If you only want to search for an exact match, select the Match whole word only option.

Assume you type empl_id. The Find dialog box appears as shown in [Figure 125](#).

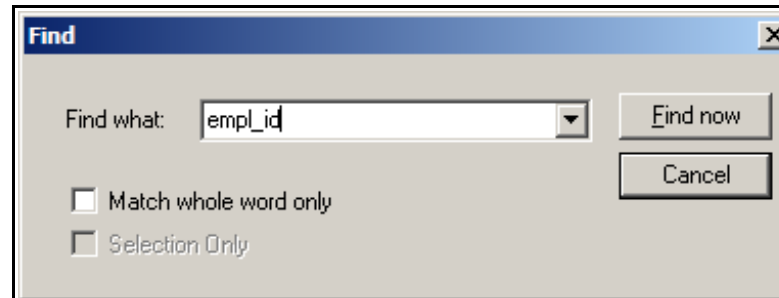


Figure 125: Find Dialog Box

4. Click Find now. The Find in Strategy output window appears below the Routing Design window and highlights the occurrences of the text string (see Figure 126).

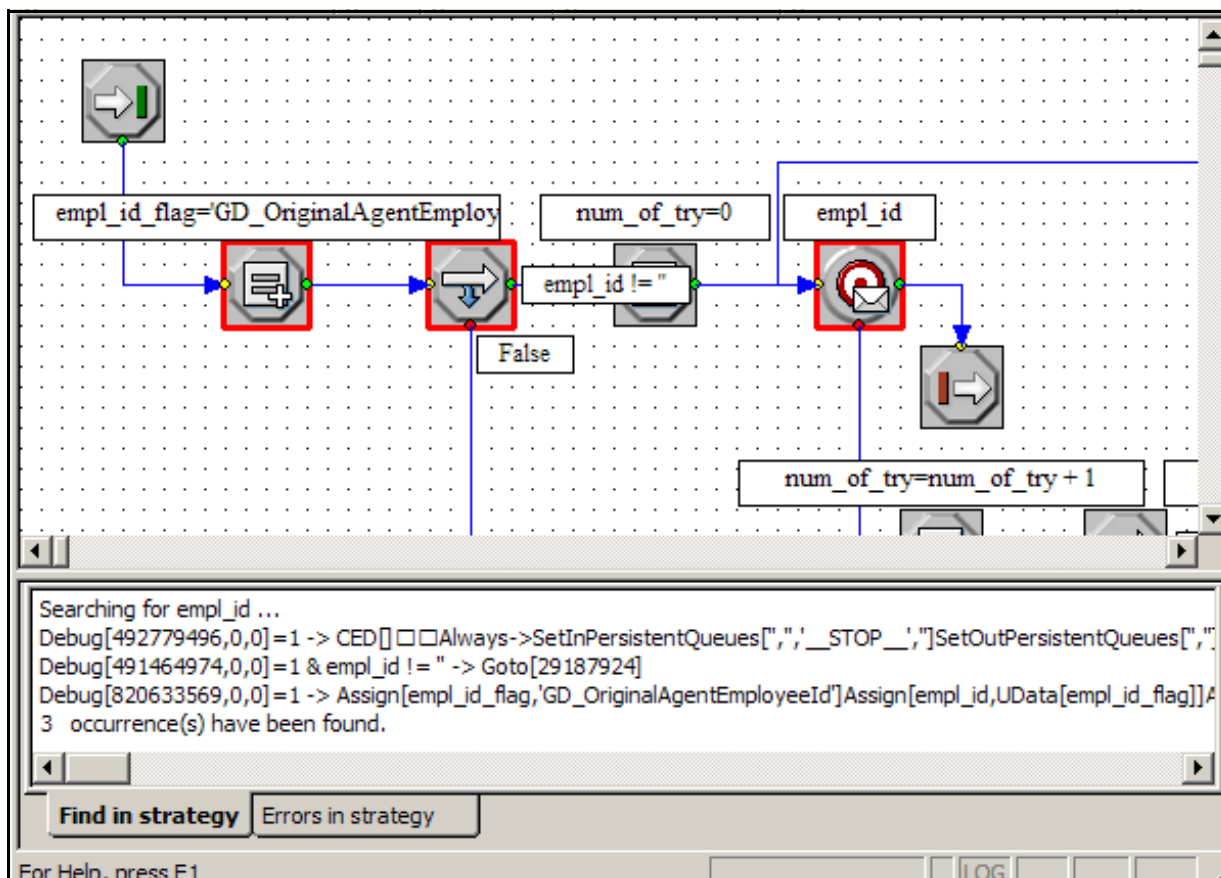


Figure 126: Objects Highlighted that Contain Text String

5. Double-click the line in the Find in strategy tab that begins with Debug. The object containing the search item is highlighted in the strategy.
6. Double-click the object to open its properties dialog box and view the text string.

7. Move through the list of string occurrences that appear in the list by using the Enter or Arrow keys on your keypad or the F3 function key. The object that contains the text string is highlighted as you move through the list.

End of procedure

Routing Design Options

The annotations that are shown in Figure 126 on [page 141](#) are not user-entered comments. The annotations appear in the Routing Design window when you select Routing Design Options from the Tools menu and set the Graph Settings tab as shown in [Figure 127](#):

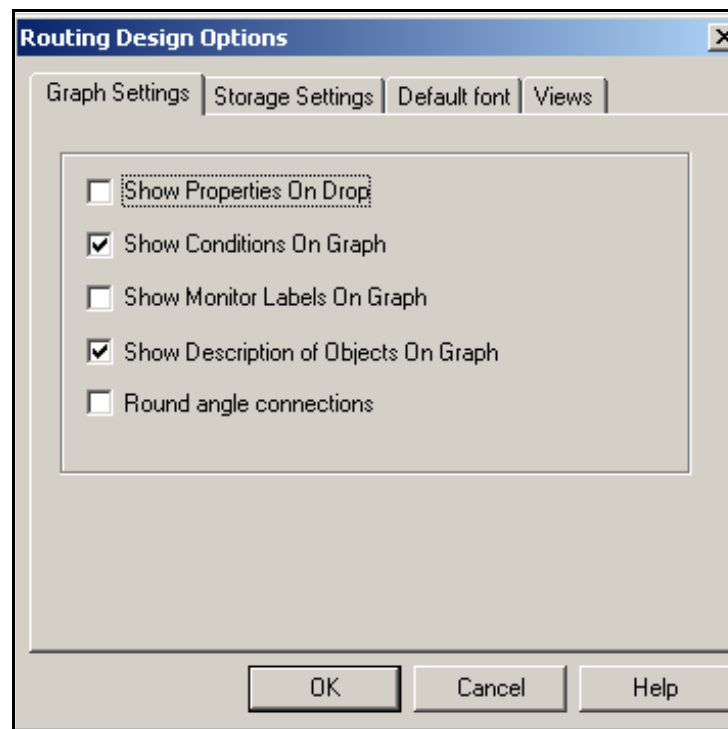


Figure 127: Graph Settings Tab

Note: The Routing Design Options dialog box applies to the Routing Design window (see Figure 98 on [page 122](#)). IRD does not use it for the Interaction Design window (see Figure 36 on [page 61](#)), which has its own options dialog box (see Figure 70 on [page 86](#)).

Use the Graph Settings tab to more clearly document interaction flow. For example, assume you wish to review the flow of Chat inbound strategy discussed in “ABC Simple Chat BP” on [page 379](#).

When you do not check any options in the Graph Settings tab that is shown in the Routing Design Options dialog box (see [Figure 127](#) above), only the

manually inserted comment objects (see [page 139](#)) appear. [Figure 128](#) shows Chat inbound strategy with only the comment objects.

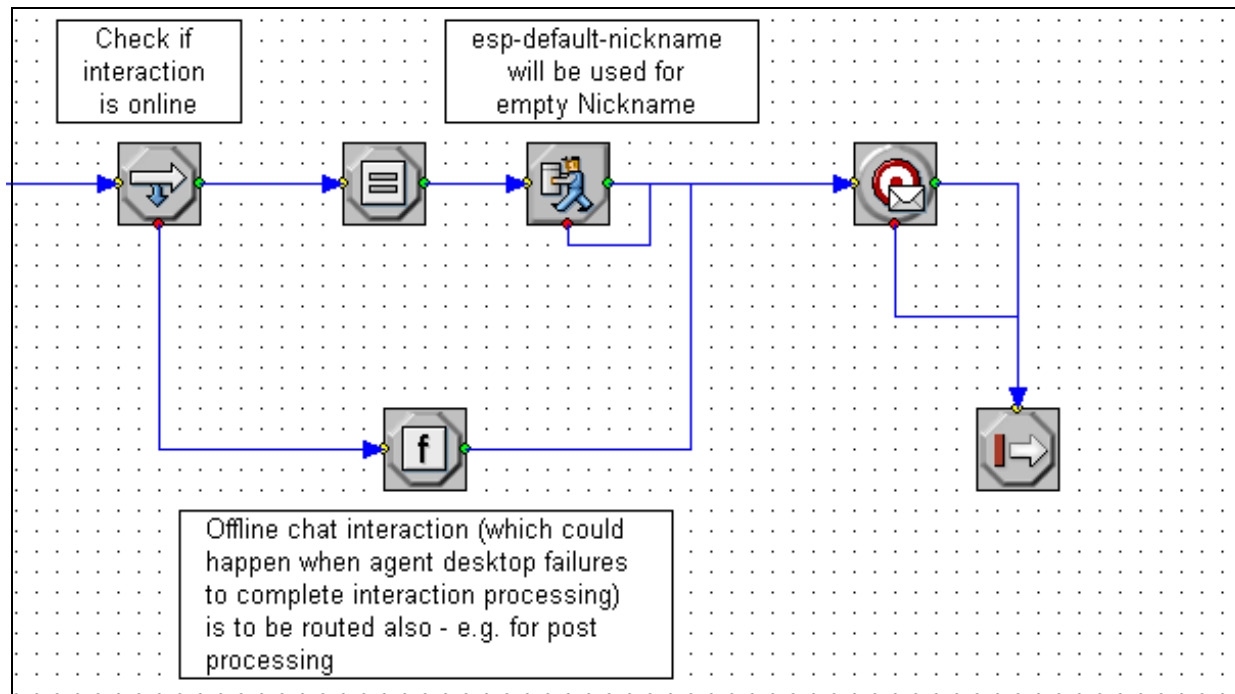


Figure 128: Chat Inbound Strategy with Only Comment Objects

[Figure 129](#) shows the strategy after checking Show Conditions on Graph.

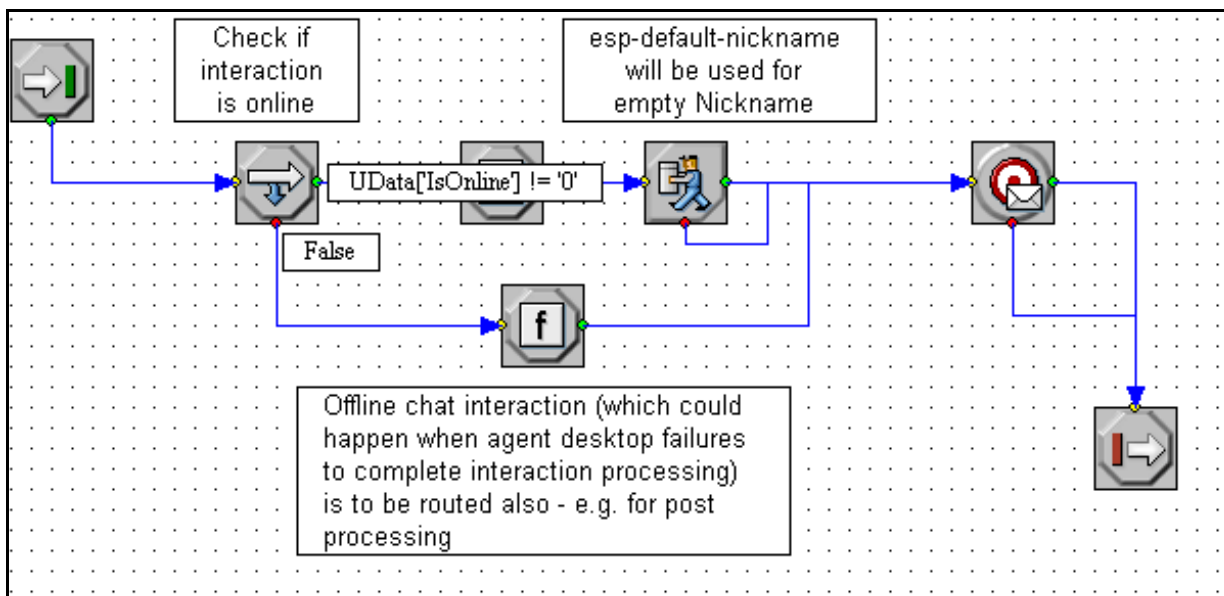


Figure 129: Show Conditions on Graph Checked

[Figure 130](#) shows the strategy after checking only Show Monitor Labels on Graph in the Routing Design Options dialog box.

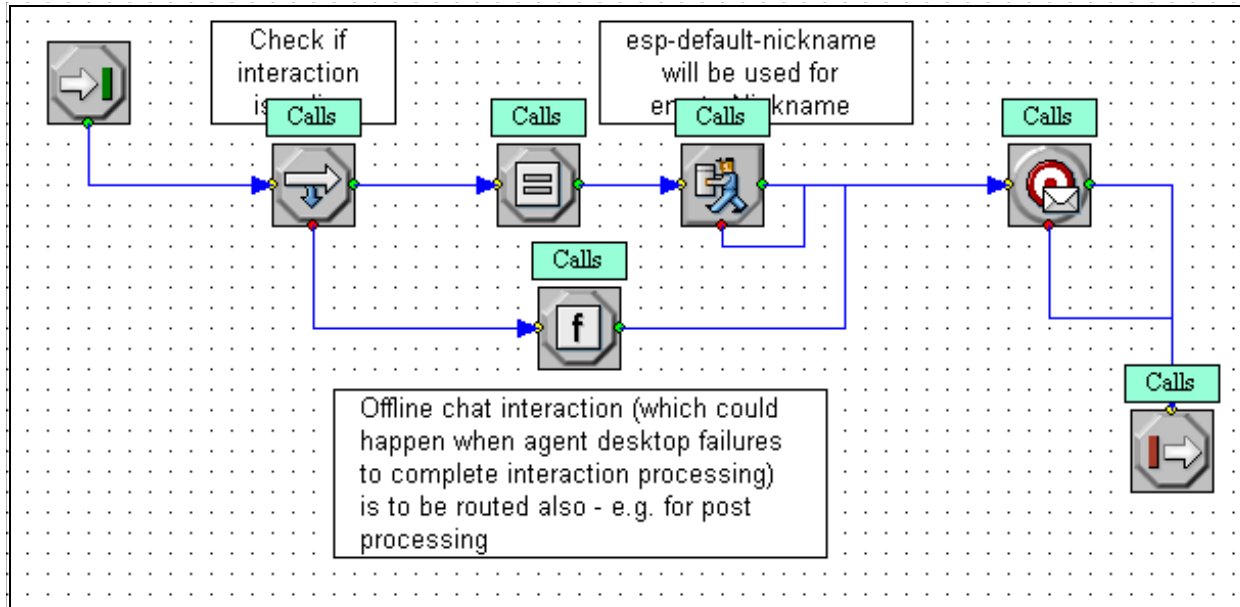


Figure 130: Show Monitor Labels on Graph Checked

Figure 131 shows the strategy after checking Show Description of objects on Graph.

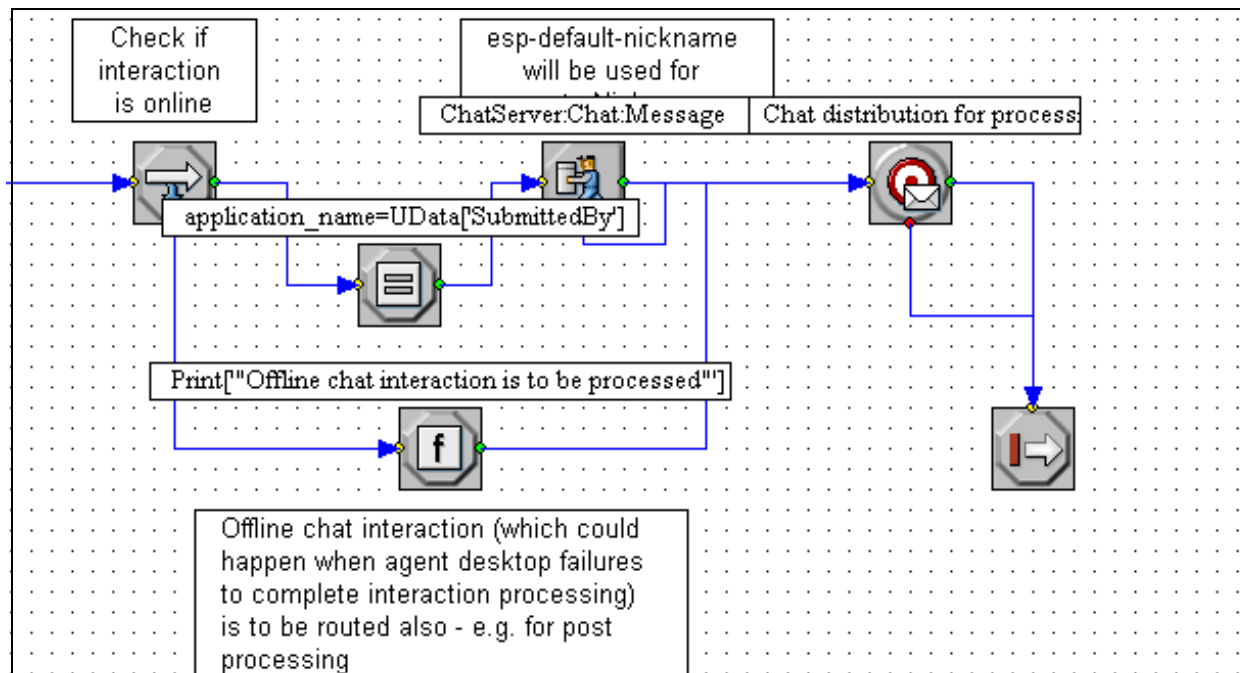


Figure 131: Show Description of Objects Checked

Figure 132 shows the strategy with only Round Angle Connections checked in the in the Routing Design Options dialog box.

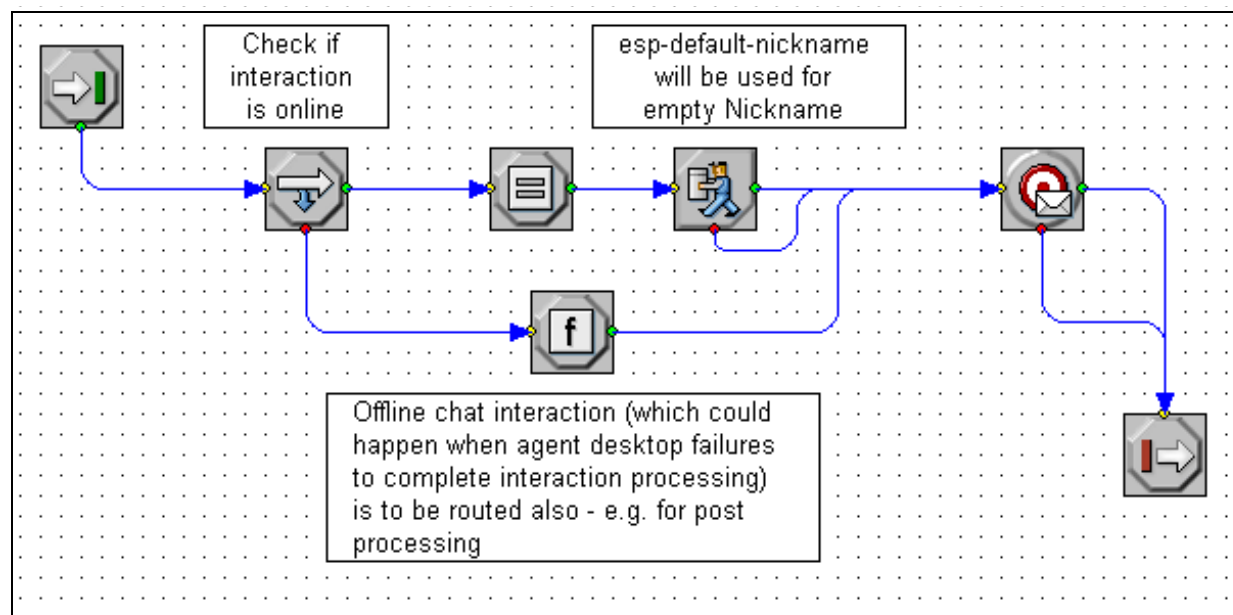


Figure 132: Round Angle Connections Checked

This section now returns to the second tab in the Routing Design Options dialog box. [Figure 133](#) shows the Storage Settings tab.

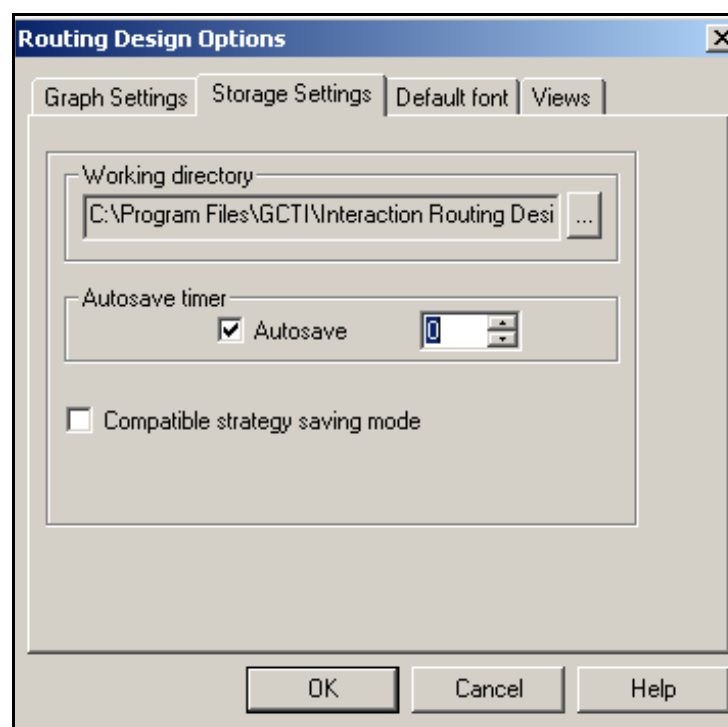


Figure 133: Storage Settings Tab

Working directory

Keep the default or browse for a new one. This directory contains log and importstr folders. It can also contain the following files: import.log (after importing), export.log (after exporting), copyas.log (after save as), and save.log (after saving). Temporary strategy/subroutine files reside in the importstr subdirectory. See the *Universal Routing 8.1 Interaction Routing Designer Help* if you want more information on the temporary files in the importstr directory.

Autosave timer

Use to automatically save a currently active and open strategy or subroutine at the indicated interval while the strategy is being edited. If IRD shuts down or freezes, you can restore the last edited version of the strategy that was autosaved.

Compatible strategy saving mode

Normally you will leave unchecked (the default). Select only if you will you want to save a strategy created with IRD 7.6 in compatible mode so that it can be opened with an older version of IRD (prior to 7.5). When unchecked, IRD saves the strategy in a memory-efficient format.

Note: You can also specify a default storage location by Tenant. For details, see the *Universal Routing 8.1 Interaction Routing Designer Help*.

Use the Default Font tab to specify the strategy comments font (see [Figure 134](#)).

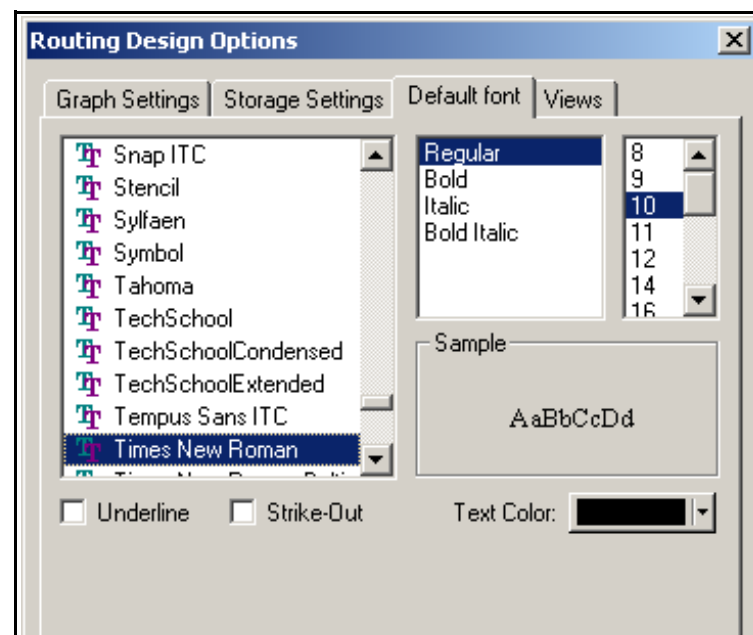


Figure 134: Default Font Tab

Note: If you have a strategy currently open, you must close and re-open the strategy in order for the change to take effect.

Use the Views tab to specify the IRD GUI elements to display (see [Figure 135](#)).

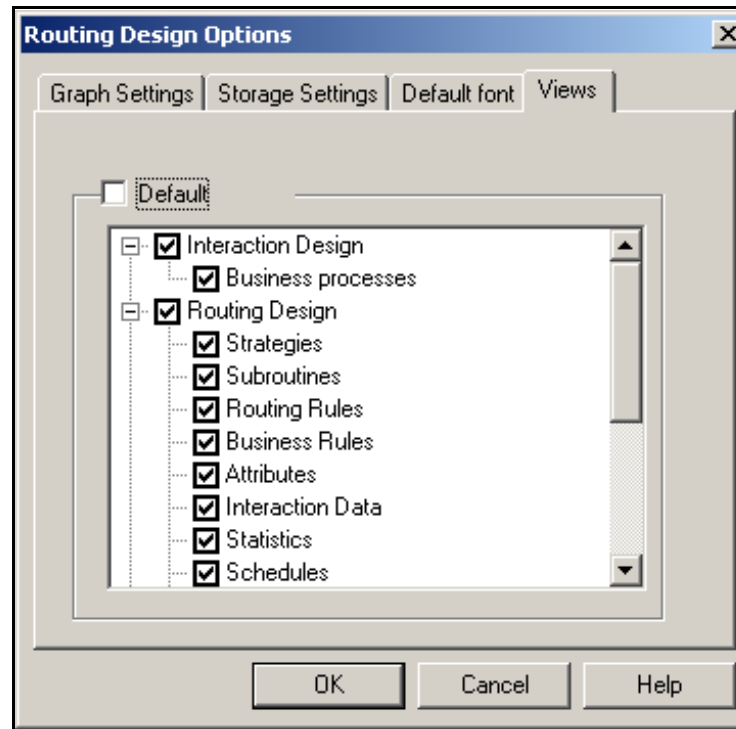


Figure 135: Views Tab

Note: New settings take effect upon IRD application restart.

Database Wizard

Database-driven routing means that an interaction is routed based on information retrieved from a database. You can build a strategy that instructs URS to:

- Query a database for any information, including customer name and language, but also for account level, ID of the last agent who handled the customer, and so on.
- Attach this information to the interaction.
- Route the interaction to the appropriate agent.

You use the Database Wizard object (see [Figure 102](#) on [page 124](#)) for this purpose. [Figure 136](#) shows an example voice strategy that uses the Database Wizard object.

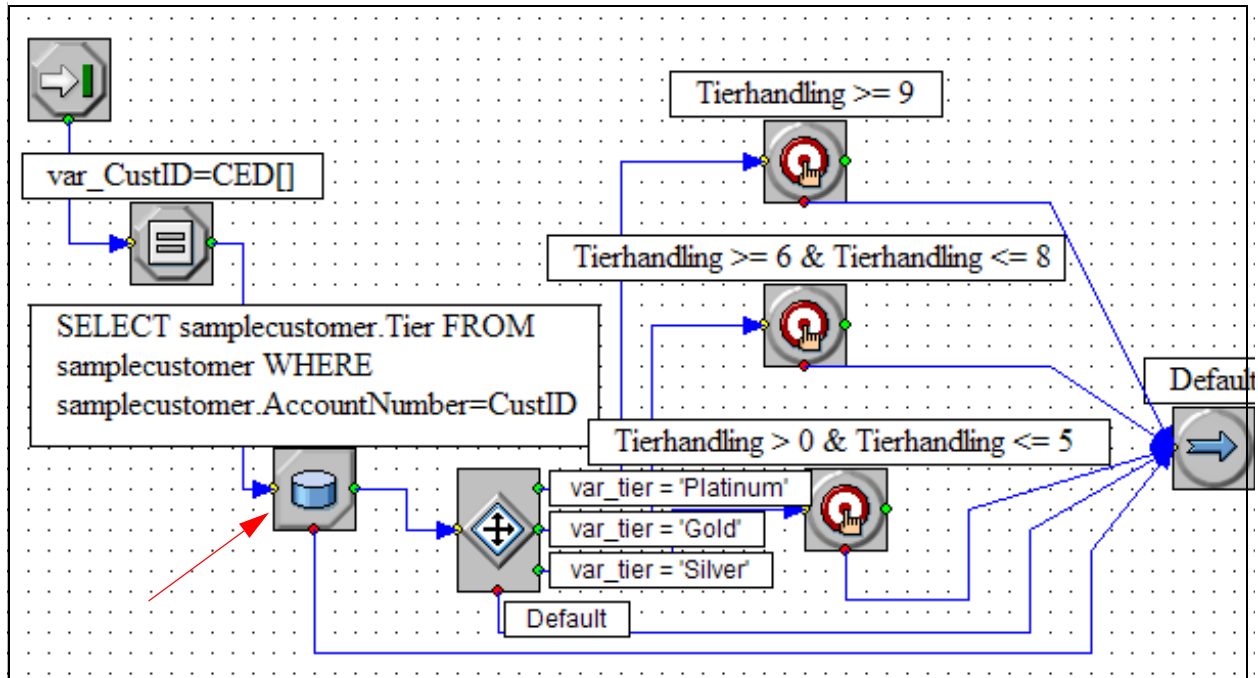


Figure 136: Example Database Lookup Strategy

This strategy routes based on the customer's revenue potential (Customer Tier). Customers are ranked by importance based on their account number. Based on its three possible values (Platinum, Gold, and Silver), the interaction is routed to an agent with a corresponding skill range.

Figure 137 shows the Database Wizard dialog box that opens when you place the Database Wizard object in a strategy.

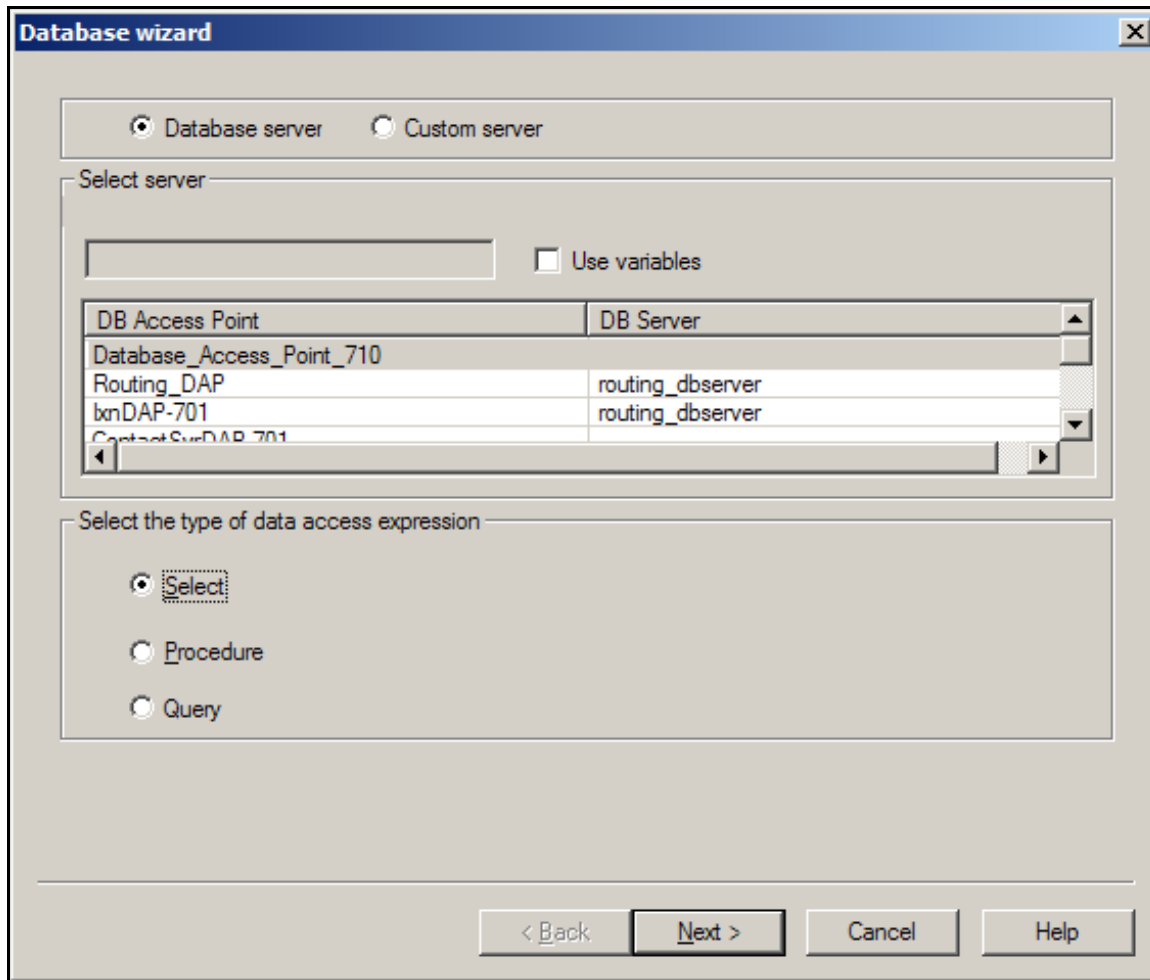


Figure 137: Database Wizard Starting Dialog Box

Note: To see all the Database Wizard dialog boxes, refer to *Universal Routing 8.0 Strategy Samples*. Also see *Universal Routing 8.1 Reference Manual*.

Summaries of each Database Wizard dialog box are presented below.

- After click Next as shown in [Figure 137](#), the next Database Wizard object dialog box retrieves from the table samplecustomer the value of the field Tier for the record where the field AccountNumber equals the number contained in the interaction.
- The next Database Wizard dialog box constructs the WHERE clause (see [Figure 138](#)).

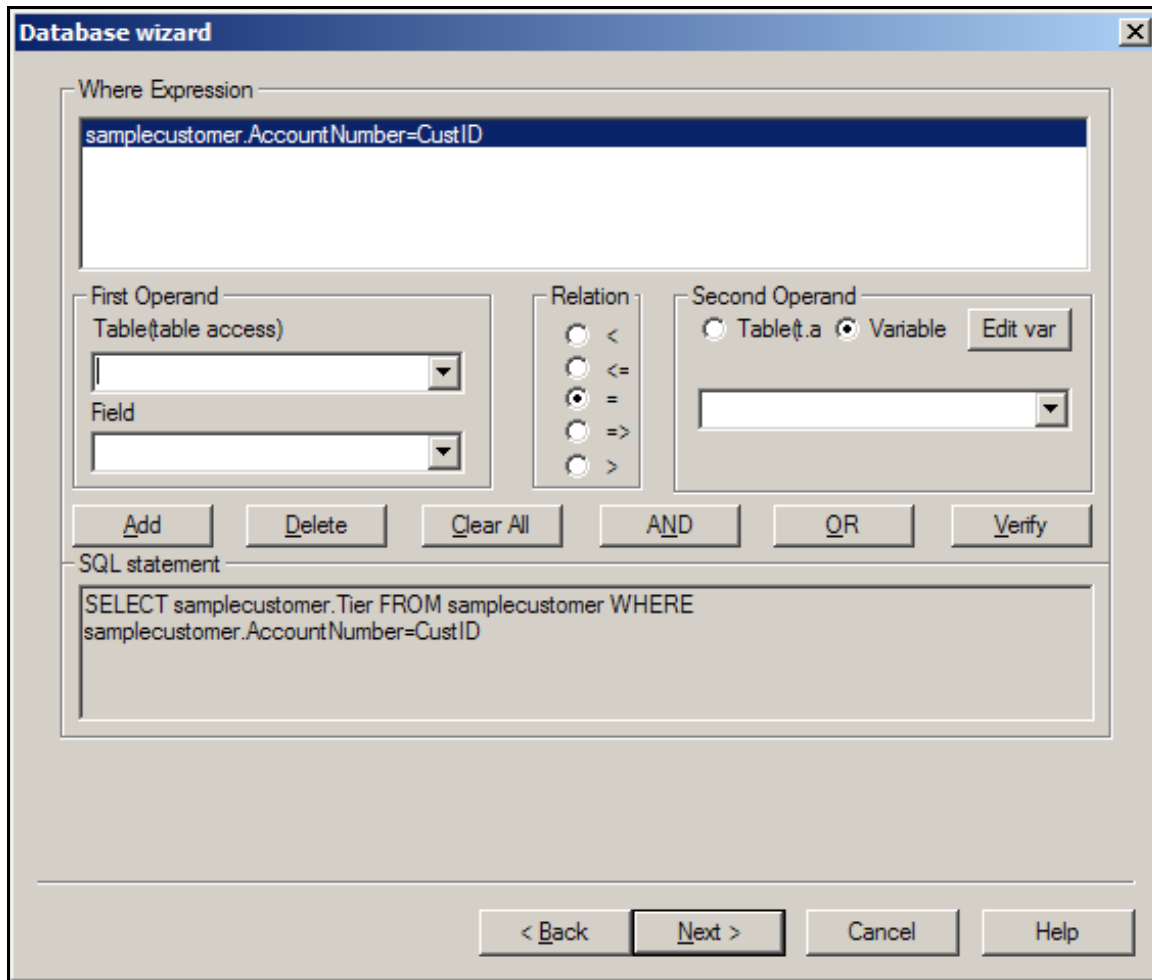


Figure 138: Database Wizard, Where Expression

- The next Database Wizard dialog box allows you to specify a sort order.
- The next Database Wizard dialog box gives the option of assigning the output to a variable or attaching it to the interaction.
- If you elect to assign the output to a variable, the final Database Wizard dialog box lets you assign the output value to a variable.

Defining Variables

Certain objects allow you to assign values to variables:

- Under the Miscellaneous icon (see Figure 105 on [page 126](#)), the Assign, Function, and Multi-Assign objects assign values to variables.
- Under the Database icon (see Figure 102 on [page 124](#)), the Database object.

Variable List Dialog Box

Use the Variable List dialog box to define variables and to move definitions of variables used in one strategy to another strategy. Figure 139 shows the Variable List dialog box with several variables defined.

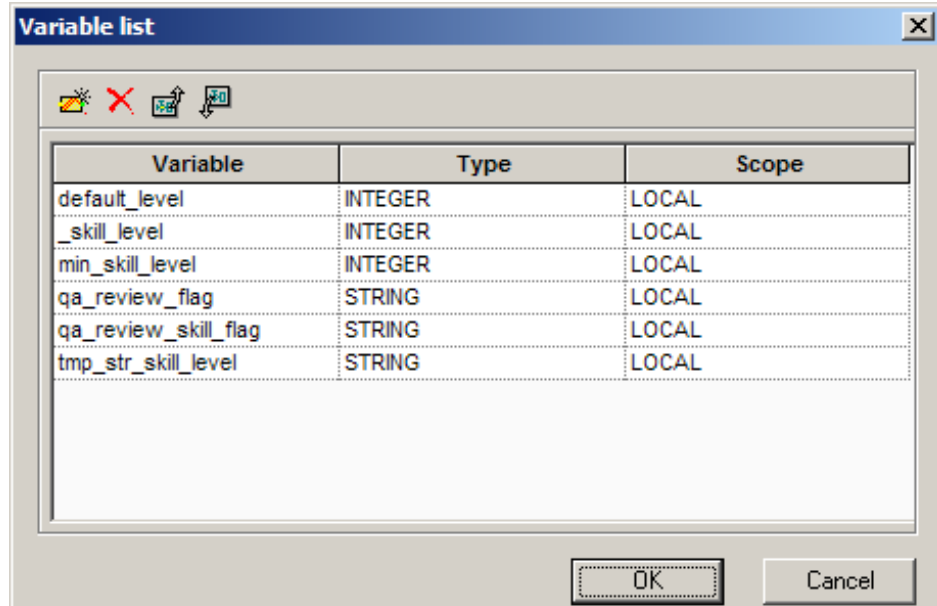



Figure 139: Variable List Dialog Box

Bring up the Variable List dialog box as follows:

- When working with a strategy, click the Variables button  on the toolbar to bring up this dialog box.
- In the Database Wizard object (see Figure 137 on page 149), when you assign the output or key-value pairs to one or more variables, a dialog box opens. Here you click the Edit Variables button to bring up the Variable List dialog box.
- In the Generic Segmentation object, click the down arrow in the Expression column to bring up the Expression Builder (see Figure 119 on page 136). In the Expression Builder, click the Variables button.
- Under the Miscellaneous icon (see Figure 105 on page 126), in the properties dialog box for the If, Assign, or Function objects, click the Variables button to bring up the Variable List dialog box. The Multi-Assign object lets you assign multiple variables at once using its own dialog box.

Using the Function object as an example, Figure 140 on page 152, shows the output of the Rand function (described in *Universal Routing 8.1 Reference Manual*) assigned to the variable min_skill_level.

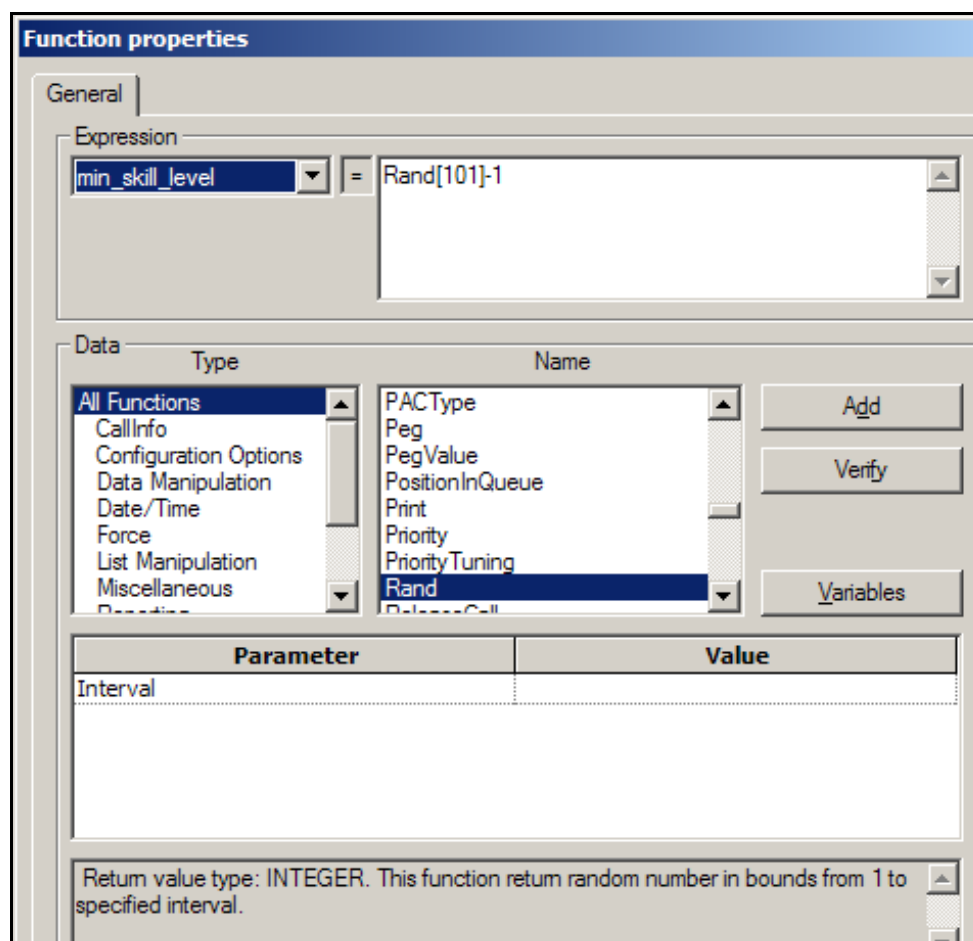


Figure 140: Function Object Properties Dialog Box

For more information, see “Defining Variables” on [page 341](#). Also see the section on variables in the *Universal Routing 8.1 Reference Manual*.

IRD Security

Starting with 7.6, IRD implements an inactivity timeout, which is fully described in the *Genesys 8.0 Security Deployment Guide*. This feature requires re-authentication (logging in again) after a period of user inactivity. The default period of inactivity is 0 (zero) minutes. To change the default in the IRD Application object, configure a value for the `inactivity-timeout` option as described in the *Universal Routing 8.1 Reference Manual*.

Note: IRD interprets the absence of the `inactivity-timeout` option or the setting of its value to 0 (zero) as disabling the feature of application locking as a result of user inactivity.

Important Information

- Upon expiration of the value set for the `inactivity-timeout` option, all opened IRD windows are hidden (minimized). You are presented with a re-login dialog box that, for authentication purposes, asks only for a user password in order to resume the Application session. All other fields are grayed out since the connection of the IRD Application to Configuration Server remains active the entire time until re-login.

If you want to end the Application session by pressing `Cancel` button, on the re-login dialog box you will be warned that you are about to exit the Application. To exit the Application, press the `Yes` button on the `Do you want to close the application?` warning message. To return to the re-login dialog box, press the `No` button.

- If the administrator changes a user's password in Configuration Manager at any time during an IRD session before that user is presented with the re-login dialog box, the previous password will be required in order to resume the suspended session.
- In a case where the user changes a password in IRD before the expiration of the value set for the `inactivity-timeout` option, then only a new password will be accepted in the re-login dialog box in order to continue working with the Application.
- The Interaction Design window (see Figure 36 on [page 61](#)) behaves differently than the Routing Design window in the case where you want to end the Application session while you have unsaved changes. Unlike Routing Design, when you press the `Yes` button in order to close the Application, Interaction Design provides a message giving the possibility to save modifications made to a business process prior exiting.

IRD Access Permissions

Make sure that the `Person` object (see Figure 144 on [page 160](#)) for each user that will access IRD is assigned the required `Access Group` for IRD. Starting with 7.6, the `Environment` and `Tenant` objects have an option that defines the access permissions for a new `Person` object. The default is for a new `Person` object to have no access permissions unless you specify assign them in the `Security` tab of the `Person` properties dialog box.

Configuration Manager displays a warning message if you attempt to save a new `Person` object without assigning an `Access Group`. Any user without an assigned `Access Group` can open IRD, but can only view the IRD GUI. For more information on configuring Application level security, see the *Genesys 8.0 Security Deployment Guide*.

Summary

The intent of this chapter is simply to introduce the strategy creation interface. You will use it to create the routing strategies that are discussed in “Creating Strategies” on [page 323](#).

5

Configuration Layer Interface

This chapter describes the interface that is used to create Configuration Manager objects used in strategies. For step-by-step instructions on creating these objects, see “Creating Configuration Manager Objects” on [page 237](#).

This chapter includes the following sections:

- [About Configuration Manager, page 155](#)
- [Environment Folder and Tenants, page 156](#)
- [Resources Folder, page 158](#)
- [Scripts Folder, page 159](#)
- [Business Attributes, page 161](#)
- [Workflow Object Names, page 171](#)
- [Graphical Portion of a Strategy, page 172](#)
- [Setting Permissions, page 173](#)

About Configuration Manager

Configuration Manager is the Genesys software application that enables you to manipulate your contact center's configuration data and set user permissions for solution functions and data. Configuration Manager is one of the three mandatory components of the Configuration Layer:

- Configuration Database, which stores all configuration data. DB Server—a Services Layer component—serves as an access point to the Configuration Database.
- Configuration Server, which:
Provides centralized access to the Configuration Database, based on permissions that you can set for any user to any configuration object.

Maintains the common logical integrity of configuration data and notifies applications of changes made to the data.

As an optional feature, provides support for a geographically distributed environment.

- Configuration Manager.

Note: For information about logging into Configuration Manager, see [page 237](#)

Required Objects

Assuming that you have objects required by Framework and Universal Routing already configured, additional objects that you might need to define in Configuration Manager include:

- **Persons**. In addition to an agent, at various points in a business process, you will want to route an interaction to a supervisor, manager, or QA member. Before you can select that target in a Strategy object, the target must first be defined as a **Person** object in Configuration Manager.
- **Skills** (for assignment to **Person** objects)
- **Agent Groups** (collections of **Person** objects)
- **Places and Place Groups** (desks)
- **Business Attributes** (see Figure 146 on [page 162](#)).
- **Table Access** (instructions that tie together formats, database access points, and tables when accessing information in a non-SQL database)
- **Email Accounts** (external e-mail addresses)
- **Capacity Rules** (see “Agent Capacity Rules” on [page 164](#))

Environment Folder and Tenants

[Figure 141](#) shows an example Configuration Manager interface. The right pane shows the **Environment** folder; the left pane shows *Tenants*.

- **Tenants** are businesses whose customer interactions are enabled or enhanced through services offered by a third party, typically a telecommunications service provider.
- From a functional standpoint, each **Tenant** in a Multi-Tenant environment is a contact center (single or multi-site) completely equipped to process customer interactions.

The example in [Figure 141](#) includes three **Tenant** objects (including **Environment**).

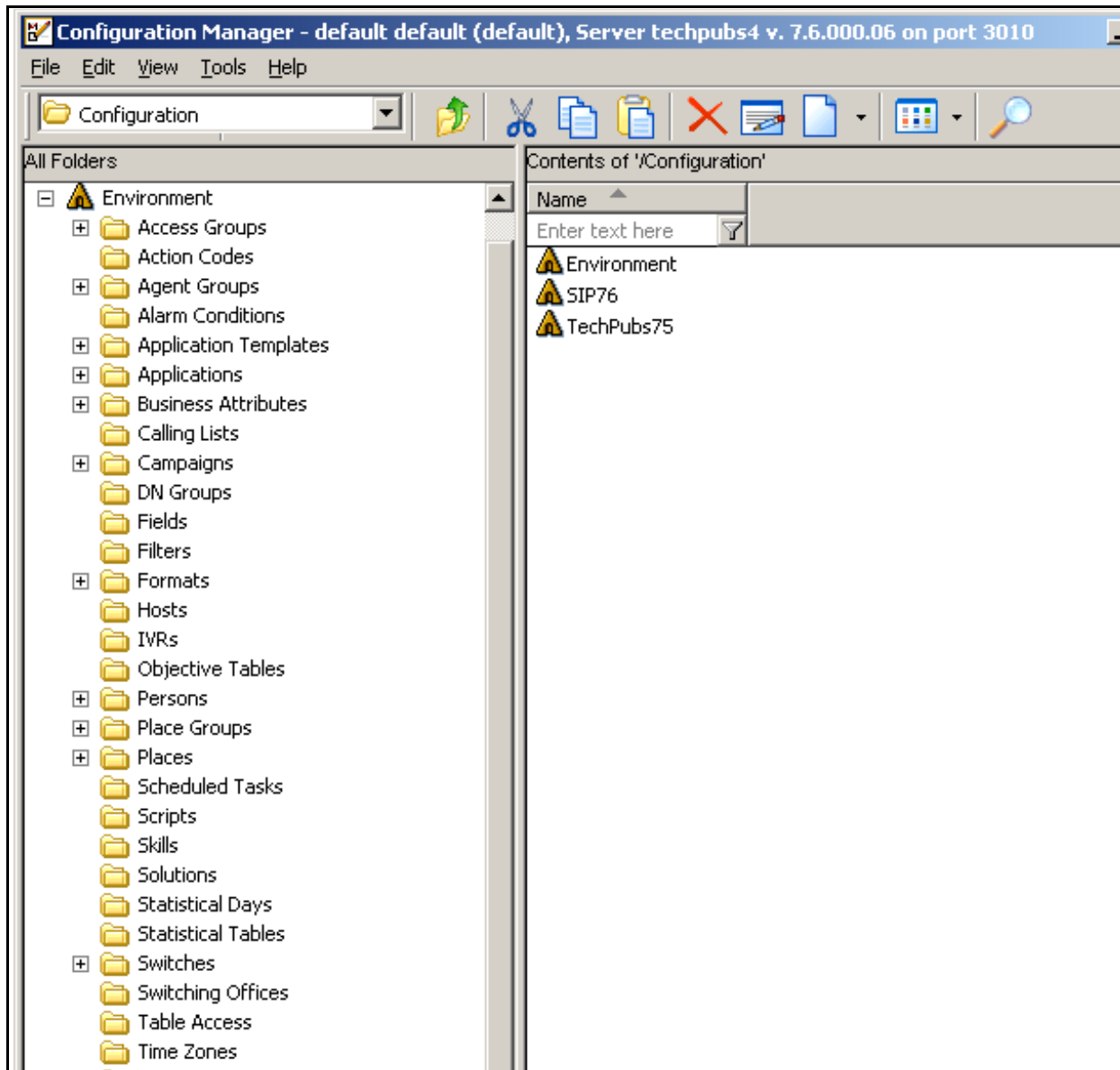


Figure 141: Environment Folder Expanded

The object presentation in Configuration Manager depends on the type of Genesys configuration environment, which can be:

1. Enterprise (also referred to as *Single-Tenant*) or
2. Multi-Tenant.

Note: The type of Genesys configuration environment depends on the operation mode of Configuration Server. You set this mode by applying either Enterprise or Multi-Tenant installation scripts when you create the Configuration Database as described in the *Framework 8.1 Deployment Guide*.

This guide assumes objects in the **Environment** folder—including Universal Routing Server (see [page 49](#)), E-mail Server (see [page 51](#)), and Interaction Server (see [page 49](#)) Applications —have already been configured.

Resources Folder

[Figure 142](#) shows folders for resources for a Tenant in a Multi-Tenant environment.

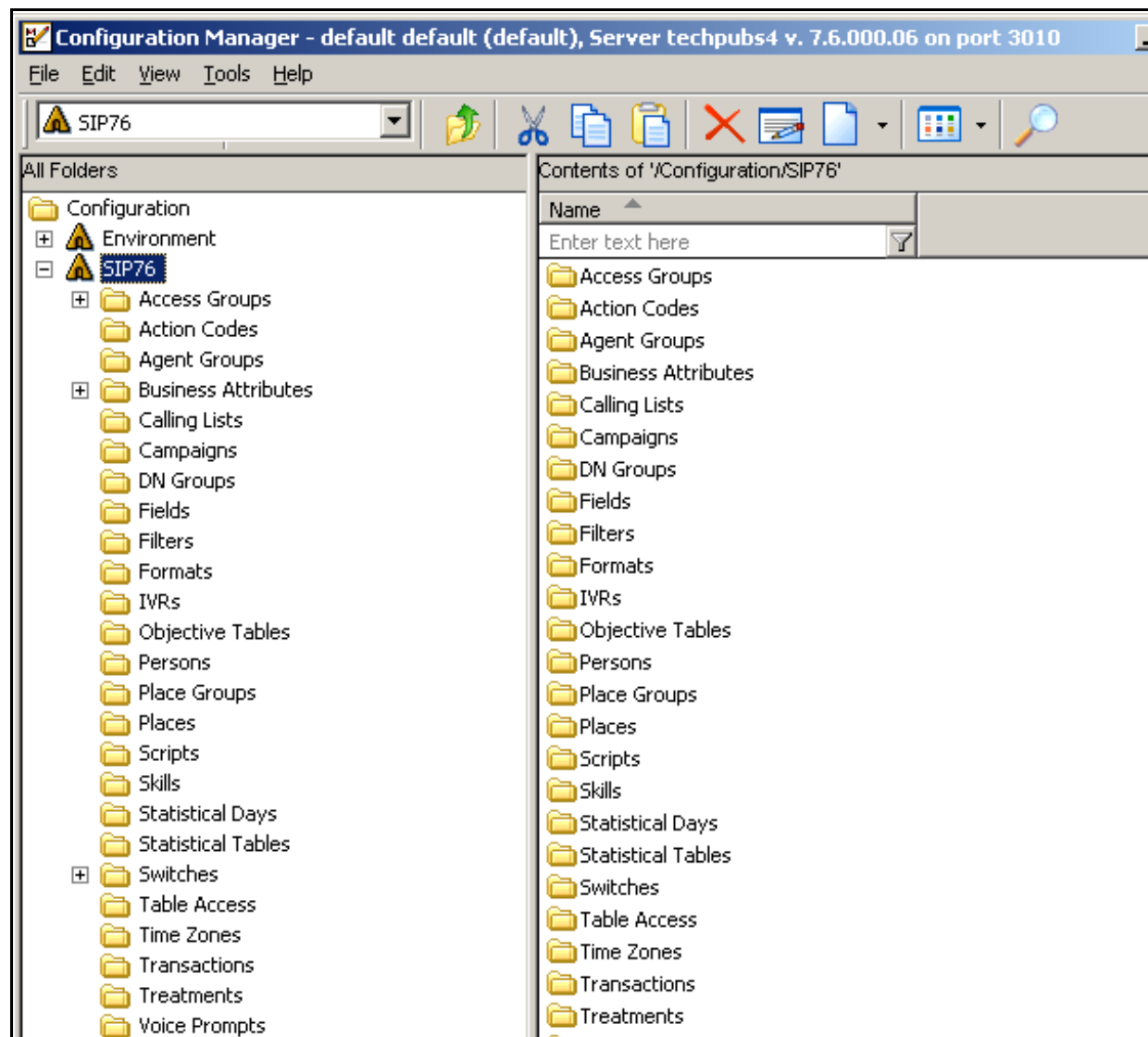


Figure 142: Resources Folder, Tenant Selected

Note: A Single-Tenant environment places resources in a folder called Resources.

Scripts Folder

When you create a new business process, Queue, View, or Strategy object, the associated Script file is stored in the Scripts folder in the Configuration Database (see [Figure 143](#)).

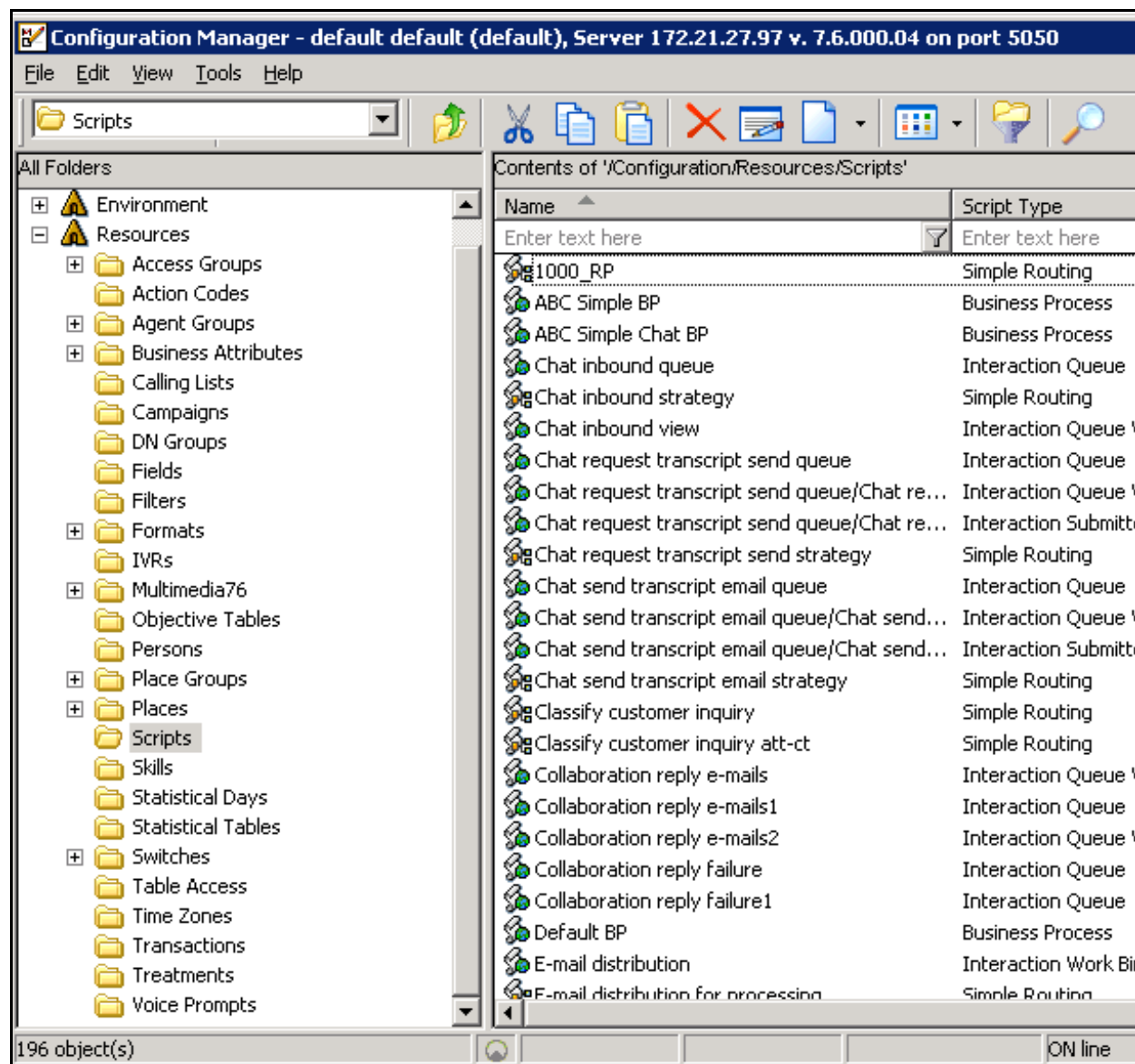


Figure 143: Scripts Folder

Warning! Do not use Configuration Manager to create these Script objects manually. To ensure internal integrity, use only IRD to create these objects.

Viewing Object Properties

To view an object's properties, double-click its icon in the right pane. For example:

1. Expand the **Persons** folder to find a **Person** object.
2. Double-click a **Person** object in the right pane to open a properties dialog box (see [Figure 144](#)).

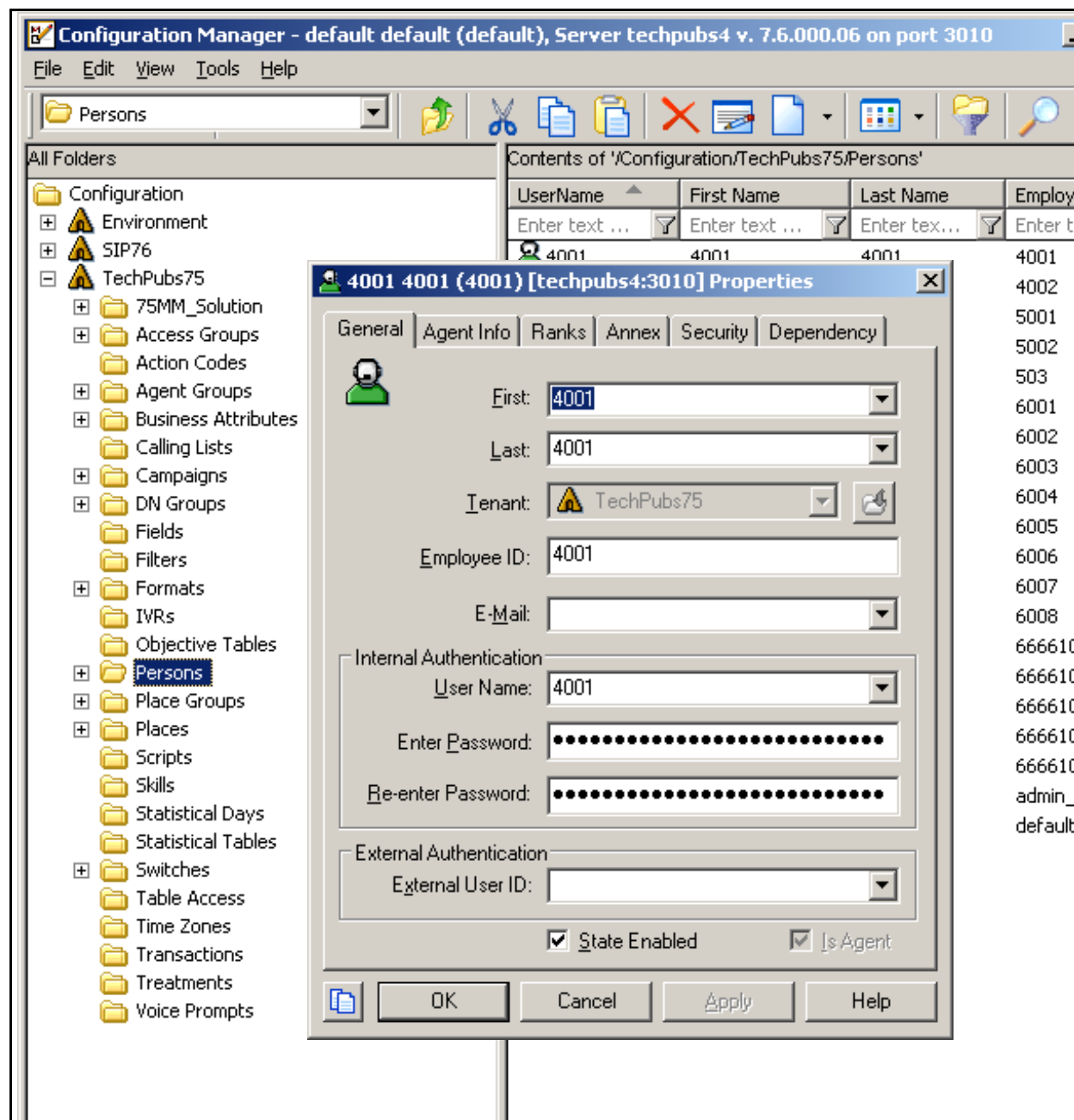


Figure 144: Agent Properties Dialog Box, General Tab

3. Click the Agent Info tab to see any Skills or Capacity Rules that are assigned to the agent (see [Figure 145](#)).

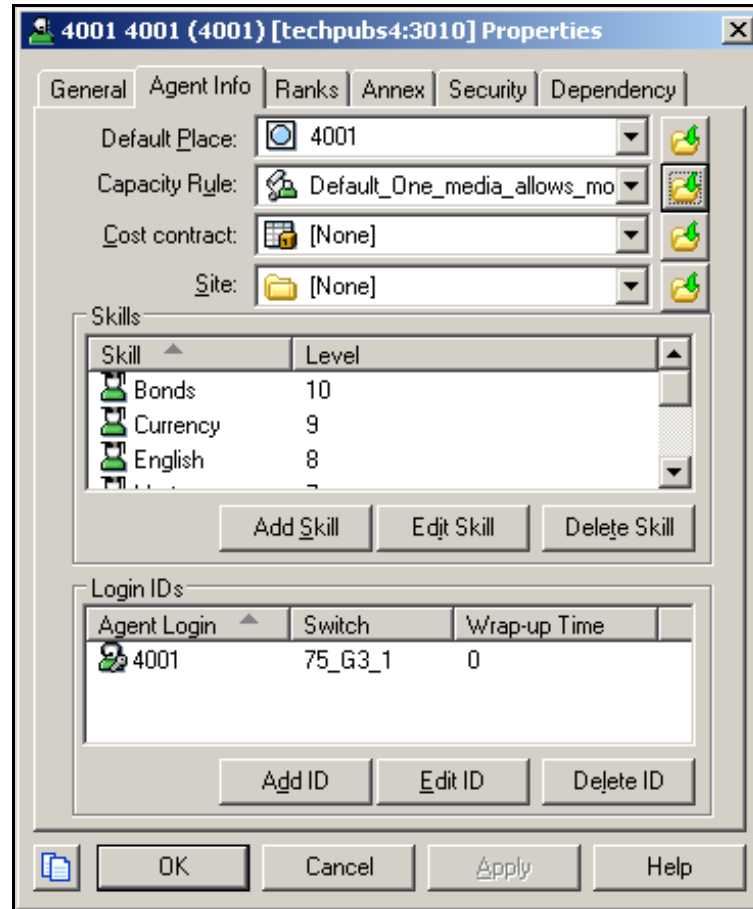


Figure 145: Agent Properties Dialog Box, Agent Info Tab

Note: See the **Note** on [page 72](#) about updating properties for View, Queue, and Workbin objects.

Business Attributes

Business Attributes are interaction attributes that are used in different ways within Genesys. [Figure 146](#) shows the content of the Business Attributes folder.

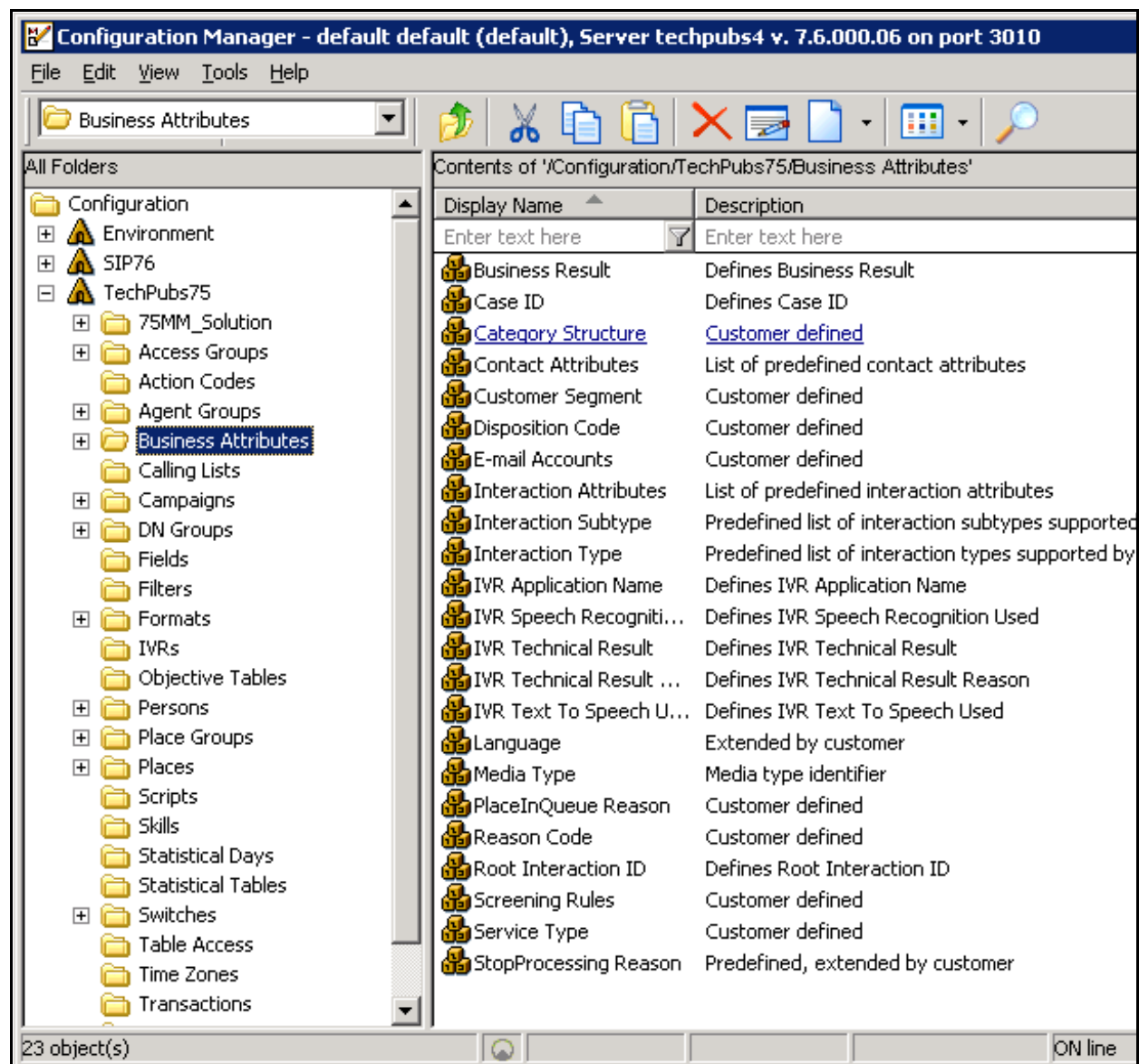


Figure 146: Business Attributes Folder

When designing strategies for business processes, you can use the attributes in the Business Attributes folder (see as follows):

- The If object (see Figure 120 on page 137) and Assign object (see Figure 116 on page 134) give the option of selecting Business Attributes when constructing an expression.
- When using the Function or Multi-Function objects, certain functions use Business Attributes including Attach, Business Data, Update, and UpdateBusinessData.
- The Generic Segmentation object (see page 129) lets you select Business Attributes when constructing an expression.

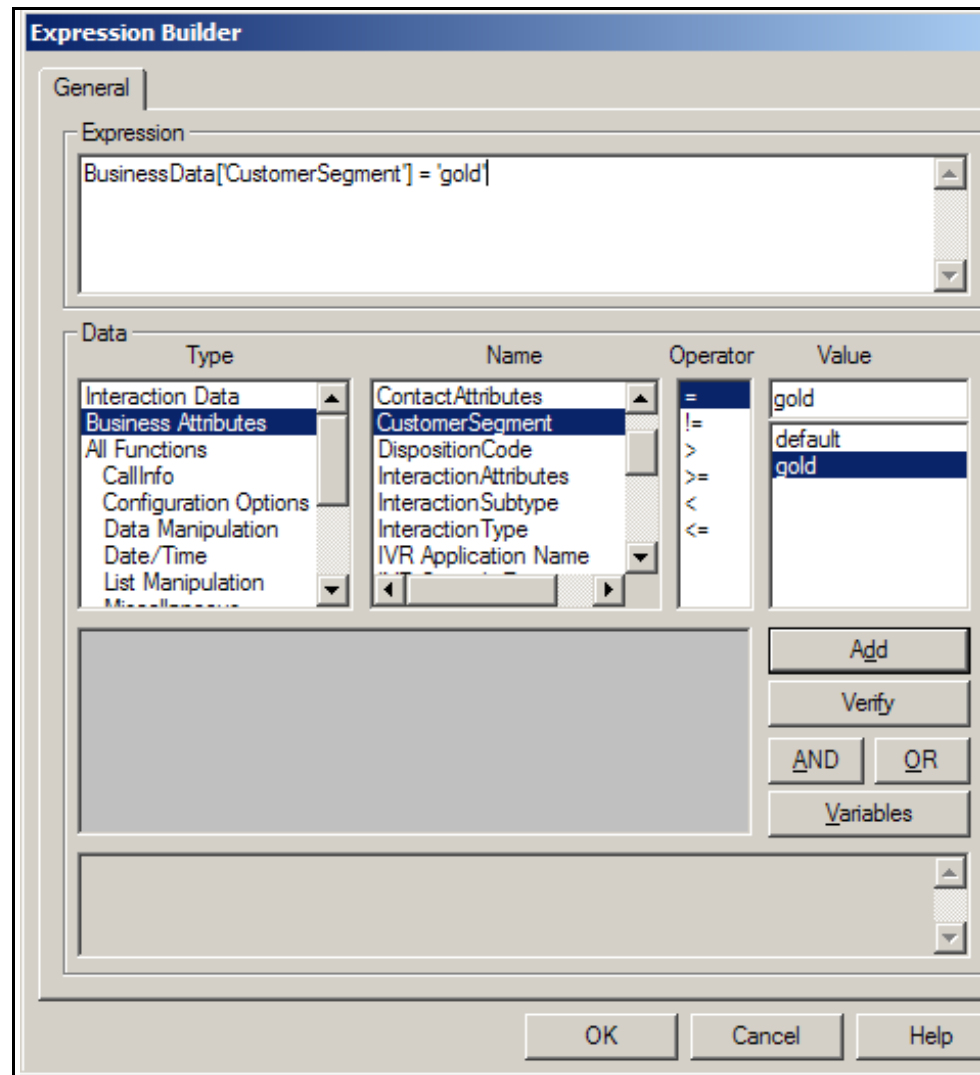


Figure 147: Generic Segmentation Object Using Business Attributes

Note: In the above example, the function uses a Business Attribute called Customer Segment, which can be used to categorize a customer based on their revenue potential. For example, in the credit card business, customers are categorized according to their maximum spending limit. This is indicated by whether the customer has a Platinum (high), Gold (medium) or Bronze (low) credit card.

- The Multi-Attach Miscellaneous object (Table 8 on [page 201](#)) gives the option of attaching Business Attributes to interactions.
- The Forward and Redirect objects require you to select an E-mail Account.
- The Classify object requires you to select e-mail Categories.
- The Screen and Multi-Screen objects require you to select Screening Rules (see [page 233](#)).

Media Type Business Attribute

A frequently used Business Attribute is Media Type. [Figure 148](#) shows the Business Attributes and Media Type folders expanded.

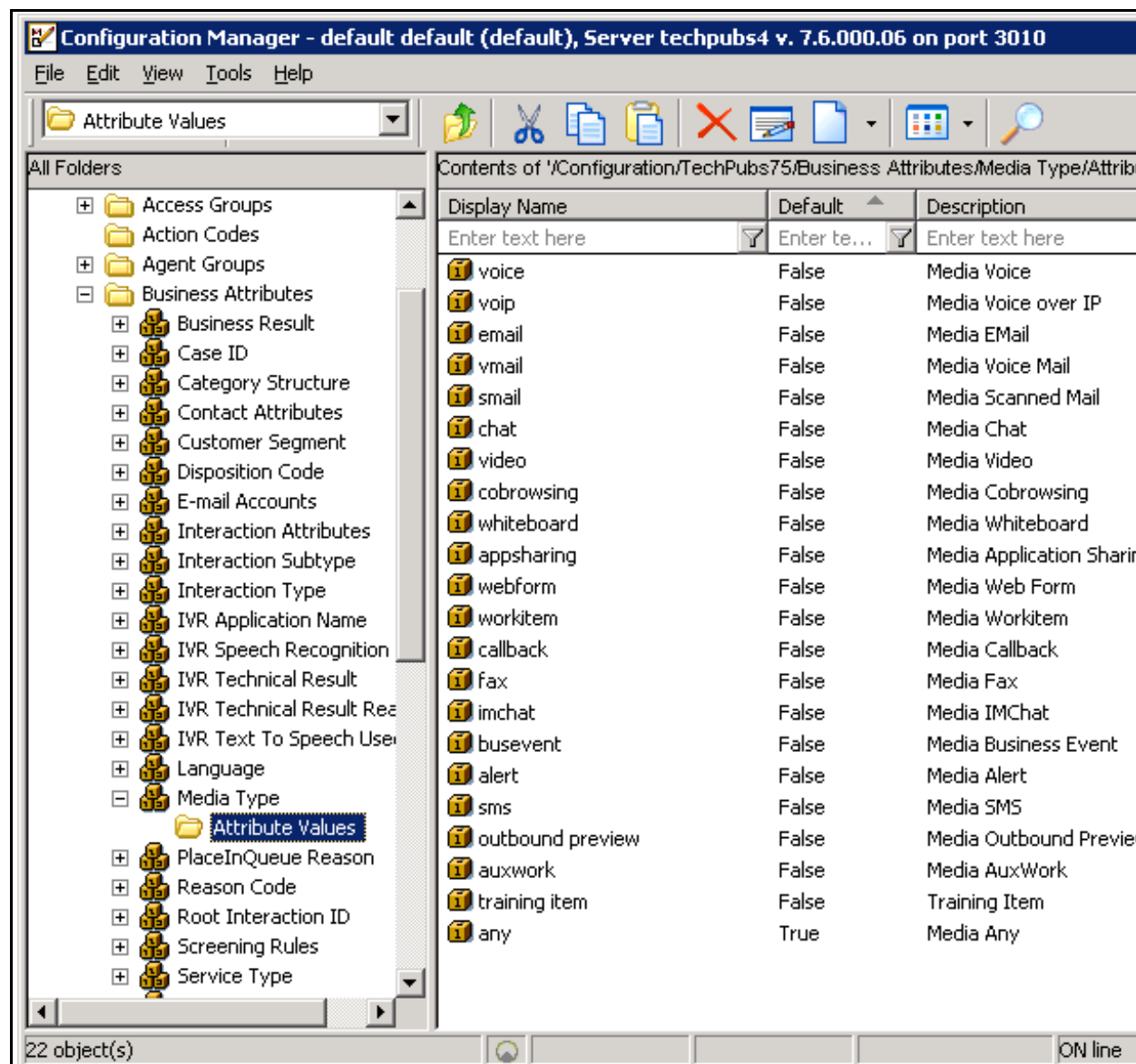


Figure 148: Media Types in Business Attributes Folder

Agent Capacity Rules

Note the agent capacity rule that is assigned to the agent in [Figure 145](#) on [page 161](#). A capacity rule (which can be assigned at the Tenant (default), Person (agent), or Place level) defines an agent's ability to handle simultaneous interactions of different media types.

URS is required to use agent capacity information when routing non-voice interactions such as those handled by business processes. After defining a complete set of available agents (taking agent capacity rules into consideration if configured), URS applies the routing selection criteria specified in the strategy objects.

Capacity rules reside in the Genesys Configuration Database as Script objects. By default, the Multimedia Wizard puts capacity rules in a Scripts folder under the Solutions folder for the Tenant.

Creating a New Capacity Rule

To create a new capacity rule in Configuration Manager, you must have the Resource Capacity Planning Wizard installed (available on the Real-Time Metric Engine CD). You can then right-click the Scripts folder and select Wizard > New > Capacity Rule from the context menu (see [Figure 149](#)).

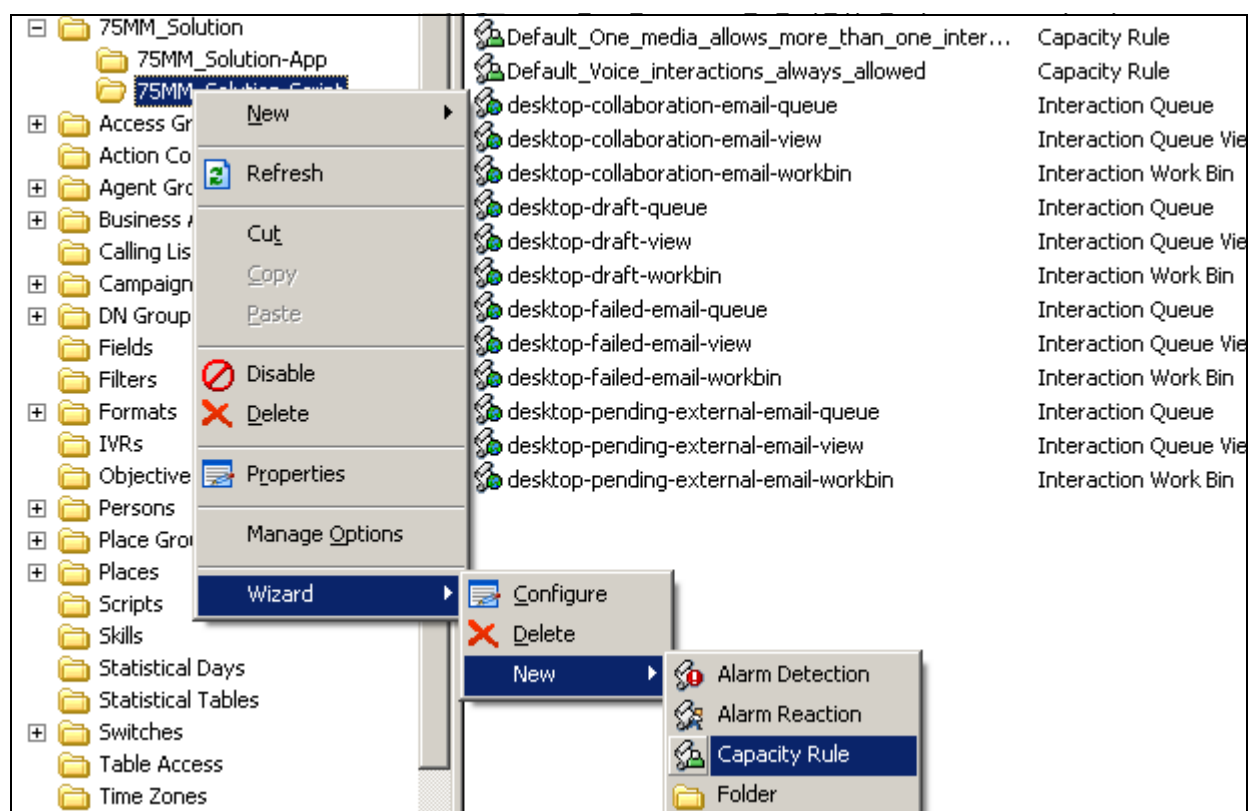


Figure 149: Capacity Rule in Scripts Folder Under Solutions

This action brings up the Resource Capacity Planning Wizard (see [Figure 150](#)).

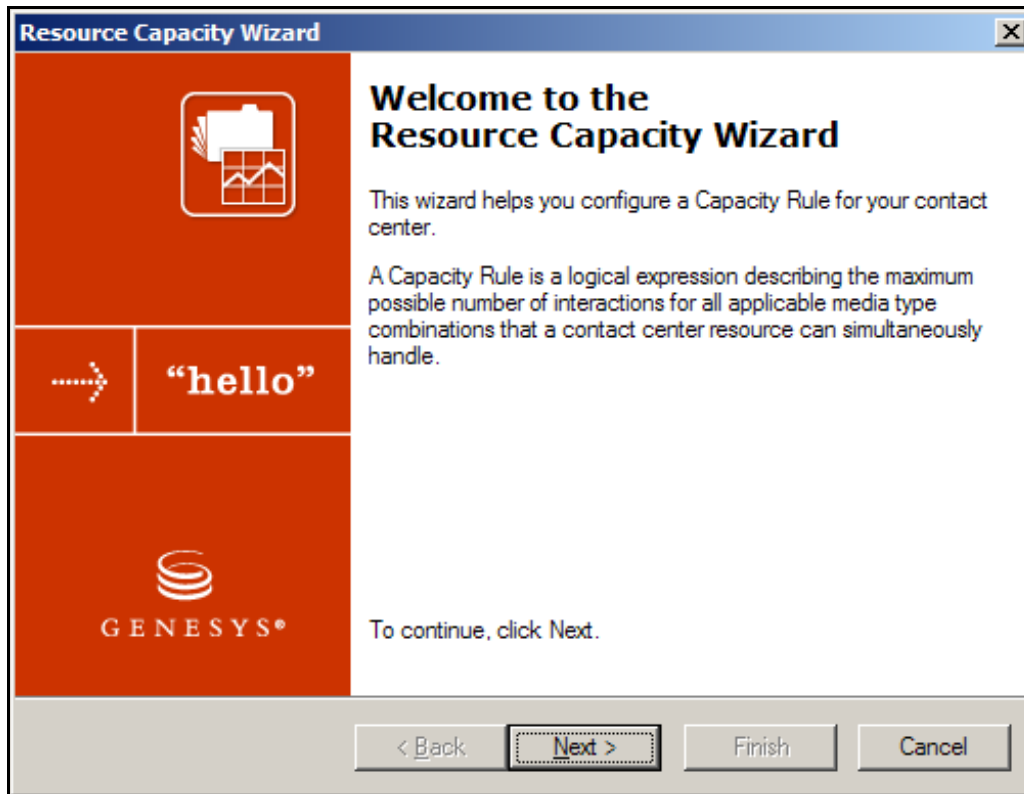


Figure 150: Creating a New Capacity Rule

At this point, you can create a new capacity rule from scratch or edit an existing rule.

Note: For more information about creating agent capacity rules, see the *Genesys 8.0 Resource Capacity Planning Guide*.

Media Types Available During Agent Login

The Agent Desktop login (Connection) dialog box uses agent capacity rules to define the media types that the agent can receive. [Figure 151](#) shows an example agent capacity rule that includes numerous media types.

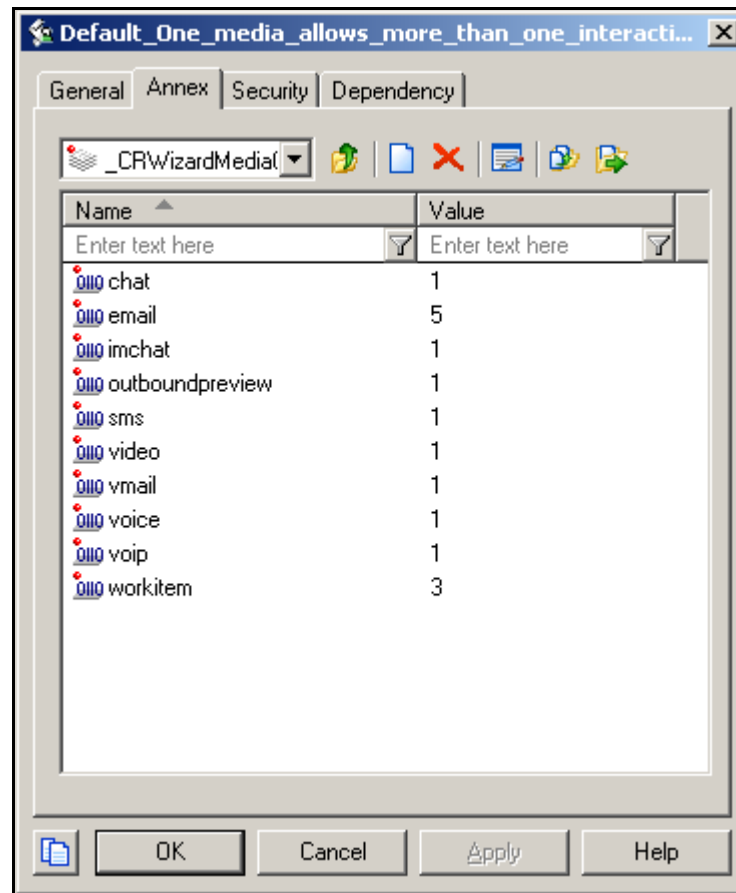


Figure 151: Example Agent Capacity Rule

Assume that the capacity rule that is shown in [Figure 151](#) is associated with an agent who is logging in (see [Figure 145](#) on [page 161](#)). You can configure the Agent Desktop Connection dialog box to list:

- All of the media types that are shown in [Figure 151](#).
- Only certain media types if you edit the multimedia option that is associated with the Agent Desktop Application object as described later.

[Figure 152](#) shows the Connection dialog box with only a subset of media types shown.

Connection

User Name : 6002

Place : 6002

☒ Supervisor

☒ voice

Agent Login : 6002

Agent Password :

Queue : 6601

☒ email

☒ chat

☒ workitem

☐ voip

☐ video

☒ outbound preview

controlled by media option in multimedia section

<< Previous Submit

Figure 152: Dialog Box for Logging In

In order to receive interactions of a specific media type, the agent must check that media type in the Connection dialog box.

Figure 152 does not list all the media types shown in the capacity rule in Figure 151 on page 167. This is because you can limit the media types shown in the Connection dialog box via the media option in the ion Agent Desktop Application object.

Procedure:

Limiting media types during login

Purpose: To limit the media types that an agent can check in the Connection dialog box to a subset of the media types associated with the capacity rule.

Start of procedure

1. Open Configuration Manager.
2. Select the Tenant if applicable.
3. Open the Applications folder.

4. Open the Agent Desktop Application object (see [Figure 153](#)).

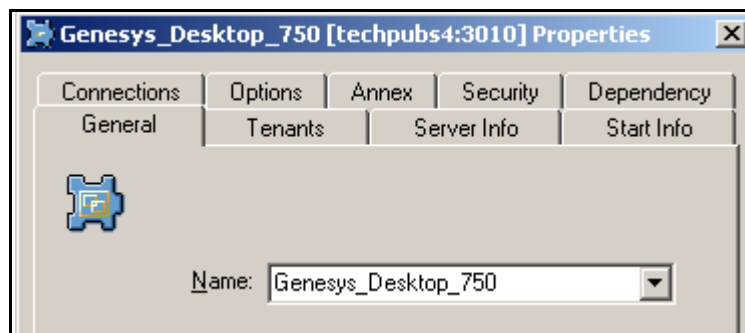


Figure 153: Agent Desktop Application Object

5. Click the Options tab (see [Figure 154](#)).

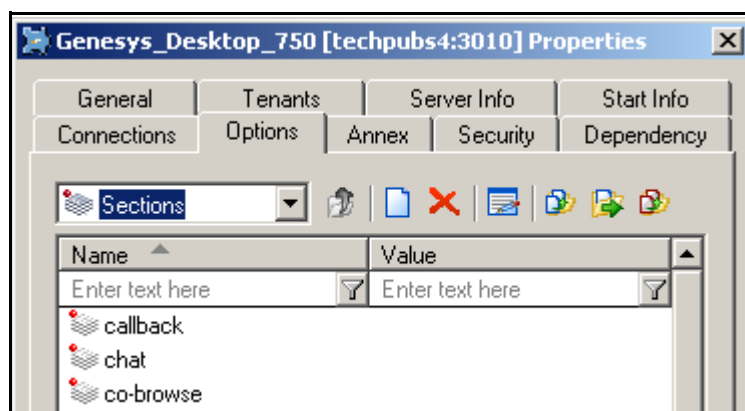


Figure 154: Agent Desktop Application Object, Options Tab

6. Select the multimedia section and click the icon to edit the section/option (see [Figure 155](#)).

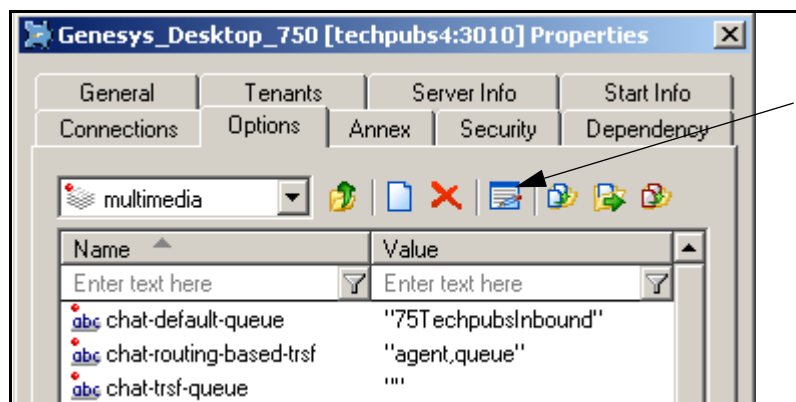


Figure 155: Icon to Edit Section/Option

7. In the resulting dialog box specify the media types to be shown in the login dialog box. [Figure 156](#) shows an example completed dialog box that includes only some of the media types shown in [Figure 152](#) on [page 168](#).

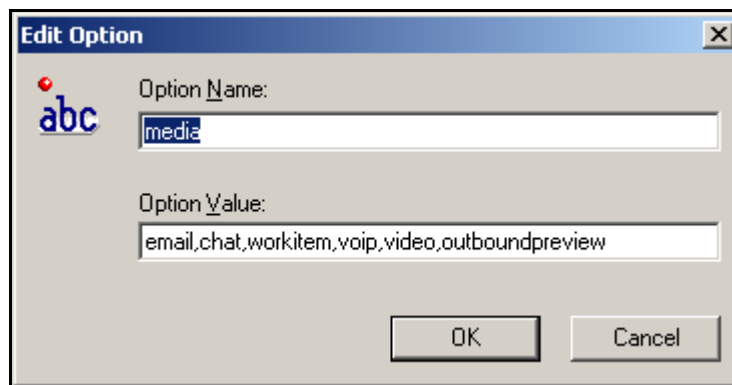


Figure 156: Edit Option Dialog Box

8. Click OK. The media types appear as option values (see [Figure 157](#)).

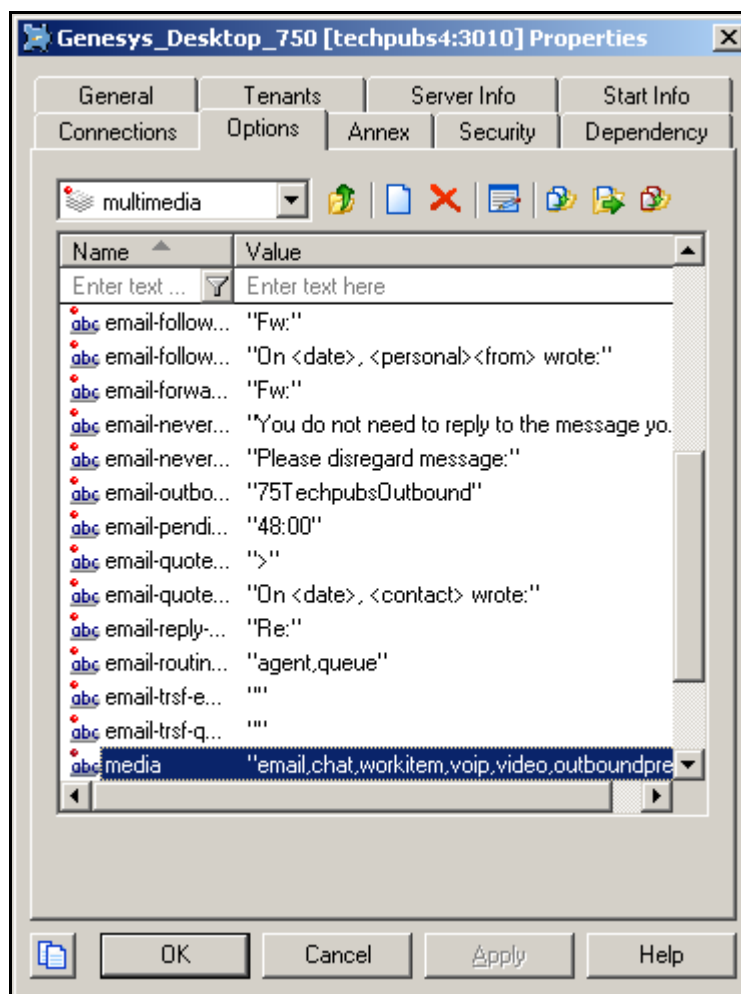


Figure 157: Media Option After Adding outboundpreview

End of procedure

Notes: To ensure proper handling of workflow post-processing features, you may also wish to set the following option in the Agent Desktop Application object, outbound section:

preview-park-queue

Values: `__STOP__` (default), or any valid Interaction Queue name

For more information, see the section on handling Outbound and Callback interactions in the *Genesys Desktop 7.6 Deployment Guide*.

Workflow Object Names

IRD stores business process information as a set of objects in the Configuration Database where each object corresponds to a business process, queue, workbin, view, submitter or strategy. Each object is stored as type Script.

All Scripts in the Configuration Database share the same *namespace*. All Scripts must have unique names, which means a particular name can be used only once.

The Interaction Design window avoids this limitation by allowing business processes to be presented in a way where two different queues may have equally named views or two different business processes may have equally named queues or workbins.

This is accomplished by IRD using an auxiliary name (Namespace Relative, Figure 73 on [page 89](#)) for each Script object (which is also a Script object property). This allows you to reuse names across configurations with IRD controlling the uniqueness of the auxiliary names in their namespaces.

Note: IRD does not allow you to have equally named views that belong to the same queue, nor it does not allow having equally named queues that belongs to the same business process. The only object that must have a unique name in the whole configuration is a strategy/subroutine.

By default, IRD presents a business process in a way where only Namespace Relative names are displayed for queues, views and workbins. However, IRD can present a business process where each element shows its real name in the Configuration Database or even both. See [page 88](#) for information about the Real Configuration Names, Namespace Relative, and Both options.

- The Namespace Relative option presents only auxiliary names.
- The Real Configuration Names option presents names of corresponding Script objects.
- The Both option shows both names. In this case, if an object has an auxiliary name different from its real name in the Configuration Database, the real name will be shown in brackets.

Graphical Portion of a Strategy

The script portion of a strategy and the graphical portion (.rbn file) may be stored in different locations. For example, while the script file is always stored in the Configuration Database, the graphical portion (which takes up more space) may be stored:

- In the Configuration Database in the `ird_strategies` table if an initialization script supplied by Genesys created the table.
- On a user's local drive.
- On a network drive.

Note: If you do not have access to the .rbn file, you will not be able to view a strategy in the Routing Design window.

To view the path pointing to the graphical portion of a strategy:

1. Double-click the strategy in the Scripts folder,
2. In the resulting properties dialog box, select the Annex tab. (If the tab does not appear, select View > Options from the Configuration Manager menu and select Show annex tab in object properties.)
3. Select the strategy section.
4. Double-click the path option (see [Figure 158](#)).

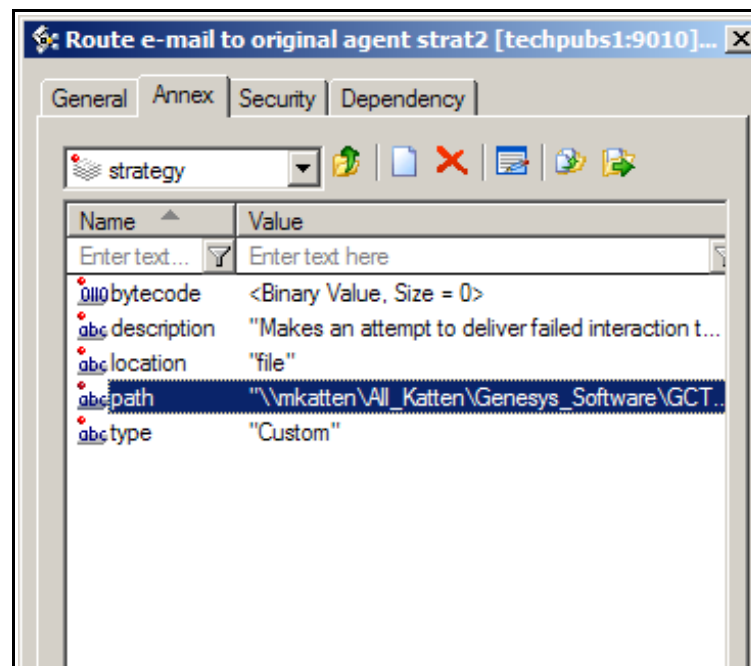


Figure 158: Strategy RBN File Path

Business Attributes that Cannot Be Changed

Warning! Some Business Attributes should never be changed. See the chapter on interaction properties in the *eServices (Multimedia) 8.0 User's Guide* for more information.

- For more examples of Business Attribute usage, see the section on e-mail routing strategies in *Universal Routing 8.1 Strategy Samples*.
- For information about creating Business Attributes, see [page 243](#).

Setting Permissions

Set permissions by right-clicking an object in Configuration Manager, selecting Properties, clicking the Security tab and then the Permissions button to bring up a dialog box. You can then assign types of access to types of users. [Figure 159](#) shows an example.

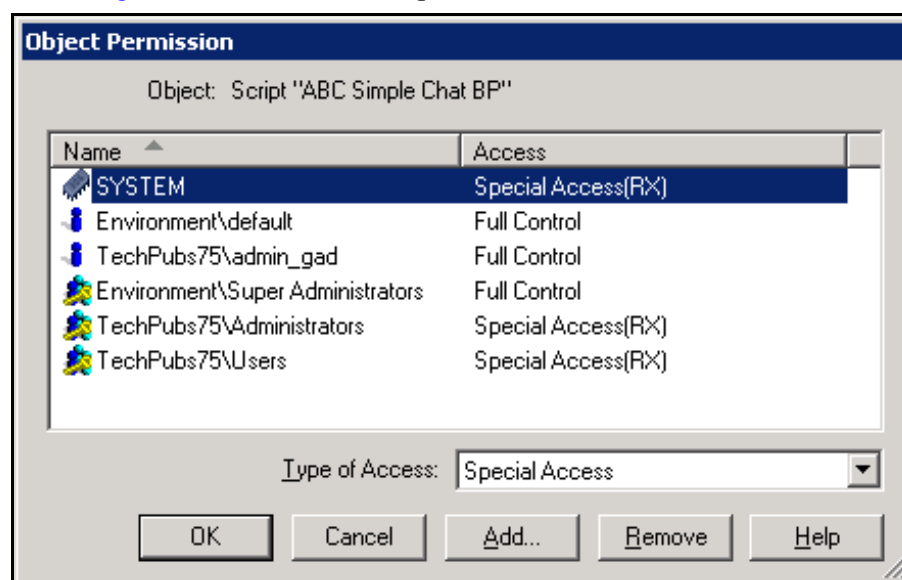


Figure 159: Example Object Permission Dialog Box for Agent Group

When you log into IRD, you are granted permissions for objects based on your group membership and object permissions. An Access tab appears in the list pane for each IRD object (see [Figure 34](#) on [page 59](#)).

[Table 4](#) describes the types of access.

Table 4: Access Control Types

Access control type	Appears in IRD List pane as (R=Read, H=Change, D=Delete)
No Access	Object does not display
Read	R
Change	RHD
Full Access	RHD
Special Access	Depends on the selected option(s): Full Access: RHD; Read: R; Create: R; Change: RH; Execute: R; Delete: RD Read Permissions: R; Change Permissions: R; Read and Execute: R

Note: If you do not have access to the folder where the graphical portion of a strategy is stored, you will not be able to view a strategy in the Routing Design window. For more information, see “Graphical Portion of a Strategy” on [page 172](#).

Default of No Access for New Users

Starting with 7.6, the `Environment` and `Tenant` objects have an option that defines the access permissions for a new `Person` object created in Configuration Manager. The default is for a new `Person` object to have no access permissions unless you specify assign them in the `Members of` tab of the `Person Properties` dialog box. As a result, in order to use IRD 7.6, each `Person` object must have one or more `Access Groups` assigned. Any user does not have an assigned `Access Group` can open IRD, but can only view the IRD GUI. For more information, see the *Genesys 8.0 Security Deployment Guide*.

Summary

The intent of this chapter is simply to introduce the Configuration Manager interface. You will create Configuration Manager objects later in “Creating Configuration Manager Objects” on [page 237](#).

6

Knowledge Manager Interface

This chapter describes the interface used to create interaction classification Categories, Screening Rules, Standard Responses, as well as the Field Codes and Custom Variables that may be used in Standard Responses. For information about creating these objects, see “Creating Knowledge Manager Objects” on [page 223](#).

This chapter includes these sections:

- [About Knowledge Manager, page 175](#)
- [Categories Tab, page 178](#)
- [Field Codes Tab, page 183](#)
- [Screening Tab, page 185](#)
- [Training, Training Schedules, Models, and FAQ Tabs, page 188](#)

About Knowledge Manager

At some point in a business process, you may want to screen an interaction for certain words or word patterns, analyze an interactions content and assign Categories, or send a Standard Response. Before you can perform these functions in a strategy, you must define certain objects in Knowledge Manager (see Table 5 on [page 176](#)).

Table 5: Knowledge Manager Objects Used for Routing

Knowledge Manager Object	Routing Strategy Object That Uses:
Classification Categories	<p>Classify object to automatically classify an interaction with a Category code based on its content (see Figure 162 on page 180). Once a Category code is assigned, other types of processing can occur based on the Category code, such as automatically generating a Standard Response.</p> <p>Attach Categories object to manually attach classification Categories to an interaction (see Figure 163 on page 181).</p> <p>Classification Segmentation object (see Figure 164 on page 181) to cause interactions to take different paths in the strategy based on an assigned classification Category.</p> <p>Multi-Screen object to return Categories associated with Screening rules.</p>
Standard Responses (which may include Field Codes and Custom Variables)	Acknowledgement, Autoresponse, Chat Transcript, Forward E-mail, Redirect E-mail, Create E-mail Out, Create Notification, and Create SMS objects.
Screening Rules	<p>Screen and Multi-Screen objects for screening interactions for certain words or word patterns. Once a Screening Rule match occur, you can configure other types of processing to occur.</p> <p>Note: The primary difference between screening and classification is that the result of screening is a Screening Rule name and the value of true or false; the result of classification (you must have the Content Analyzer option installed) is a Category Code, which can be associated with a Standard Response or used for other purposes such as segmentation. For more information, see the chapter on IRD objects in the <i>Universal Routing 8.1 Reference Manual</i>.</p>

After creating these objects in Knowledge Manager and saving the definitions in the Universal Contact Server Database, the object names carry over to the Configuration Database.

- The Knowledge Manager objects are then viewable in Configuration Manager (see Figure 148 on [page 164](#) for an example).
- The Knowledge Manager objects are also selectable in the Strategy objects that use them (see Figure 365 on [page 421](#) for an example).

Note: For information about logging into Knowledge Manager, see [page 223](#).

[Figure 160](#) shows an example Knowledge Manager with a Category expanded.

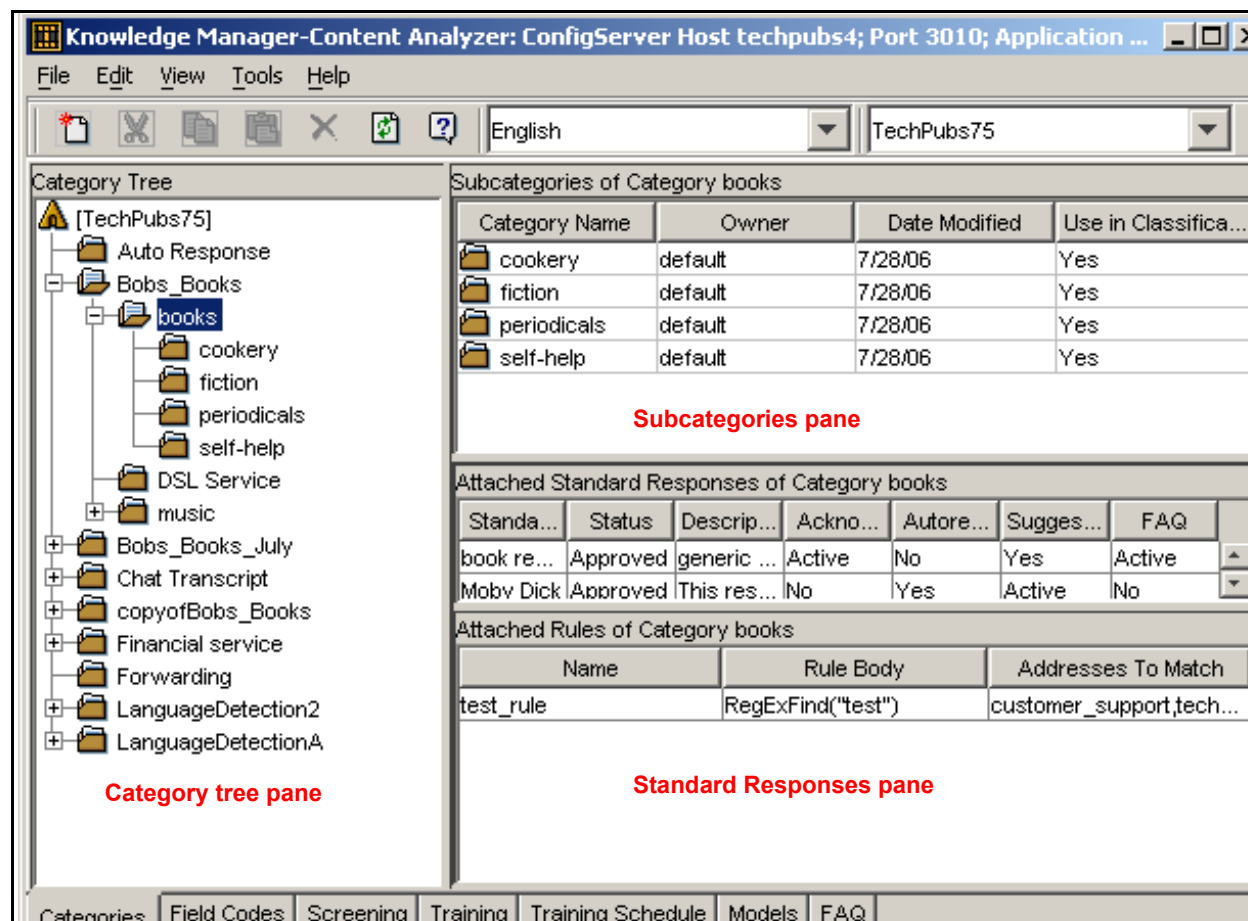


Figure 160: Knowledge Manager Panes

The Knowledge Manager interface contains the following tabs.

- Categories
- Field Codes
- Screening
- Training
- Training Schedule
- Models
- FAQ

Note: The first three tabs are relevant to all users of Knowledge Manager while the remaining tabs are relevant only to users of Genesys Content Analyzer if that option is installed (see [page 50](#)).

[Table 6](#) summarizes each tab.

Table 6: Knowledge Manager Tabs

Relevance	Tab	Description
General	Categories tab	Displays and gives access to Category trees and their associated Standard Responses. Provides access to the Standard Response Editor.
	Field Codes tab	Displays the set of Field Codes and provides access to the Field Code Editor.
	Screening tab	Displays the set of Screening rules and provides access to the Screening Rules Editor.
Genesys Content Analyzer only	Training tab	Displays the set of training objects and provides access to the Mail Editor.
	Training Schedule tab	Displays start time, status, and other information about training objects.
	Models tab	Displays information about models.
	FAQ tab	A FAQ object takes Standard Responses and recasts them as answers to frequently asked questions.

Categories Tab

Note: For more information on Categories than presented here, see the *eServices (Multimedia) 8.0 User's Guide*.

Refer back to Figure 160 on [page 177](#) to view the **Categories** tab with folders expanded.

Category Codes and Standard Responses

Category trees are integral to the classification functionality of Genesys Content Analyzer.

- Category trees are a means of organizing and gaining 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.
- Content Analyzer can classify an incoming e-mail in terms of the Category tree.

You use Knowledge Manager to create Category trees and to create and edit the associated Standard Responses, as well as the Field Codes that Standard Responses can contain.

Once Categories are defined in Knowledge Manager and saved in the Universal Contact Server Database, the object names carry over to the Configuration Database and are viewable in Configuration Manager (see [Figure 161](#) and compare it to [Figure 160](#) on [page 177](#)).

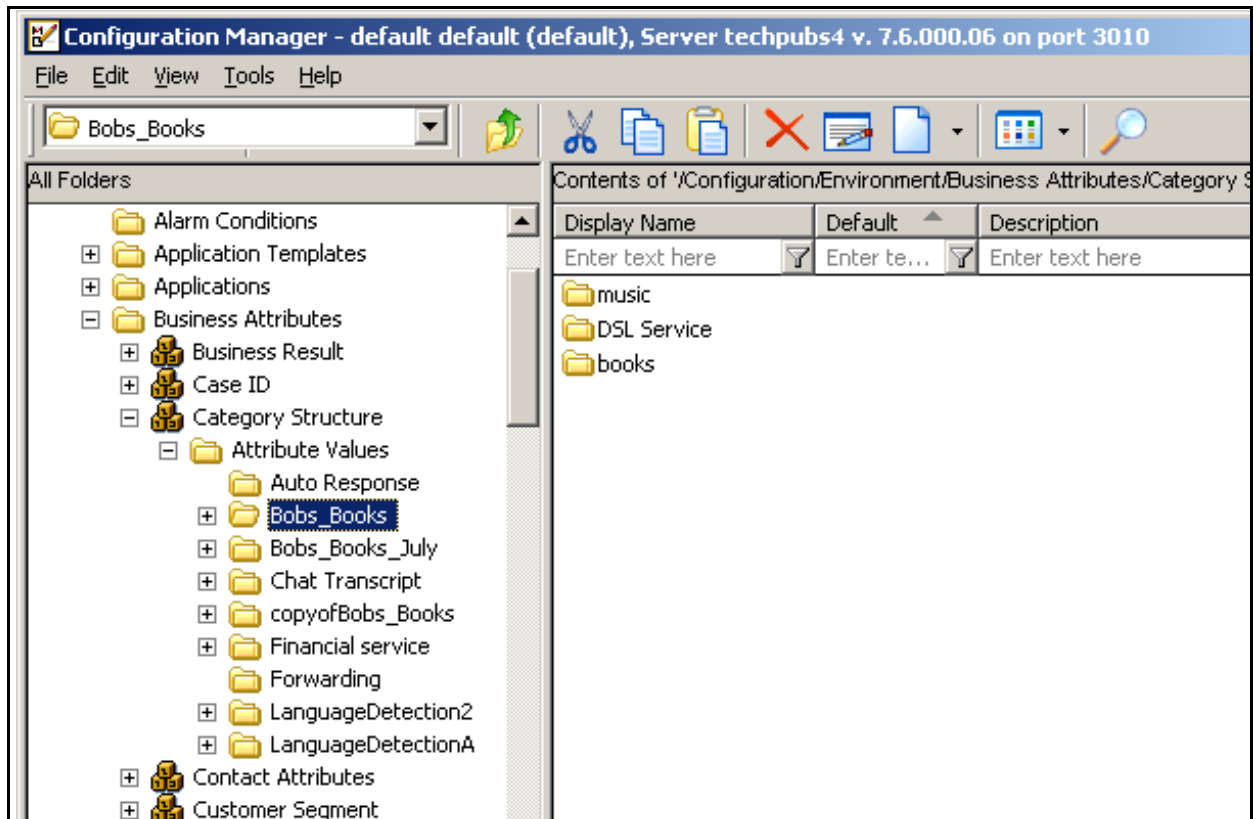


Figure 161: Classification Category Codes

Once the Categories are contained in the Configuration Database, the codes are viewable in various IRD object properties dialog boxes.

Category Codes in Classify Object and Attach Categories Objects

The IRD `Classify` object properties box displays classification Categories that were originally defined in Knowledge Manager (see [Figure 162](#)).

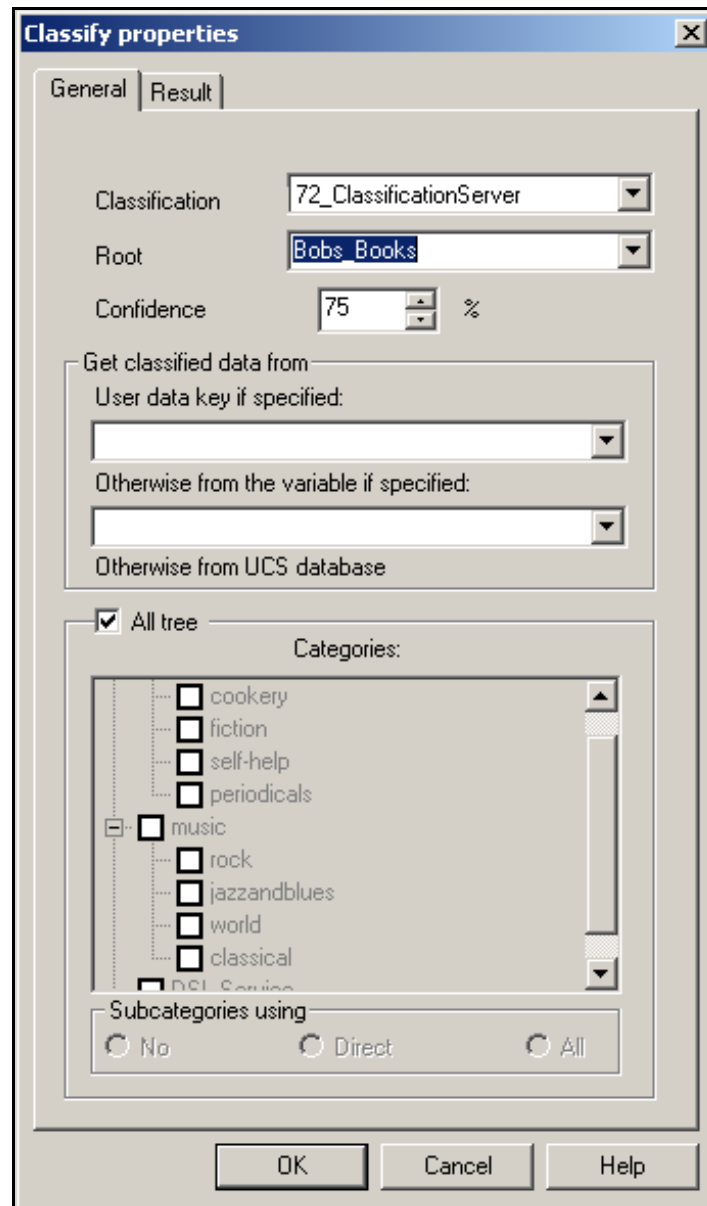


Figure 162: Classification Categories in Classify Object

IRD's Attach Categories object is similar to the Classify object, but you use it to manually (instead of automatically) attach classification Categories to an interaction. Once this is done, one possible use would be to create a strategy where an If object creates an expression based on the attached Categories. You could then have interactions take different paths in the strategy based on those Categories.

[Figure 163](#) shows an example completed Attach Categories Properties dialog box with Categories selected that were originally defined in Knowledge Manager.

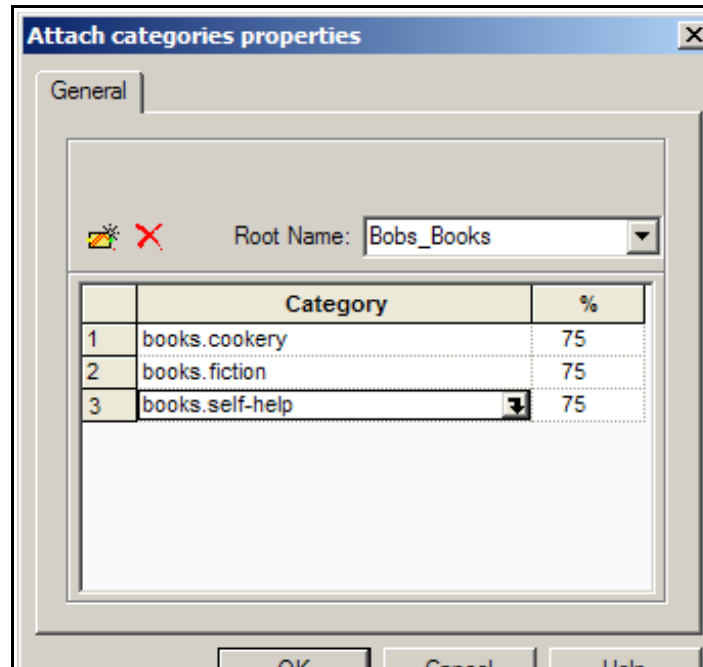


Figure 163: Classification Categories in Attach Categories Object

Category Codes in Classification Segmentation Object

You can segment interactions to take different paths in a strategy based on Categories returned from the Multi-Screen or Classify object. [Figure 164](#) shows an example completed Classify Segmentation Properties dialog box.

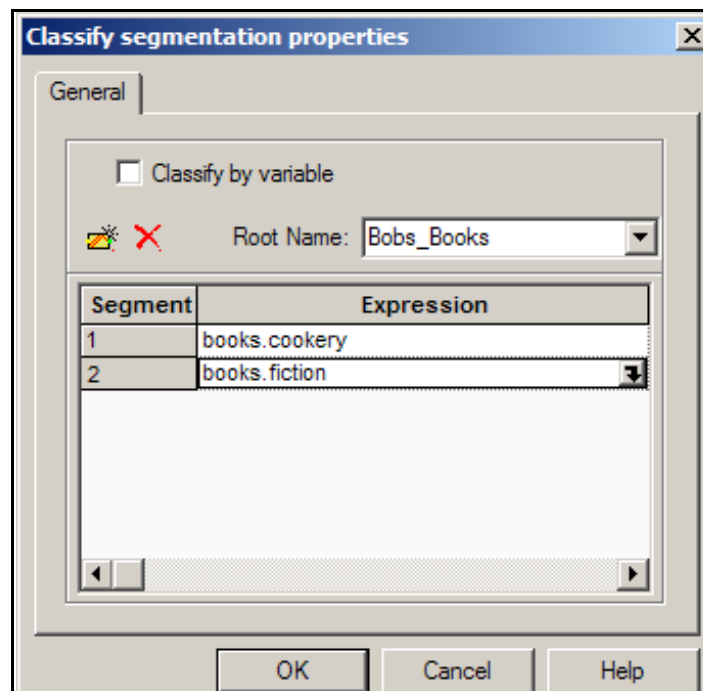


Figure 164: Classification Categories in Classify Segmentation Object

Category Codes in Acknowledgement and Autoresponse Objects

The Acknowledgement and Autoresponse objects allow you to select Standard Responses, which are previously defined in Knowledge Manager. [Figure 165](#) shows an example Acknowledgement receipt properties dialog box where Standard Responses are selected.

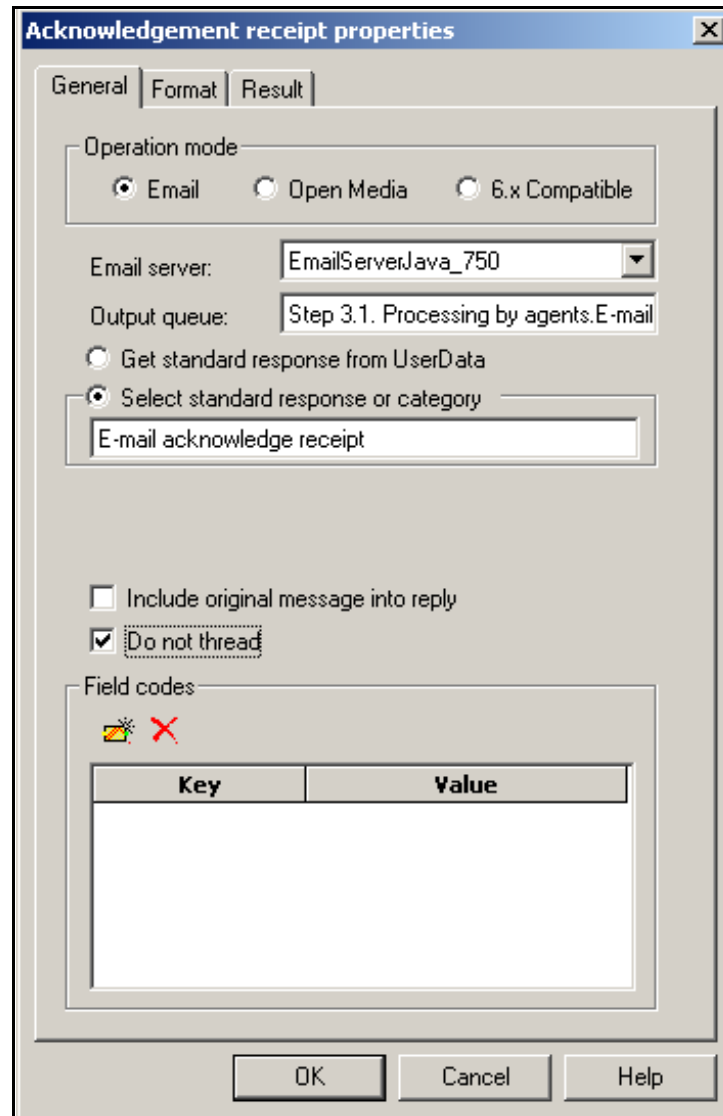


Figure 165: Acknowledgement Object With Standard Response

Field Codes Tab

Note: For more information than presented here, see the section on Field Codes in the *eServices (Multimedia) 8.0 User's Guide*.

Figure 166 shows the Knowledge Manager Field Codes tab.

Name	Description	Body
contact phone_CONF050205102517		Contact.PrimaryPhoneNumber
subject_CONF050205102517	subject of interaction	Interaction.Subject
agentsig_CONF050205102517		Agent.Signature
contact name and title_CONF05020...		Contact.Title+" "+Contact.FullName
contact phone		Contact.PrimaryPhoneNumber
subject	subject of interaction	Interaction.Subject
agentsig		Agent.Signature
contact name and title		Contact.Title+" "+Contact.FullName
Customer name		Contact.FirstName+" "+Contact.LastName
SMS Text	SMS Text, contains the text of the SMS t...	Interaction.AttachedData("SMSText")
Customer name_CONF081606161004		Contact.FirstName+" "+Contact.LastName
OrigSMSNumber	Original SMS number, contains the origin...	Interaction.AttachedData("OrigSMSNu
DestSMSNumber	Destination SMS number, contains the S...	Interaction.AttachedData("DestSMSNu
SMS Text_CONF083106155105	SMS Text, contains the text of the SMS t...	Interaction.AttachedData("SMSText")
Customer name_CONF083106155105		Contact.FirstName+" "+Contact.LastName
OrigSMSNumber_CONF0831061551...	Original SMS number, contains the origin...	Interaction.AttachedData("OrigSMSNu
DestSMSNumber_CONF083106155...	Destination SMS number, contains the S...	Interaction.AttachedData("DestSMSNu
SMS Text_CONF083106155105_CO...	SMS Text, contains the text of the SMS t...	Interaction.AttachedData("SMSText")
DestSMSNumber_CONF091306153...	Destination SMS number, contains the S...	Interaction.AttachedData("DestSMSNu

Figure 166: Knowledge Manager Field Codes Tab

The main use of Field Codes is to particularize Standard Responses.

Figure 167 shows a Standard Response that uses the Field Codes Contact.Title and Contact.FullName.

Dear <\$ Contact.Title+" "+Contact.FullName \$>,
 Thank you for your request that we carry <magazine_name>.
 Unfortunately we have only limited shelf space and must carry only periodicals that have
 above a minimum customer interest.
 Sincerely,
 <\$ Agent.Signature \$>

Figure 167: Field Codes in Standard Response

For example, you can use the Field Code <\$Contact.FullName \$> in a response beginning Dear <\$Contact.FullName \$>, which you send to dozens of recipients. In each message, <\$Contact.FullName \$> is replaced by the full name of the addressee of the message (the contact) as listed in the Universal Contact Server database. [Figure 168](#) shows an example completed Edit Field Code dialog box for a Field Code.

Edit Field Code

Name:

Description:

Field code variables

System:

Custom:

Text:

Figure 168: Knowledge Manager Edit Field Codes Dialog Box

Field Codes in Autoresponse Object

Once you define Field Codes in Knowledge Manager, the names carry over to Configuration Manager and are selectable in the IRD Acknowledgement and Autoresponse Properties dialog boxes by clicking the down arrow (see [Figure 169](#)).

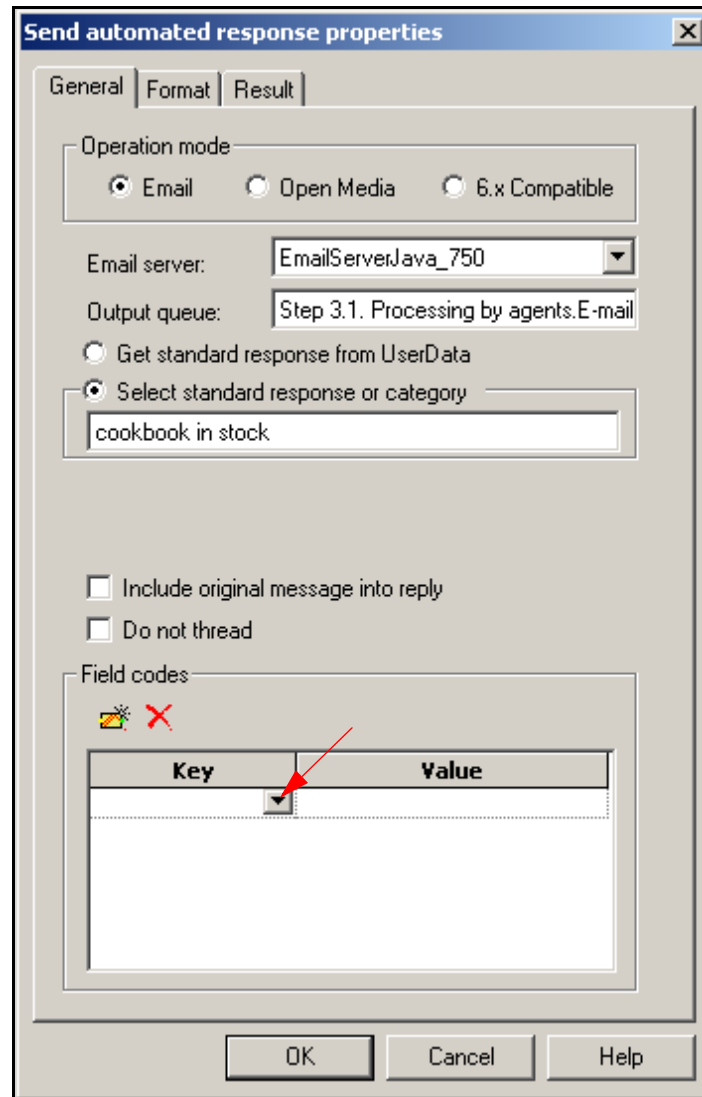


Figure 169: Autoresponse Object, Displaying Field Codes

Screening Tab

Note: For more information than presented here, see the section on Screening rules in the *eServices (Multimedia) 8.0 User's Guide*.

Figure 170 shows the Knowledge Manager Screening tab with example entries.

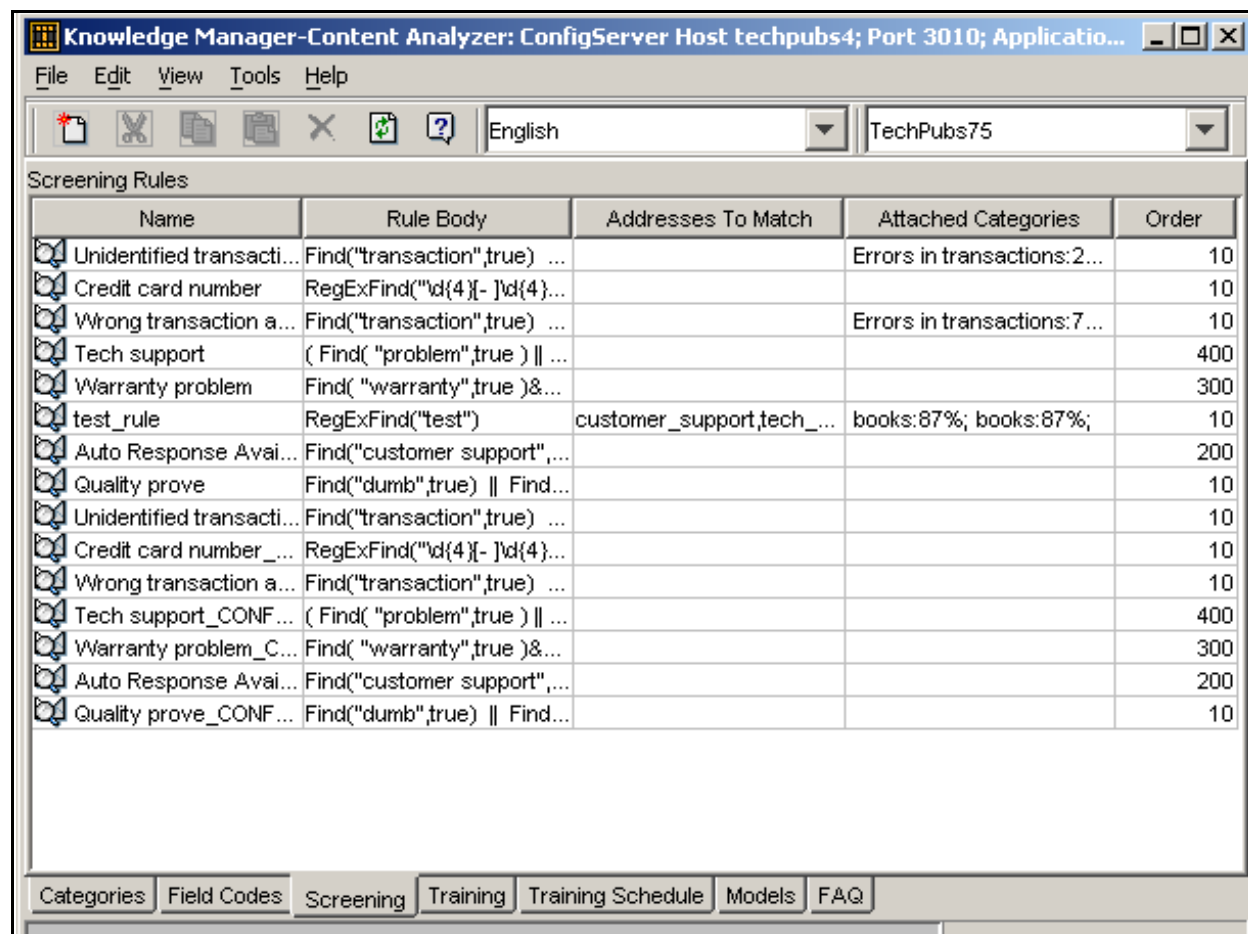


Figure 170: Knowledge Manager Screening Tab

When triggered by a Screen object in a routing strategy, Classification Server uses Screening Rules to scan an interaction and try to match either an originating address, a regular expression, or both. Figure 171 shows an example completed Edit Screening Rule dialog box.

Edit Screening Rule

Name:

☒ Enabled Order:

Use these addresses

customer_support
 tech_support
 warranty_support

☐ Exact address match

☒ AND ☐ OR

Use pattern

Choose and add regular expressions and operators between them:

Find("transaction",true) && Find("amount",true) && (Find("wrong",true) || Find("different",true) || Find("doesn't match"

Search for pattern in message's ☒ Subject ☒ Body ☒ Header

☐ Merge sources checked above

Categories

	Root category	Category	Relevancy
<input type="button" value="Add"/>	Financial service	Errors in transactions	75
<input type="button" value="Delete"/>			

Test messages

	Subject
<input type="button" value="Add new"/>	
<input type="button" value="Delete"/>	
<input type="button" value="Test rule"/>	

Figure 171: Knowledge Manager Screening Tab

Note that a Screening Rule is associated with a Category and a Category is associated with a Standard Response (see Figure 160 on [page 177](#)). Once you define Screening Rules in Knowledge Manager, they carry over to the Genesys Configuration Database and become selectable in the IRD Screen object (see [Figure 172](#)).

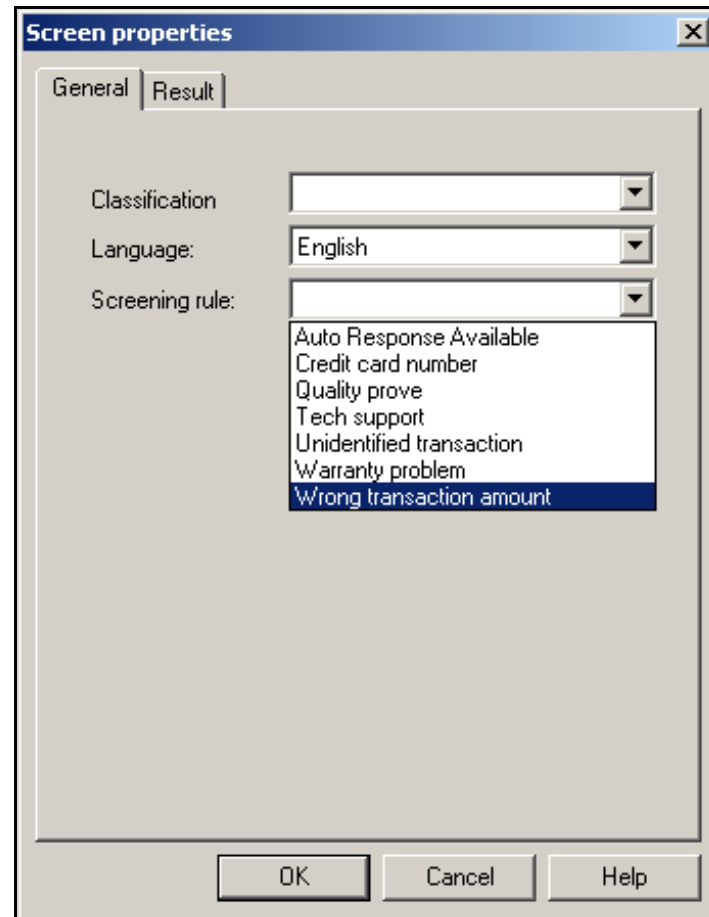


Figure 172: Screen Object Showing Available Screening Rules

After an interaction is screened, you can use the Screen Segmentation object to have interactions take different paths in a strategy based on screening results (see [Figure 375 on page 431](#)).

Training, Training Schedules, Models, and FAQ Tabs

The last four tabs are relevant only to users of Genesys Content Analyzer and are not shown. For details, see *eServices (Multimedia) 8.0 Knowledge Manager Help*.

Summary

The intent of this chapter is simply to introduce the Knowledge Manager interface. You will use Knowledge Manager later as described in “Creating Knowledge Manager Objects” on [page 223](#).



Part

3

Creating a Business Process

Part Three of this *Universal Routing 8.1 Business Process User's Guide* provides information that you will need to create a business process, including information for the planning and preparation stage.

The information in Part Three is divided into the following chapters:

- Chapter 7, “Planning a Business Process” on [page 195](#).
- Chapter 8, “Creating Knowledge Manager Objects” on [page 223](#).
- Chapter 9, “Creating Configuration Manager Objects” on [page 237](#).
- Chapter 10, “Creating Business Process Objects” on [page 247](#).
- Chapter 11, “Creating Strategies” on [page 323](#).
- Chapter 12, “Using a Business Process” on [page 361](#).

Summary of Entire Process

This section summarizes the entire process of creating a business process. It includes the planning stage and creating the objects that must exist prior to creating the business process in IRD's Interaction Design window.

[Table 7](#) summarizes the steps that are required.

Table 7: High Level Steps to Create/Load a Business Process

Objective	Related sections and procedures
1. Determine the interaction life cycle at your contact center.	Review a simple interaction life cycle: See “Basic Interaction Life Cycle” on page 195 . Review a more complex interaction life cycle: See “Using the Samples” on page 197 .
2. Determine the IRD objects to be used in strategies to perform the various processing required at each stage of interaction processing.	Review the functionality associated with IRD objects commonly used in business processes. See “IRD Objects Used in Business Processes” on page 201 .
3. For each interaction processing stage, assign a name to the required business processes.	Use the supplied worksheet in the section “Naming the Required Business Processes” on page 212 .
4. Name the queues that will connect the strategies contained within each business process and/or connect one business process to another business process.	Use the supplied worksheet in the section “Naming the Required Queues” on page 213 to name the required queues.
5. Determine the selection criteria for extracting interactions from queues.	See “Determining View Criteria” on page 215 .
6. Name the views that will extract interactions from queues.	Use the supplied worksheet in the section “View Information Worksheet” on page 216 .
7. Review limitations.	See “Configuration Manager Limitations” on page 219 and “IRD Limitations” on page 219 .
8. Create Knowledge Manager objects, such as Categories, Standard Responses, Field Codes, and Screening Rules.	To create some of the objects that will be used in IRD objects contained in strategies, see “Creating Knowledge Manager Objects” on page 223 . Procedures: <ul style="list-style-type: none"> • “Creating a New Category” on page 227. • “Creating a Standard Response” on page 229. • “Creating a Field Code” on page 231. • “Creating a Screening Rule” on page 234.

Table 7: High Level Steps to Create/Load a Business Process (Continued)

Objective	Related sections and procedures
9. Create Configuration Manager objects, such as Skills, Persons, Agent Groups, Places, Place Groups, and Business Attributes.	<p>To create some of the objects that will be used in IRD objects contained in strategies, see “Creating Configuration Manager Objects” on page 237.</p> <p>Procedures:</p> <ul style="list-style-type: none"> • “Defining Skill objects that can be assigned to agents” on page 239. • “Defining Person objects” on page 241. • “Defining Agent Groups, Places, and Place Groups” on page 243. • “Defining Business Attributes” on page 243.
10. Create the business process “container” that will contain the queues, strategies, views and other objects that perform interaction processing.	<p>Use the following procedures:</p> <ul style="list-style-type: none"> • “Defining a Business Process Script object” on page 248 • “Adding endpoints” on page 254 • “Adding a Queue object” on page 258 • “Adding a View to a Queue object” on page 268 • “Completing the View object Condition tab” on page 272 • “Completing the View object Order tab” on page 274 • “Completing the Parameterized Conditions tab” on page 282 • “Adding a Workbin object to a business process” on page 293 • “Creating strategy placeholders” on page 300 • “Creating a Submitter object” on page 304
11. Create routing strategies for use inside business processes.	See “Creating Strategies” on page 323 for a list of procedures.
12. Activate the strategies inside business processes.	See “Activating Strategies” on page 361 .

7

Planning a Business Process

This chapter provides instructions for planning a business process. It covers the following topics:

- [Basic Interaction Life Cycle, page 195](#)
- [Using the Samples, page 197](#)
- [Defining the Required Functionality, page 200](#)
- [IRD Objects Used in Business Processes, page 201](#)
- [Naming the Required Business Processes, page 212](#)
- [Naming the Required Queues, page 213](#)
- [Determining View Criteria, page 215](#)
- [View Information Worksheet, page 216](#)
- [Order of Configuration, page 217](#)
- [Limitations, page 219](#)

Basic Interaction Life Cycle

When you are planning a business process, start by considering the basic stages in interaction life-cycle processing. You can then design a business process that encompasses all stages, just one stage, or multiple stages. This section presents four basic stages in interaction life-cycle processing, which are especially applicable to e-mail processing. The stages are the following:

1. Pre-Route
2. Route-to-Agent
3. Review
4. Pre-Send

Each stage is summarized below.

Pre-Routing Stage

The main activities in the pre-routing stage can include, but are not limited to:

- Determining whether an interaction has already been processed by Genesys. This can be accomplished via the absence or presence of an Interaction Subtype (see “Step 1. Pre-Routing” on [page 391](#)).
- If Content Analyzer is installed, sending interactions to Classification Server for assignment of one or more Category codes previously defined in Knowledge Manager (see Figure 162 on [page 180](#)). Once a Category code is assigned to an interaction, you can configure other types of processing to occur based on the Category code.
- Screening interactions for certain words or patterns of words (see “Step 2.3. New Inbound E-mails” on [page 396](#)). Once a Screening Rule match occurs, you can configure other types of processing based on the true/false value.
- Sending an acknowledgement and/or automatic Standard Response to the customer originating the interaction (see “Step 2.3. New Inbound E-mails” on [page 396](#)).
- Determining the agent that previously handled the interaction (see “Step 2.1. NDR Handling” on [page 393](#)).

Route-to-Target Stage

This may or may not be an agent target. For example, the interaction may be:

- Sent to a queue for submittal to other routing strategies and further processing (see “Step 2.3. New Inbound E-mails” on [page 396](#)).
- Sent to a queue for failed interactions (see “Step 2.2. Inbound Collaboration Reply” on [page 394](#)).
- Forwarded outside the contact center to an expert with the expectation of getting a response back (see “Step 3.3. Forwarding” on [page 403](#)).
- Redirected to another agent without the expectation of getting a response back (see “Step 3.4. Redirecting” on [page 405](#)).
- Routed to an agent target for construction of a response (see “Step 3.1. Processing By Agents” on [page 399](#)).

Review Stage

The reviewer could be a manager, supervisor, or QA Person (see “Defining Persons” on [page 241](#)). You may want to have two different types of quality-assurance review:

1. A supervisor review that checks the skills of the agent who constructed the response (see “Step 3.2. QA Review” on [page 401](#)).

2. An analysis that performs a “sanity check;” for example, to prevent sending out a bank account password in an interaction or to screen interactions for inappropriate language.

Pre-Send Stage

The cycle of going from queue to routing strategy to queue can continue until the interaction reaches some final outbound queue (see “Step 4. Outbound Sending” on [page 407](#)). The pre-send stage performs last-minute quality checking and allows for attaching additional information to interactions when needed. Another approach to defining the interaction life cycle is to study the Genesys-supplied business process samples.

Using the Samples

When you install the Genesys Multimedia software, you have the option of installing a component called *Interaction Workflow Samples* (see [Figure 173](#)).

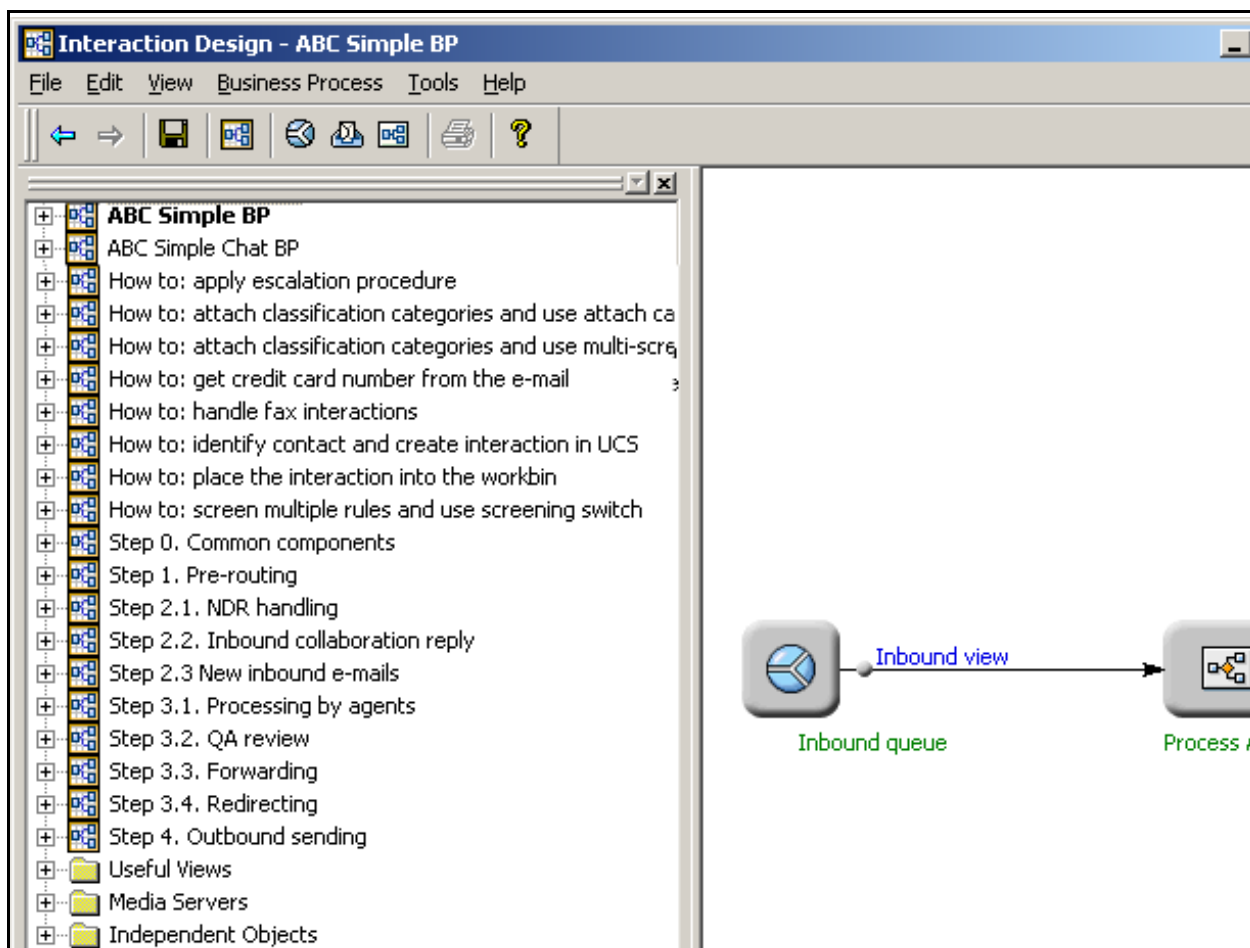


Figure 173: Interaction Workflow Samples

The Workflow Samples component (*samples*) includes various business processes and associated queues, views, submitters, workbins, and routing strategies. The samples show how interaction processing can be contained in one large business process or broken down into smaller business processes connected with queues.

Samples Functionality

Note: For a description of each sample, see “Business Process Samples” on [page 369](#).

The Default BP business process shown in [Figure 173](#) demonstrates “real world” workflow complexity. In order to help you understand Default BP, a group of samples isolate its functional areas. For each functional area of Default BP, such as pre-routing, the samples supply a corresponding step-numbered business process (see [Figure 173](#) on [page 197](#)). For example, [Figure 174](#) shows the pre-routing area in Default BP.

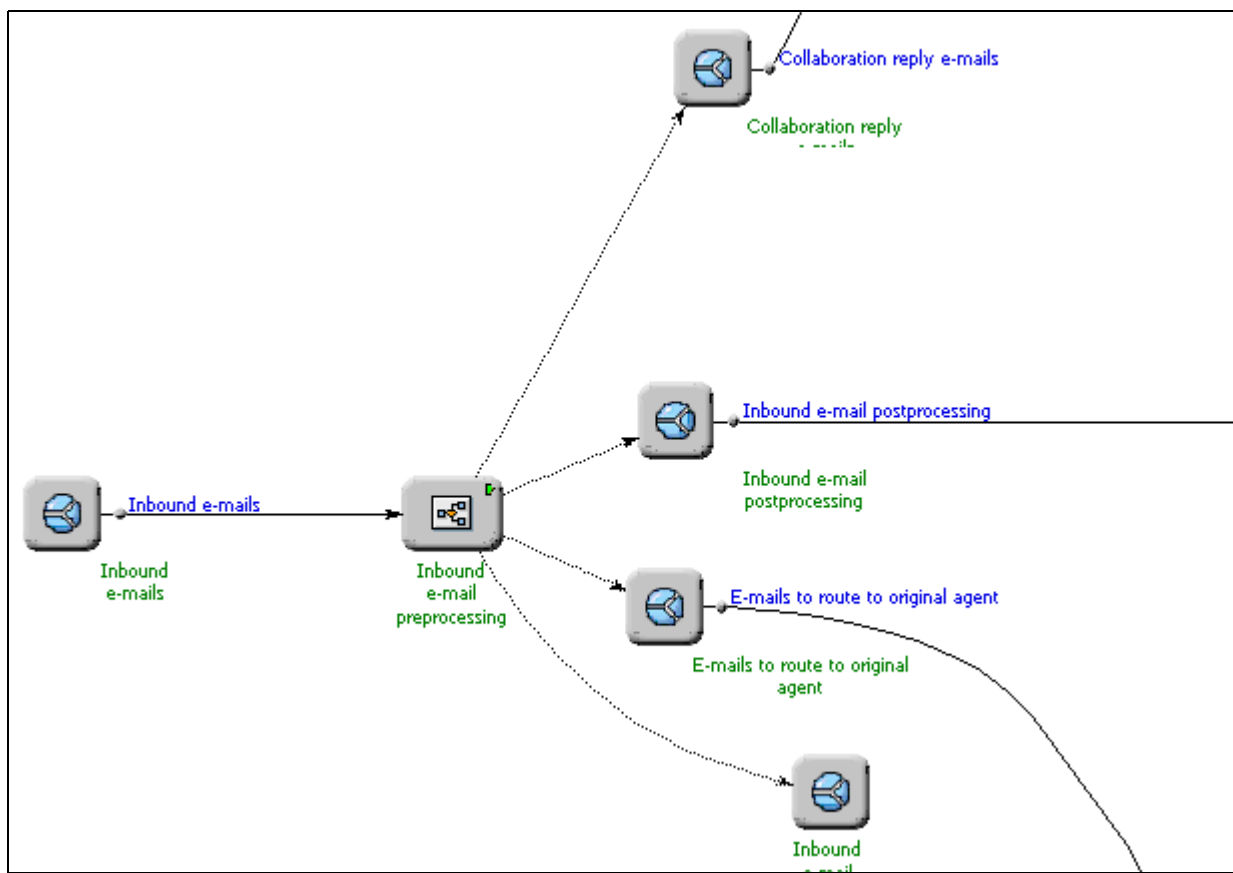


Figure 174: Pre-routing Area in Default BP

The pre-routing area in Default BP in [Figure 174](#) corresponds to the Step 1. Pre-routing business process shown in [Figure 175](#) on [page 199](#).

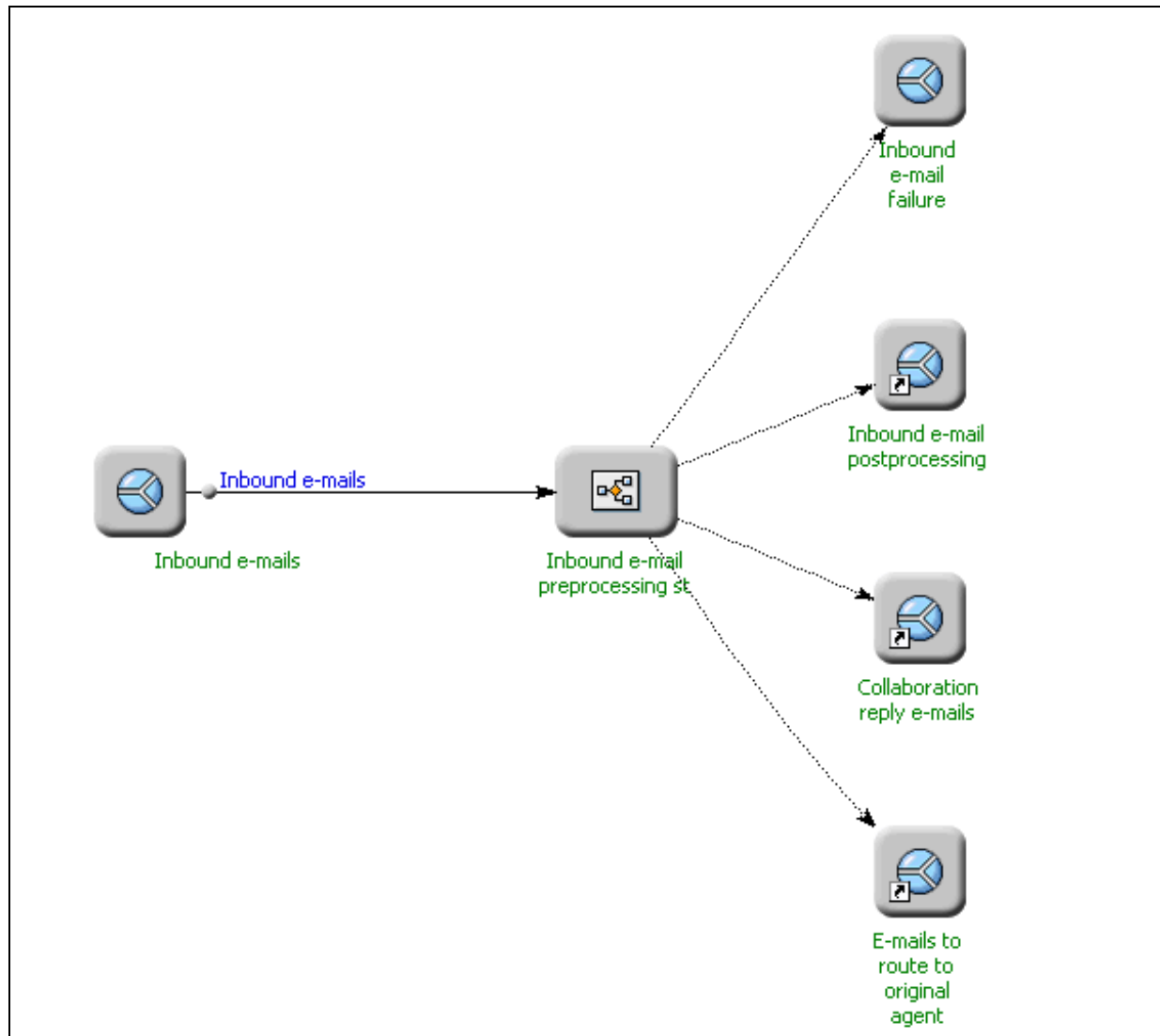


Figure 175: Step 1. Pre-Routing Business Process

Connecting Business Processes Via Queues

As can be seen in [Figure 175](#), Step 1. Pre-routing directly outputs to four queues:

1. Collaboration reply e-mails. Input queue for Step 2.2. Inbound Collaboration Reply.
2. E-mails to route to original agent. Input queue for Step 2.1. NDR Handling.
3. Inbound e-mail failure.
4. Inbound e-mail postprocessing. Input queue for Step 2.3. New Inbound E-mails.

Queues can connect business processes in this manner to create an *interaction workflow*. You can find the business process that “owns” (originated) a queue by right-clicking the queue and selecting **Locate** from the menu. The queue is highlighted in the object browser under the business process that owns the queue. If the queue originated in a different business process, it displays an up arrow (see Figure 9 on [page 28](#)).

Step-Numbered Business Processes

The step-numbered business processes demonstrate how to construct the functional areas of **Default BP**. To help you estimate the queues and strategies you will need if you wish to emulate the samples, Table 30 on [page 389](#) shows the elements in each step-numbered business process. It also points you to the corresponding IRD objects used to implement the functional area.

Defining the Required Functionality

To isolate the interaction processing functionality that is required at your contact center, you can start by using the samples to these questions:

1. What functionality from the first column in Table 30 on [page 389](#) is applicable to your site? The middle column in Table 30 on [page 389](#) shows the IRD objects you could use. The third column shows the queues you would need to define if emulating the samples.
2. Is there any special interaction processing functionality that is required at your contact center that is not covered by the first column in Table 30 on [page 389](#) or by the overall samples functionality (see “Samples Functionality” on [page 371](#)).
3. Can the Web Service (see Table 14 on [page 210](#)) or External Service object (see Table 8 on [page 201](#)) be used to supply this functionality?
4. Does this special interaction functionality require its own business process or will it be part of another business process?
5. What queues and strategies are required to implement this special functionality?
6. What are your contact center’s special conditions for extracting interactions from queues? See “Interaction Attributes” on [page 216](#).

After listing the interaction processing functionality that is required at your site, decide whether you should:

- Create one large business process as demonstrated by **Default BP** (see [page 387](#)).
- Build a number of smaller business processes and connect them via queues as demonstrated by the step-numbered samples (see [page 389](#)).

IRD Objects Used in Business Processes

This section highlights the strategy-building objects that are specifically intended for routing strategies that are called by business processes.

Multimedia Objects

Table 8 on [page 201](#) summarizes the Multimedia strategy-building objects (see Figure 106 on [page 126](#)) in alphabetical order.

Note: IRD Multimedia objects (business processes, single queues, and workbins) are renamed in release 8.1.1. IRD keeps a record of the interaction design objects usage (business process, queues, workbins) in strategies, and tracks interaction design object name changes. This enables IRD to make the adjustment the object properties inside strategies *on-the-fly* to correctly refer to the renamed interaction design object. Previously, users had to adjust the name changes manually.

Table 8: Multimedia Objects Used in Business Processes

Name	Purpose	Strategy-linked nodes (page 34)
Acknowledgement	<p>Generates an acknowledgement e-mail using text from your Standard Response Library explaining that the customer's e-mail has been received and will be answered. You can send an Acknowledgement in reply to an incoming interaction in any medium.</p> <p>The Acknowledgment object has two methods for getting text for the acknowledgement e-mail.</p> <p>The first method automatically selects Standard Response text based upon the Category specified in interaction User Data placed there as a result of using the Classification Request object.</p> <p>The second method lets you preset a Standard Response. If you select this option, you are presented with a tree of Categories and associated Standard Responses.</p>	When Operation Mode is E-mail or Open Media, generates server and queue nodes in a business process.

Table 8: Multimedia Objects Used in Business Processes (Continued)

Name	Purpose	Strategy-linked nodes (page 34)
Attach Categories	<p>Lets you manually emulate the results of the Classify object's request to Classification Server to attach one or more classification Categories to an interaction.</p> <p>Use when creating a strategy in which screening results determine what Categories to attach to an interaction with the Attach Categories object.</p> <p>Use when creating a strategy in which an If object creates an expression based on Categories manually attached to interaction with Attach Categories object. URS analysis (true/false) of the expression determines interaction path in strategy.</p> <p>You can also segment interactions based on Categories using the Classify Segmentation object and/or use Categories to select a Standard Response.</p>	
Autoresponse	<p>Generates (but does not send) an automatic response message using text from your Standard Response Library. You can send an Autoresponse in reply to an incoming interaction in any medium.</p> <p>The Autoresponse object has two methods for getting a Standard Response.</p> <ol style="list-style-type: none"> 1. The first method automatically selects a Standard Response based upon the Category specified in interaction User Data placed there as a result of using the Classification Request object. 2. The second method lets you preset a Standard Response. If you select this option, you are presented with a tree of Categories and associated Standard Responses. 	<p>When Operation Mode is E-mail or Open Media, generates server and queue nodes in a business process.</p>
Chat Transcript	<p>Generates (but does not send) an e-mail, using text from your Standard Response Library, with the customer's chat transcript attached. (Use the Send E-Mail object to send it.) Does not generate any strategy-linked nodes in a business process.</p>	<p>Generates server and queue nodes in a business process.</p>

Table 8: Multimedia Objects Used in Business Processes (Continued)

Name	Purpose	Strategy-linked nodes (page 34)
Classify (note: there is also a Classify Segmentation object)	<p>Requests Classification Server to assign one or more Categories to text-based interactions. The Categories can then be used to select a Standard Response, as well as for routing or reporting.</p> <p>The input parameters include the minimum relevancy each Category must have in order for Classification Server to consider an interaction as belonging to that Category (threshold). Parameters also specify whether to analyze only for the Parent Categories set up in Configuration Manger or both parent and child Categories.</p>	
Create E-mail Out	<p>Creates an outbound e-mail interaction. This outbound e-mail is sent via an E-mail Server that has been specifically configured to handle Open Media interactions.</p> <p>Use the Send E-Mail object to send this message after it has been created.</p>	Generates server and queue nodes in a business process.
Create Interaction	<p>Has URS request that an interaction record be created in the Universal Contact Server database for a customer contact. This object applies to all interaction types other than voice, chat, or e-mail. The UCS Database can store three types of interaction content simultaneously: Text, Structured Text, and Binary Data. When interaction content is expected to be large, Genesys recommends using the Create Interaction object as early as possible in a strategy.</p>	
Create Notification	<p>Creates an informational e-mail to a customer. The e-mail may contain the information that is requested by the customer or may direct the customer to a URS on which the information is located.</p> <p>The outbound e-mail is sent via an E-mail Server that has been specifically configured to handle Open Media interactions.</p>	Generates server and queue nodes in a business process.
Create SMS	<p>Use to create a new outbound message in a format that is to be sent by a specifically configured E-mail Server to SMS-ready targets, such as cell phones, via an E-mail to SMS gateway.</p> <p>Use the Send E-Mail object to send the SMS message after you have created it.</p>	Generates server and queue nodes in a business process.
Distribute Custom Event	<p>Delivers special events to reporting clients.</p>	

Table 8: Multimedia Objects Used in Business Processes (Continued)

Name	Purpose	Strategy-linked nodes (page 34)
Find Interaction	Queries Interaction Server for all or a number of interactions that correspond to specific conditions and listed in a specific order.	
Forward E-mail	Use when sending an incoming message to an external address (see E-mail Accounts on page 246) with the expectation of getting a response back. Supports agent collaboration. The resource can be another agent such as an “expert” or an e-mail server. The Forward E-Mail object is a request to E-mail Server for method Forward to create the forwarded e-mail. Use the Send E-Mail object to send the forwarded e-mail that is waiting in a queue.	Generates server and queue nodes in a business process.
Identify Contact	Use to locate one or more contacts in the Universal Contact Server (UCS) database with attributes that match data attached to the interaction. If you choose to match one unique contact, if UCS locates it, it returns all stored data concerning that contact. You can also choose to have UCS create a new contact if no existing contact matches the attached data. This object requires you to specify a Contact Server.	
MultiScreen	See Screen object. The difference between the two objects is that MultiScreen can use multiple Screening Rules, supplies additional return options, and does not require a conditional test to determine whether a match occurred.	
Redirect E-mail	Used when sending an incoming message to an external address (see E-mail Accounts on page 246) without expecting a response or the need for any further processing. The Redirect E-Mail object is a request to E-mail Server for method Redirect to create the redirected e-mail. Use the Send E-Mail object to send the redirected e-mail that is waiting in a queue.	Generates server and queue nodes in a business process.
Reply from External Resource	Takes an External Resource Reply inbound e-mail as input (such as one generated as a result of using the Forward object), extracts the external resource reply text from it, creates a Customer Reply outbound e-mail, and submits the e-mail to Interaction Server.	Generates server and queue nodes in a business process.
Render Message Content	Creates message content by using text from either a message box of the strategy object, strategy variable, User Data or Standard Response.	

Table 8: Multimedia Objects Used in Business Processes (Continued)

Name	Purpose	Strategy-linked nodes (page 34)
Screen	Requests Classification Server to screen text-based interactions for certain words or patterns of words using rules set up in Knowledge Manager. You can choose to return Screening Rule identifiers (associated with Categories in Knowledge Manager) or Categories (associated with Standard Responses in Knowledge Manager), matched pairs, or all of the above. Requires that you name the Classification Server used for screening as well as a language and a Screening Rule.	
Send E-mail	Sends an e-mail that is waiting in an interaction queue to a customer or another agent. This can be the final e-mail response or an e-mail generated with the Acknowledgement, Autoresponse, ChatTranscript, Forward, or Redirect object.	
Stop Interaction	Sends a stop interaction request to Interaction Server. Optionally, notifies Universal Contact Server that interaction processing in this particular routing strategy is finished. Requires a Reason Code.	Generates a stop node in a business process.
Submit New Interaction	Creates a new interaction in Interaction Server.	
Update Contact	Updates information for an existing contact in the Universal Contact Server (UCS) Database based on data associated with the interaction.	
Update Interaction	Updates properties of the interaction in the Interaction Server database that are not currently processed in the strategy by URS.	
Update UCS Record	Updates properties of the interaction in the Universal Contact Server database that are not currently processed in the strategy by URS.	
Routing objects	Certain Routing objects also generate queue, person, and stop nodes. See Table 11 on page 207 for more information.	

Workforce and Resource Management

Table 9 describes Workforce and Resource Management objects (see Figure 108 on page 128) that can be used in strategies that are called by business processes.

Table 9: Workforce and Resource Management Objects Used in Business Processes

Name	Purpose
Force Logout	Use the Force Logout object to log out a Place or an Agent from all media that are controlled by Interaction Server. When this is done, the reported agent state (agent capacity vector) will not contain any media that are supported by Interaction Server.
Set Agent DND State	Use the Set Agent DND State object to turn the Agent DND status on or off. If this is set to off, all of the agent's media that are controlled by Interaction Server will be reported as not accepting any interactions. If it is set to on, reported media status will be based on agent capacity rules.
Set Agent Media State	Use the Set Agent Media State object to change the state of the specified media to which the agent is logged on (if it is controlled by Interaction Server). If the media are set to Not Ready, it will be reported as not accepting any interactions. If the media are set to Ready, the status of the media will be reported based on agent capacity rules.
Set Multimedia Strategy State	Use the Set Multimedia Strategy State object as an additional method for managing workflows. Strategies can be activated or deactivated by an interaction that has specific properties.

SMS

[Table 10](#) describes Workforce and Resource Management objects (see [Figure 109](#) on [page 128](#)) that can be used in strategies that are called by business processes.

Table 10: SMS Objects Used in Business Processes

Name	Purpose	Strategy-linked nodes (page 34)
Create SMS Out	Use the Create SMS Out object to instruct SMS Server to create a new SMS interaction that will be handled by using ESP technology. Note: Do not confuse this object with the Create SMS object on the Multimedia toolbar. The Multimedia Create SMS object creates a specially-configured e-mail-type message that is sent by the E-Mail Server. The Create SMS Out object uses ESP technology to create an SMS message that is sent by SMS Server.	Generates a queue node in a business process.
Send SMS Out	Use the Send SMS Out object to send an SMS message that is created by using the Create SMS Out object.	

Routing Objects

[Table 11](#) describes Routing objects (see [Figure 104](#) on [page 125](#)) that can be used in strategies that are called by business processes.

Table 11: Routing Objects Used in Business Processes

Name	Purpose	Strategy-linked nodes
Route Interaction	Routes a non-voice interaction to a specified target type: Agent, AgentGroup, Place, PlaceGroup, Skill (see Figure 121 on page 138)—or to a target that is contained in a variable (see “Defining Variables” on page 150).	Generates a queue node in a business process. If Agent is specified as a target, generates a person node in a business process.

Table 11: Routing Objects Used in Business Processes (Continued)

Name	Purpose	Strategy-linked nodes
Workbin	Use to place an interaction in a temporary storage area that is called a Workbin, which is associated with one of the following: Agent, AgentGroup, Place, or PlaceGroup	Generates a workbin node in a business process. If a Person object (agent) is specified as a target, generates a person node. If the Stop Processing(__ queue is selected, generates a stop node.
Queue Interaction	Generates a message from URS to Interaction Server to place the interaction into a queue see page 47). Queues that are defined in the Interaction Design window (see page 258) are listed for selection.	Generates a queue node in a business process.

The remaining Routing objects on the toolbar are intended for voice routing strategies.

Segmentation Objects

[Table 12](#) describes the Segmentation strategy-building objects that you will frequently use in routing strategies that are called by business processes.

Table 12: Segmentation Objects Used in Business Processes

Name	Purpose
Generic	Segments interactions to take different paths in the strategy based on the true/false value of an expression created in Expression Builder (see Figure 119 on page 136). Expressions can be created using Interaction Data (see page 119), Business Attributes (see page 161), or Functions (see page 331). For an example, see “Segmenting Interactions” on page 328 .
Screen	Segments interactions to take different paths in the strategy (see Figure 364 on page 420) based on analyzing whether a Screening Rule match occurred.
Classify	Segments based on classification Categories (see Figure 164 on page 181).

Miscellaneous Objects

Any of the objects accessed from the Miscellaneous icon (see [Figure 100 on page 123](#)) can be used in routing strategies that are called by business

processes. However, if you study the samples, as described in “Business Process Samples” on [page 369](#), you will note frequent use of the Miscellaneous objects listed in [Table 13](#).

Table 13: Miscellaneous Objects Used in Business Processes

Name	Purpose
Assign and Multi-Assign	The Assign object (see Figure 116 on page 134) gives a value to a variable, which has been predefined in the Variable List dialog box (see Figure 139 on page 151). For an example, see page 341 . The variable can then be used as a parameter of almost any object. For example, the Function object allows you to assign the function return to a variable.
Function	When you open the properties dialog box for the Function object, you select one of the functions detailed in <i>Universal Routing 8.1 Reference Manual</i> . If applicable, you can use the Expression box (see Figure 140 on page 152) in the Function object to create an expression, which assigns the output to a variable.
If	The properties dialog box lets you create an If expression (see Figure 120 on page 137). You can create expressions using Interaction Data (see page 119), Business Attributes (see page 161), or Functions (see page 331).
Error Segmentation	The Error Segmentation object processes error codes generated by functions and objects. Connecting an object to the Error Segmentation object overrides standard behavior for a particular error. This enables further processing of errors and presents interactions from going to the default destination.
Call Subroutine	The Call Subroutine object lets you call a subroutine from within a strategy or subroutine. When URS encounters this object in a strategy, control of the interaction is passed to the subroutine. Values can be passed between a strategy and a subroutine through input and output parameters

Note: For detailed information about using these and other strategy-building objects, see the section on IRD objects the *Universal Routing 8.1 Reference Manual*.

Data & Services

[Table 14](#) describes Data & Services objects (see Figure 102 on [page 124](#)) that can be used in strategies that are called by business processes.

Table 14: Data & Services Objects Used in Business Processes

Name	Purpose
External Service	<p>Use to exchange data with third party (non-Genesys) servers that use the Genesys Interaction SDK or any other server or application that complies with Genesys Interaction Server (GIS) communication protocol.</p> <p>Note: To use this object, you must already have created the third-party server or application in Configuration Manager. Before completing the object properties dialog box, you must already know the names of the services, methods, and signatures (requested input/output parameters) provided by the external service.</p>
Web Service	<p>Use to interact with Web-based applications (Web Services) outside of Genesys applications. You specify request parameters, what type of data that you expect to be returned, and what to do with the returned data. This object can be used in both voice and non-voice routing strategies.</p>

Outbound

Note: The Outbound objects are designed to be used in strategies that are configured for proactive routing functionality, which are Open Media interactions that are processed with the `outbound_preview` media type.

Any of the objects that is accessed from the Outbound toolbar (see Figure 100 on [page 123](#)) can be used in routing strategies that are called by business processes. For more information about these objects and example strategies, see the *Genesys 7.6 Proactive Routing Solution Guide*.

Table 15: Outbound Objects

Name	Purpose
Add Record	<p>Use the Add Record object to automate building of Calling Lists by adding a new record to a specified Outbound List, such as a Calling List. For example, use to develop a Calling List, such as one to follow up on inbound calls that were abandoned during traffic peaks. You can then configure a routing strategy to detect abandoned calls and add records to the Calling List with the parameters of the incoming interactions. The Calling List can subsequently be used by an Outbound Campaign that dials out these customers during off peak hours and has the agent apologize and follow up.</p>
Do Not Call	<p>Use to add a phone number or e-mail address to a specified Do Not Call List and mark the corresponding record as Do Not Call.</p> <p>Use the Do Not Call and Processed (page 92) objects to finalize Outbound record processing. You cannot use other Outbound objects to process records with the same Record Handle after using Processed or DoNotCall in a strategy flow.</p> <p>The Do Not Call object prevents a record from being dialed by any Campaign. If a record is marked as Do Not Call, Outbound Contact Manager rejects all subsequent requests for the record.</p> <p>When URS executes this object in a strategy, it sends (via Interaction Server) a DoNotCall request to OCS. Using the GSW_RECORD_HANDLE provided, OCS:</p> <ul style="list-style-type: none"> • Identifies the record and updates the record type as NoCall. • Enters the phone number and e-mail address or customer ID of this record in the gsw_donotcall_list (table). <p>If you require more information about Do Not Call Lists in general, see the section on submitting Do Not Call requests in the <i>Outbound Contact 8.0 Reference Manual</i>.</p>
Processed	<p>Use to finalize Outbound record processing. You cannot use other Outbound objects to process records with the same Record Handle after using Processed or DoNotCall in a strategy flow.</p> <p>In the Outbound Contact 7.6 product, when an agent finishes processing a Calling List record, Genesys Desktop sends a RecordProcessed event to indicate that the record is processed and Outbound Contact Server updates the record accordingly.</p> <p>Use the Processed object in a strategy to have URS request that Outbound Contact Server finish processing a record created as a result of a customer call that was previously:</p> <ul style="list-style-type: none"> • Initiated from a Calling List • Automatically dialed by the Genesys Outbound Contact product • Routed to an agent when the potential customer answered <p>When URS executes this object in a strategy, it results in an External Service Request to Outbound Contact Server.</p>

Table 15: Outbound Objects (Continued)

Name	Purpose
Reschedule	<p>Use to reschedule a customer call on a Calling List. A record is typically rescheduled during a call when a customer requests a callback at a certain time. As described in the section on scheduling and rescheduling records in the <i>Outbound Contact 8.0 Reference Manual</i>, Outbound Contact supports two methods for rescheduling records:</p> <ul style="list-style-type: none"> • Using RecordReschedule to reschedule a call. • Using ScheduledRecordReschedule when a rescheduled call cannot be completed and must be set for another time. <p>The Reschedule object emulates the first method. URS sends Outbound Contact Server (through Interaction Server) a RecordReschedule message and receives a RecordRescheduleAcknowledge in return.</p>
Update Record	<p>Use to update a Calling List record that you specify via a RecordHandle parameter. The resulting UpdateCallCompletionStats request updates Genesys modifiable mandatory fields and custom fields in a record to Outbound Contact Server. In Predictive Dialing mode, this request can be used to overwrite the call result detected by call progress detection when needed. Or you can overwrite a call result answer with the call result wrong party.</p> <p>When URS executes this object in a strategy, it results in an External Service Request to Outbound Contact Server.</p>

Naming the Required Business Processes

When you have determined the interaction processing functionality that is required at your site by identifying the IRD objects that you will use, ask whether a single business process can implement all the functionality (such as the `Default BP` sample in Appendix A on [page 387](#)). If you require more than one business process, use [Table 16](#) to name the functionality, the required business process, the next business process(es) in the flow, and the connecting queue(s).

Table 16: Required Business Processes and Connecting Queues

Functionality	Business process	Connecting business process(es)	Connecting queue(s)

Table 16: Required Business Processes and Connecting Queues (Continued)

Functionality	Business process	Connecting business process(es)	Connecting queue(s)

Naming the Required Queues

Many of the Multimedia objects that are listed in Table 8 on [page 201](#), as well as the Routing objects listed that are in Table 11 on [page 207](#), require you to specify an output queue. [Table 17](#) lists the objects that require output queues and contains columns for your queue names.

Table 17: IRD Objects and Required Queues

IRD objects specifying queues	How queue is used	Name of your queue	Originating business process
Acknowledgement	Output queue in which E-mail Server should place the acknowledgement e-mail that will be sent to the customer.		
Autoresponse	Output queue in which E-mail Server should place the autoresponse e-mail that will be sent to the customer.		
Chat Transcript	Output queue in which E-mail Server should place the e-mail with the attached chat transcript that will be sent to the customer.		
Create E-mail Out	Output queue in which E-mail Server will find the e-mail.		
Create Notification	Output queue in which E-mail Server will find the e-mail.		
Create SMS	Interaction queue in which E-mail Server will find the messages.		
Create SMS Out	Output queue for outbound SMS.		
Forward E-mail	Output queue in which E-mail Server should place the e-mail that is to be forwarded.		
Queue Interaction	Output queue for the e-mail. Could be one read by agents, a queue for failed interactions, used for routing interactions from one business process to another, and so on.		
Redirect E-mail	Output queue in which E-mail Server should place the e-mail that is to be redirected.		
Reply from External Resource	Output queue for outbound e-mails that contain final replies that are to be sent to customers.		

Table 17: IRD Objects and Required Queues (Continued)

IRD objects specifying queues	How queue is used	Name of your queue	Originating business process
Route Interaction	<p>The Interaction Queue tab is optional. It gives the option of specifying:</p> <p>A queue for the existing interaction. For example, after the agent constructs a response, the interaction might need to be checked by QA.</p> <p>A queue for a new interaction if a new interaction is created.</p>		
Workbin	<p>The Interaction Queue tab is optional. It gives the option of specifying:</p> <p>A queue for the existing interaction. For example, after the agent constructs a response, the interaction might need to be checked by QA.</p> <p>A queue for a new interaction if a new interaction is created.</p> <p>See “Adding Workbins” on page 292.</p>		

Note: IRD predefines a `stop_processing (_STOP_)` queue, which is not actually a queue, but a notification to Interaction Server that processing has stopped for a particular interaction if it reaches this point. For more information on this topic, see “IRD Limitations” on [page 219](#).

Determining View Criteria

Views (see Figure 10 on [page 28](#)) extract interactions from queues or workbins. Part of the planning process includes determining whether all interactions should be extracted or a subset of interactions based selection criteria (see “Adding a View” on [page 267](#)).

You enter the selection criteria in the View properties dialog box (see Figure 221 on [page 270](#)). It has two tabs, *Condition* (see Figure 222 on [page 273](#)) and *Order* (see Figure 224 on [page 274](#)), where you specify column names and values (interaction attributes).

Interaction Attributes

When you are creating a View object, you can create an expression that comprises:

- An interaction attribute (field) name from the `interactions` table
- An equal sign if required
- For string data, the attribute value in single quotes (not necessary for integers)

For an example, see Figure 222 on [page 273](#).

Note: See the *eServices (Multimedia) 8.0 User's Guide* for details on the `interactions` table, including column names and descriptions.

Some attribute values will be contained in the original e-mail. E-mail Server may assign other values. Routing strategy objects, such as the Database object or Classify object, may assign yet other values.

The attributes that you use to create the expression will be those in the `interactions` table as well as any custom attributes that you define in the `interactions` table (see `custom_1s` through `custom_3n`).

Translations

Translations, when they are used in the `Conditions` tab (see Figure 222 on [page 273](#)), provide database manipulation tools that are independent of the underlying database—including functions, attributes, and customizable property names for use in view and snapshot definitions.

Translations are optional. Interaction Server will accept either customized property names or actual database field and construct names. For more information, see the chapter on Interaction Properties in the *eServices (Multimedia) 8.0 User's Guide*.

View Information Worksheet

Use [Table 18](#) to record view information.

Table 18: View Objects Configuration Data

View name	Associated queue or workbin	Conditions (if any)	Order by information (if any)

Table 18: View Objects Configuration Data (Continued)

View name	Associated queue or workbin	Conditions (if any)	Order by information (if any)

Order of Configuration

Certain objects must be defined in Knowledge Manager in order to be viewable in Configuration Manager. Similarly, certain objects must exist in the Configuration Database before the objects are selectable in IRD Strategy objects. Because of this dependency, Genesys recommends that you configure objects in the following order:

1. Start with Knowledge Manager (see “Knowledge Manager Interface” on [page 175](#)).

Define any required classification Categories, Standard Responses, Screening Rules, Field Codes, and Custom Variables (see “Creating Knowledge Manager Objects” on [page 223](#)).

Once these are saved in the Universal Contact Server Database, the object definitions carry over to Configuration Database and are accessible to the strategy-building objects that use them.

2. Next, use Configuration Manager (see “Configuration Layer Interface” on [page 155](#)).

Define any required media server, skill, Person, Agent Group, Place, Place Group, and certain Business Attribute objects (see “Creating Configuration Manager Objects” on [page 237](#)).

Once these are saved in the Configuration Database, the objects are selectable in the IRD objects that use them.

3. If not already defined, use the Interaction Design window to define endpoints (see Figure 24 on [page 40](#)) for the media server Application objects.
4. Use the Interaction Design window (see Figure 36 on [page 61](#)) to define Business Process objects, including queues, views, and strategy placeholders (see “Creating Business Process Objects” on [page 247](#)).

Once definitions are saved in the Configuration Database, the names are selectable in the strategy-building objects that use them.

Notes: The properties dialog box for most of the IRD Multimedia objects requires an interaction output queue. Before any interaction queue can be listed for selection in one of the Multimedia objects, you must first associate the queue with a business process in the Interaction Design window.

The properties dialog box for the Workbin object requires you to select a workbin name. In order for a workbin name to display for selection in the Workbin object, you must the associate Workbin object with a business processes in the Interaction Design window.

5. Use the Routing Design window (see Figure 98 on [page 122](#)) to create the required routing strategies (see “Creating Strategies” on [page 323](#)).
6. Edit your business processes by pulling in existing Strategy objects and connecting them to queues with Submitter objects (see “Adding a Strategy to a Business Process” on [page 356](#)).

If you proceed in this sequence, you will be able to select the applicable queue or other object.

Limitations

When you are developing a strategy or a business process, familiarize yourself with the following limitations pertaining to Configuration Manager and IRD:

Warning! If you do not observe these limitations, your interactions might be routed to an incorrect destination, URS might unexpectedly shut down, or a requested operation might not be performed.

Configuration Manager Limitations

- While the Configuration Layer supports the full character set for use in object names, using certain characters can cause problems in the behavior of other Genesys applications.
The objects affected by this limitation that are used in Universal Routing include `Tenant`, `Field`, `Format`, `Script` (strategies and subroutines), `Table Access`, `Tenant`, and `Transaction` (routing rules, interaction data, attributes, business rules, and custom statistics).
- The maximum length of any Configuration Server object name is 256 bytes (a limitation that is automatically enforced by Configuration Server).
- When you are configuring `Employee IDs`, `Login IDs`, `Place names`, `DN numbers`, and `Switch names` that will be used to define routing targets, the maximum length is 63 bytes.
- When a URS name is added to the name of a T-Server that is connecting through a Load Distribution Server, the sum of the bytes cannot exceed 126 bytes.
- When you are defining agent states on the `Annex` or `Options` tab of a URS `Application` object (for example when preparing to use the `UseAgentState` function), the maximum number of user-defined agent states is 32.
- The names of skills, if they are used in a skill expression, cannot exceed 126 bytes.
- The priority of an interaction cannot exceed 1,000,000,000.

IRD Limitations

When you are creating or modifying strategies in IRD:

- Certain symbols, listed in [Figure 176](#), should not be used in object names. The names of all IRD reusable objects and data (strategies, routing rules, schedules, and so on) as well as `Interaction Design` window configuration objects (business processes, queues, and so on) are limited to alphanumeric characters and cannot begin with a space, an underscore, or a hyphen.

Please note that although some IRD objects allow you to enter names containing special characters, Genesys strongly recommends not using them.



Figure 176: Invalid Symbols and Characters

- IRD allows you to use only one special character, an underscore, in the middle of a strategy name. You may also use an underscore in any reusable object name, as well as in the name of a service, method, method parameter, or the name of any strategy object that results in executing an external or internal service or procedure.

The underscore is the only character that you can safely use in the middle of the name of a strategy or other reusable object, service, method, or method parameter name of any strategy object that results in executing an external or internal service or procedure.

Warning! Using commas and square brackets as data separators can make IRD incorrectly interpret the entered values if those symbols are used in Treatment, Data and Services, Multimedia, and Outbound objects.

- When you are specifying busy treatment parameters, do not include pipes “|” and colons “:” in values.
- Skill expressions (see Figure 121 on [page 138](#)) that are used by the Selection, Service Level, and Route Interaction Routing objects cannot exceed 100 elements (skill names, numbers, comparisons, and logical operands). That is, a skill expression should have no more than 25 constructions, such as `English > 1`. It is especially important to observe this limitation in the case of Service Level routing rules, which use skills internally—that is, every skill criterion used in a Service Level routing rule generates 1–3 constructions in the form `<Skill> > <Number>`.
- The maximum size of an overall skill expression (as text) is 10239 bytes.
- The maximum length of a string using the format `placename@statservername.AP agentname@statservername.A` for any routing target is 253 bytes.
- The maximum length of a request to Custom Server or DB Server through XData (used for 5.x strategies) is 10239 bytes.
- When creating a key-value list that uses a string format (such as `aaa:5|gggg:123|...`), the maximum key length is 1000 bytes and the maximum length of one key-value pair is 4096 bytes.

- When you are using the Database Wizard object to query a database, the maximum size of a SQL statement created by the DB Wizard is 1010 bytes.
- When you are using the IRD statistical adjustment functions, the name of an object plus the name of the statistic cannot exceed 250 bytes.
- The name of any single target (including a skill group) cannot exceed 256 bytes.
- Integer variables can have a maximum value of approximately four billion, with a range of -2 billion to +2 billion. If a value number exceeds the maximum capacity of an integer variable, the number wraps back around. If the number gets larger than largest allowed number, the integer variable wraps to a negative number. If the value number gets smaller than the smallest allowed number (around negative two billion), the integer variable wraps back into being positive. In any case, the returned number will be an error.
- The name of a strategy created in IRD can incorporate only 194 characters. If you create the `Simple Routing` script object (or rename an existing one) in Configuration Manager with the 254-byte name length, such an object will be displayed in the IRD `Strategies` list, but its `.rbn` file is not accessible for any kind of operation.
- When you specify a `_STOP_` queue for an Existing Interaction in the Route Interaction object's Interaction Queue tab, it places a Stop strategy-linked node in the Workflow Viewer. This Stop strategy-linked node looks the same as if you explicitly placed a Stop object in the strategy. However, the behavior is different. A `_STOP_` queue is just a *hint* to the desktop and the other is an actual *stop*.

8

Creating Knowledge Manager Objects

This chapter provides step-by-step instructions for creating Knowledge Manager objects that are used by routing strategies (see Table 5 on [page 176](#)). The information in this chapter covers the following topics:

- [Opening Knowledge Manager, page 223](#)
- [Categories and Standard Responses, page 225](#)
- [Creating Field Codes, page 230](#)
- [Creating Screening Rules, page 233](#)

For background information, see “Knowledge Manager Interface” on [page 175](#).

Opening Knowledge Manager

The information in this section assumes that you have already installed the Multimedia software components and Knowledge Manager, as described in the *eServices (Multimedia) 8.0 Deployment Guide*.

Procedure: Logging into Knowledge Manager

Start of procedure

1. Click the desktop shortcut if one exists.

As an alternative, use the Start button on your computer desktop and select Programs > Genesys Solutions > Multi Channel Routing 8.0 > Knowledge Manager > Start Knowledge Manager.

Either action brings up the Knowledge Manager login dialog box that is shown in [Figure 177](#).



The image shows a Windows-style dialog box titled "Knowledge Manager". It features a yellow padlock icon and the text "Welcome to Knowledge Manager". Below this, there are two text input fields labeled "User name:" and "User password:". Underneath these fields are three buttons: "OK", "Cancel", and "Details <<". At the bottom of the dialog, there are three more input fields: "Application:" (a text box), "Host:" (a dropdown menu), and "Port:" (a dropdown menu).

Figure 177: Knowledge Manager Login Dialog Box

2. Use the information in [Table 19](#) to complete the Knowledge Manager login dialog box.

Table 19: Knowledge Manager Login Dialog Box

Field	Description
User name:	Name of the Person object that is defined in Configuration Manager.
User password:	Password of the Person object that is defined in Configuration Manager.
Application:	Use default to have the Application object (see Figure 141 on page 157) selected automatically or enter the name of a Knowledge Manager Application object defined in the Configuration Manager. This Application object is associated Contact Server Application object, which is associated with a UCS Database Access Point.
Host name:	Name of the computer on which Configuration Server is located.
Port:	Port number that is used by Configuration Server.

3. Click OK. The Knowledge Manager interface opens.

End of procedure

After you complete the login fields and click OK, Knowledge Manager opens with the **Categories** tab selected. [Figure 178](#) shows a **Categories** tab with various top level (root) classification Categories.

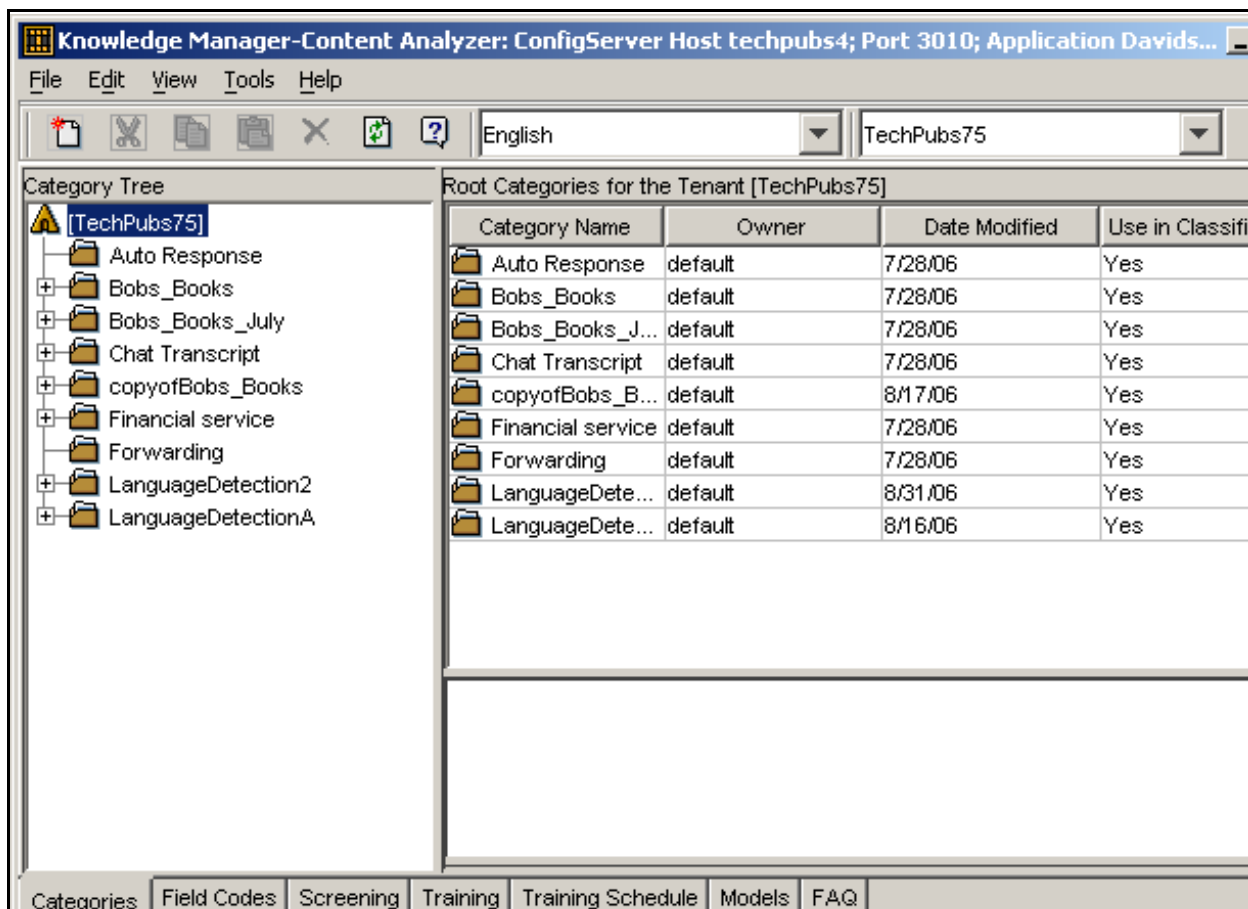


Figure 178: Knowledge Manager, Categories Tab

Categories and Standard Responses

When creating a new Category in Knowledge Manager, you must understand the concept of a *root Category*. Then you can decide whether you need to define a new root Category or whether you can place the new Category under an existing root. Note the expanded Category tree in [Figure 179](#).

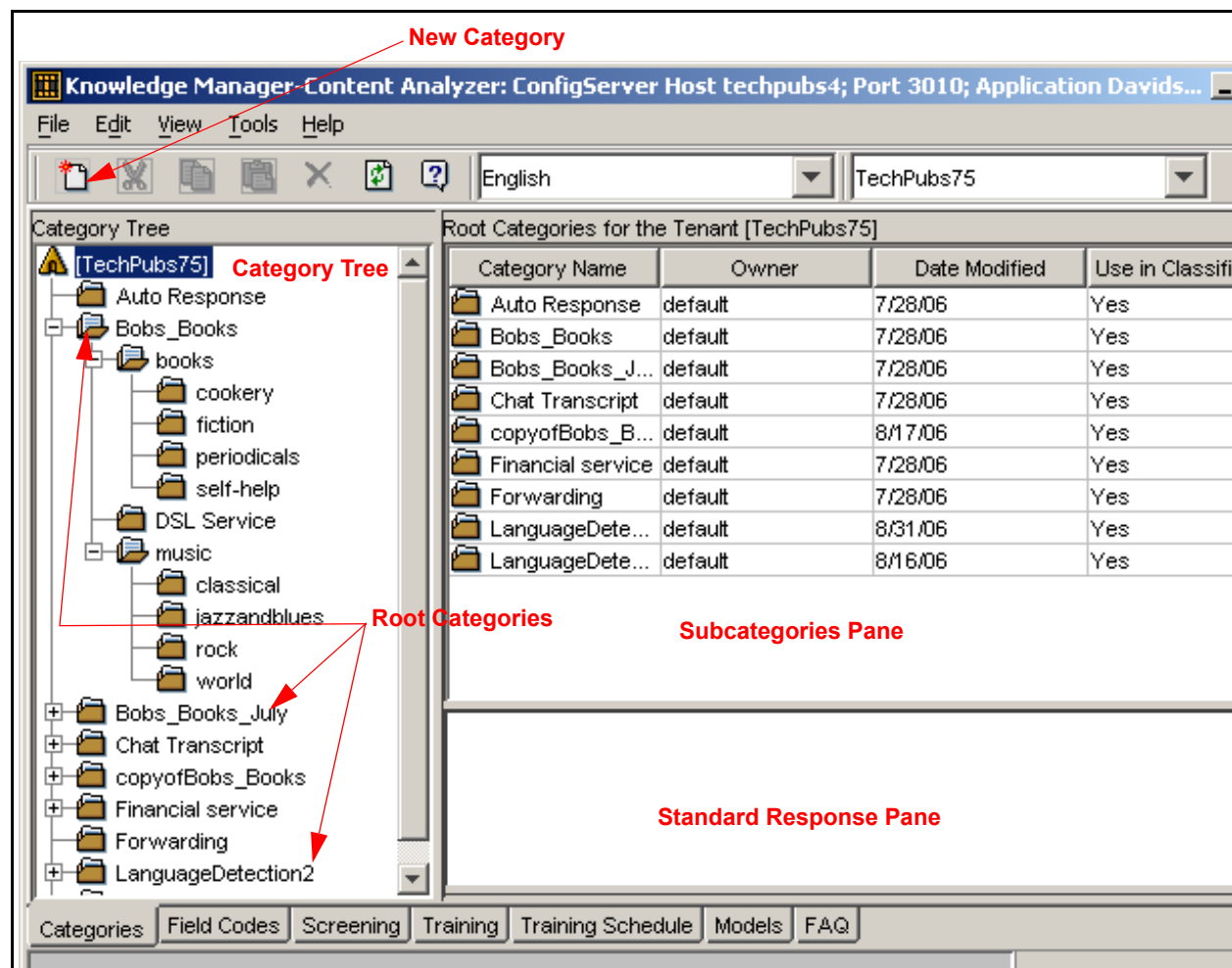


Figure 179: Example Knowledge Manager Root Categories

The example root Categories in Figure 179 are:

- Bobs_Books
- Bobs_Books_July
- Chat Transcript
- copyofBobs_Books
- Financial service
- Forwarding
- LanguageDetection2.

Procedure: Creating a New Category

Purpose: To define a Category for the Category tree that is discussed on [page 178](#). You can then use the Classify strategy-building object (see [page 203](#)) to request Classification Server to assign one or more classification Categories to an interaction, which can then be used to automatically select a Standard Response for customers.

Start of procedure

1. Decide whether you need to define a new root Category or a Subcategory.
 - For a new root Category, select **Resources**, which is the topmost node in the Category tree.
 - For a new Subcategory, select an existing root Category or a lower level Category.
2. Do one of the following to start creating a new Category:
 - Select **New** from the **File** menu.
 - Click the icon for a new Category on the toolbar (first icon).
 - Put the cursor in the Category tree or subcategories pane, right-click, and select **New Category** from the shortcut menu.

The dialog box for creating a new Category opens. [Figure 180](#) shows the New Root Category dialog box.

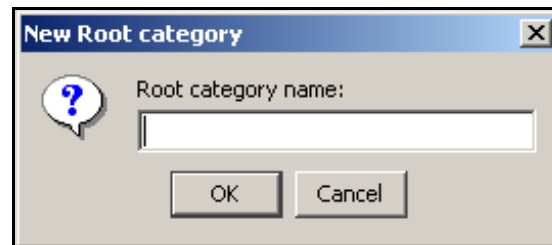


Figure 180: New Root Category Dialog Box

[Figure 181](#) shows the dialog box when **Resources** is not selected.

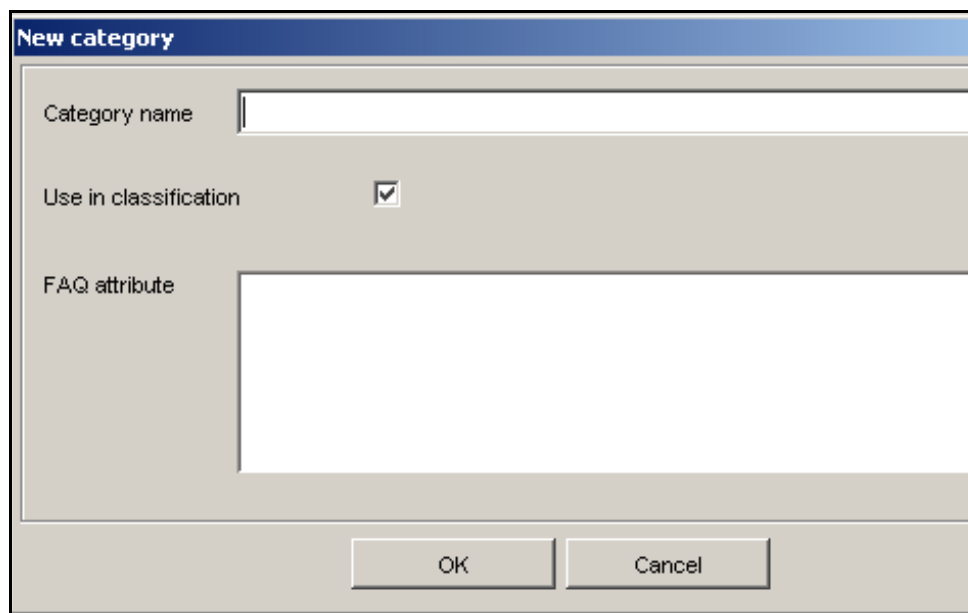
The image shows a 'New category' dialog box. It has a title bar with the text 'New category'. Inside the dialog, there are three main sections. The first section is labeled 'Category name' and contains a single-line text input field. The second section is labeled 'Use in classification' and contains a checked checkbox. The third section is labeled 'FAQ attribute' and contains a large, empty text area. At the bottom of the dialog, there are two buttons: 'OK' and 'Cancel'.

Figure 181: New Category Dialog Box

3. Enter the Category name.

Note: Names of Knowledge Manager objects can use only alphanumeric characters (A–Z, a–z, 0–9), hyphen (-), underscore (_), and space.

4. If you are using the New Category dialog box that is shown in [Figure 181](#), the Use in Classification check box is selected by default. Clear it if you want Genesys Content Analyzer to omit this Category.

Note: Not all categories may have Standard Responses attached. For example, some categories in a deep tree may exist only for the purpose of organizational structure. You may only be interested in viewing only the terminal categories that have Standard Responses attached. Other reasons include preventing a higher level Category from getting too high a relevancy and thereby shielding the lower ones from agents. In summary, this field gives you the ability to fine tune your Category structure.

5. Click OK.

End of procedure

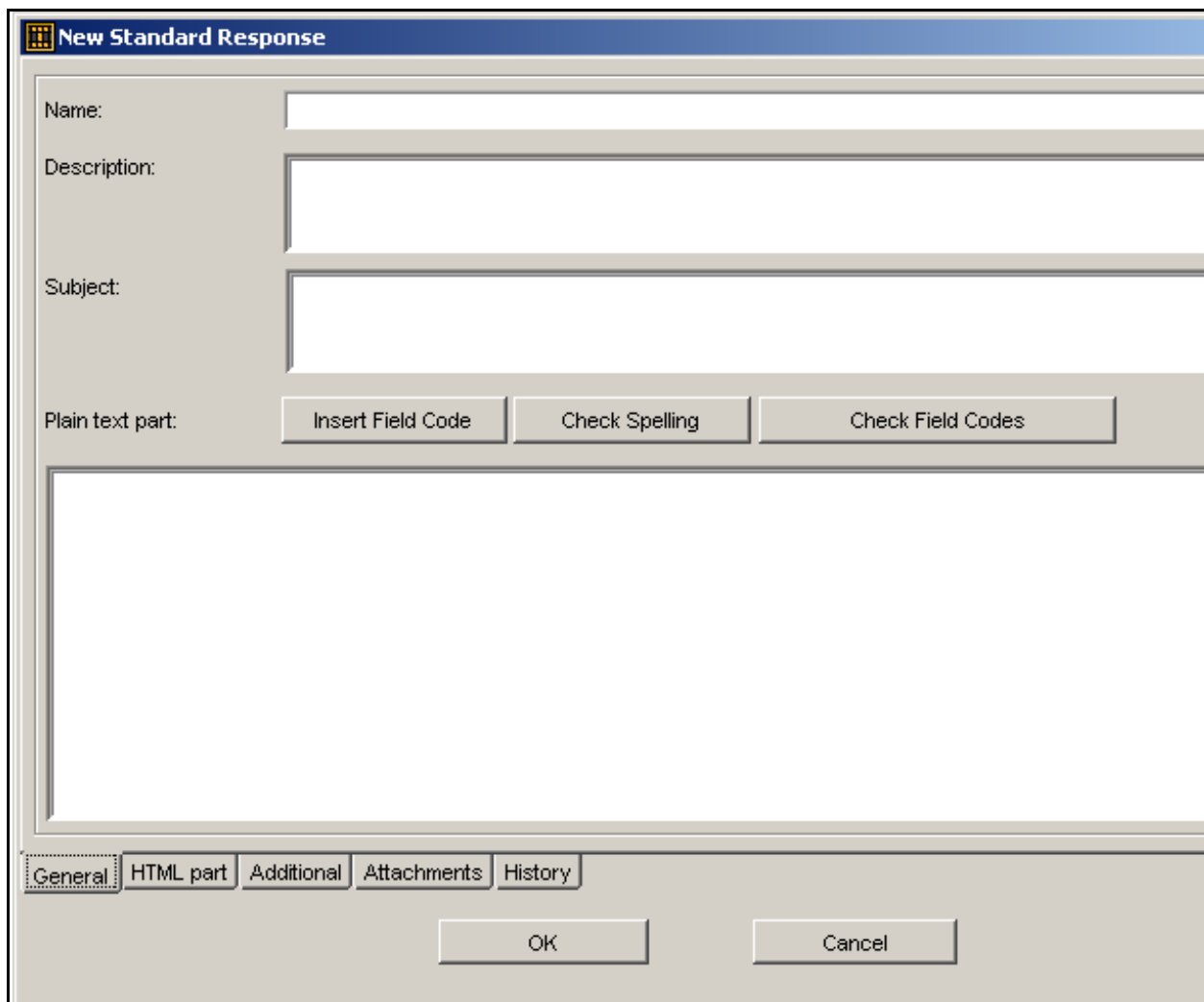
See the *eServices (Multimedia) 8.0 Knowledge Manager Help* for information about FAQs, operating on a Subcategory, searching Standard Responses associated with a Category, and deleting a Category.

Procedure: Creating a Standard Response

Purpose: To create a prewritten response that can be used by agents when responding to interactions such as e-mail interactions. Can also be used to automatically respond to a customer inquiry without agent intervention (Autoresponse object).

Start of procedure

1. On the Category tree pane in Figure 179 on [page 226](#), select the Category that should be associated with the Standard Response.
2. On the Standard Responses pane in Figure 179 on [page 226](#), right-click and select New Standard Response. The New Standard Response dialog box displays, as shown in [Figure 182](#).



The image shows a dialog box titled "New Standard Response". It has a title bar with a small icon and the text "New Standard Response". The dialog box contains several input fields and buttons. On the left side, there are labels for "Name:", "Description:", "Subject:", and "Plain text part:". To the right of these labels are corresponding input fields. Below the "Plain text part:" label, there are three buttons: "Insert Field Code", "Check Spelling", and "Check Field Codes". At the bottom of the dialog box, there is a tabbed interface with five tabs: "General", "HTML part", "Additional", "Attachments", and "History". The "General" tab is currently selected. Below the tabs are two buttons: "OK" and "Cancel".

Figure 182: New Standard Response

Note: The title of the Standard Response editor dialog box is **New Standard Response** if you are creating a Standard Response and **Edit Standard Response** if you are editing an existing Standard Response. The contents are otherwise identical.

Note the **General** tab in Figure 182 on [page 229](#). To complete the **General** tab:

3. Enter a name (required) and description (optional) for the Standard Response. Remember that the name can only use alphanumeric characters (A–Z, a–z, 0–9), hyphen, underscore, and space.
4. Enter a subject for the Standard Response. What you enter here appears as the Subject line in an e-mail (acknowledgement or autoresponse) generated from this Standard Response.
5. Enter text for the plain text version of the Standard Response, using the **Insert Field Code** button to insert Field Codes. If you have not yet created Field Codes, you can continue creating the Standard Response, then return to it and insert Field Codes after you have created them.
6. Use the relevant buttons to check spelling and Field Codes. Checking Field Codes shows you the result of applying (rendering) the Field Codes in this Standard Response. The values that are rendered are taken from a collection of generic properties that exists for this purpose.

End of procedure

For information about the remaining elements in the **General** tab, as well as the **Additional**, **Attachments**, and **History** tabs, see the *eServices (Multimedia) 8.0 User's Guide*.

Note: When E-mail Server uses the Standard Response to create an e-mail (as when generating an acknowledgment, for example), it creates a multipart e-mail that includes both plain text and HTML versions. Then the settings of the e-mail client that receives the e-mail determine the version that is displayed. For more information, see the *eServices (Multimedia) 8.0 User's Guide*.

Creating Field Codes

The IRD Acknowledgement and Autoresponse objects allow you to specify Standard Responses, which can contain Field Codes (see Figure 165 on [page 182](#) and Figure 169 on [page 185](#)). The Knowledge Manager **Field Codes** tab shows the name, description, and body of all Field Codes currently in the Universal Contact Server Database. [Figure 183](#) shows an example tab.

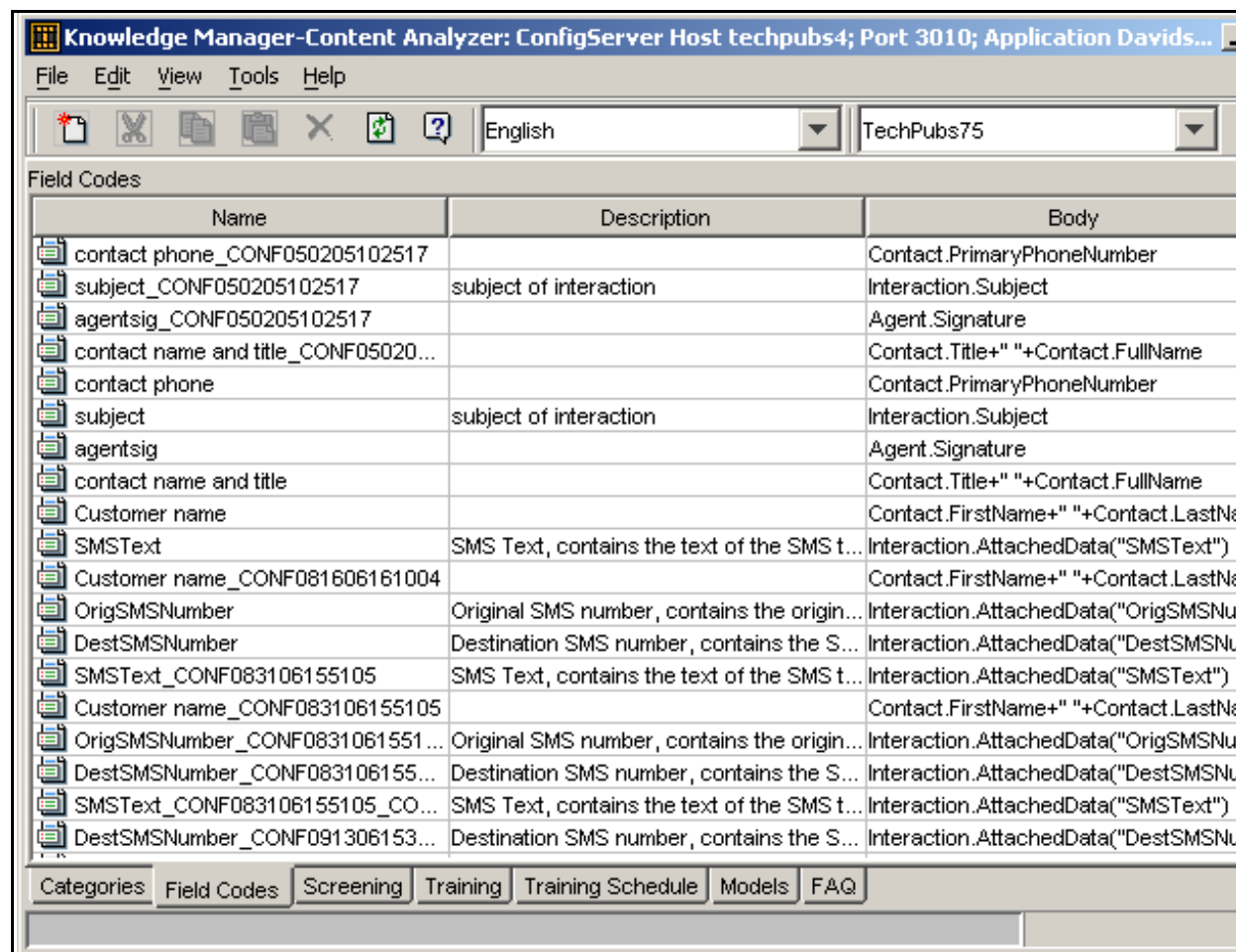


Figure 183: Knowledge Manager Field Codes Tab

Procedure: Creating a Field Code

Purpose: To create a Field Code to customize a Standard Response—usually for a particular customer.

Start of procedure

1. Click the **Field Codes** tab in the Knowledge Manager main window.
2. Click the icon on the toolbar for a new Field Code (the first icon, as shown in [Figure 183](#)). This brings up the New Field Code dialog box (see [Figure 184](#)).

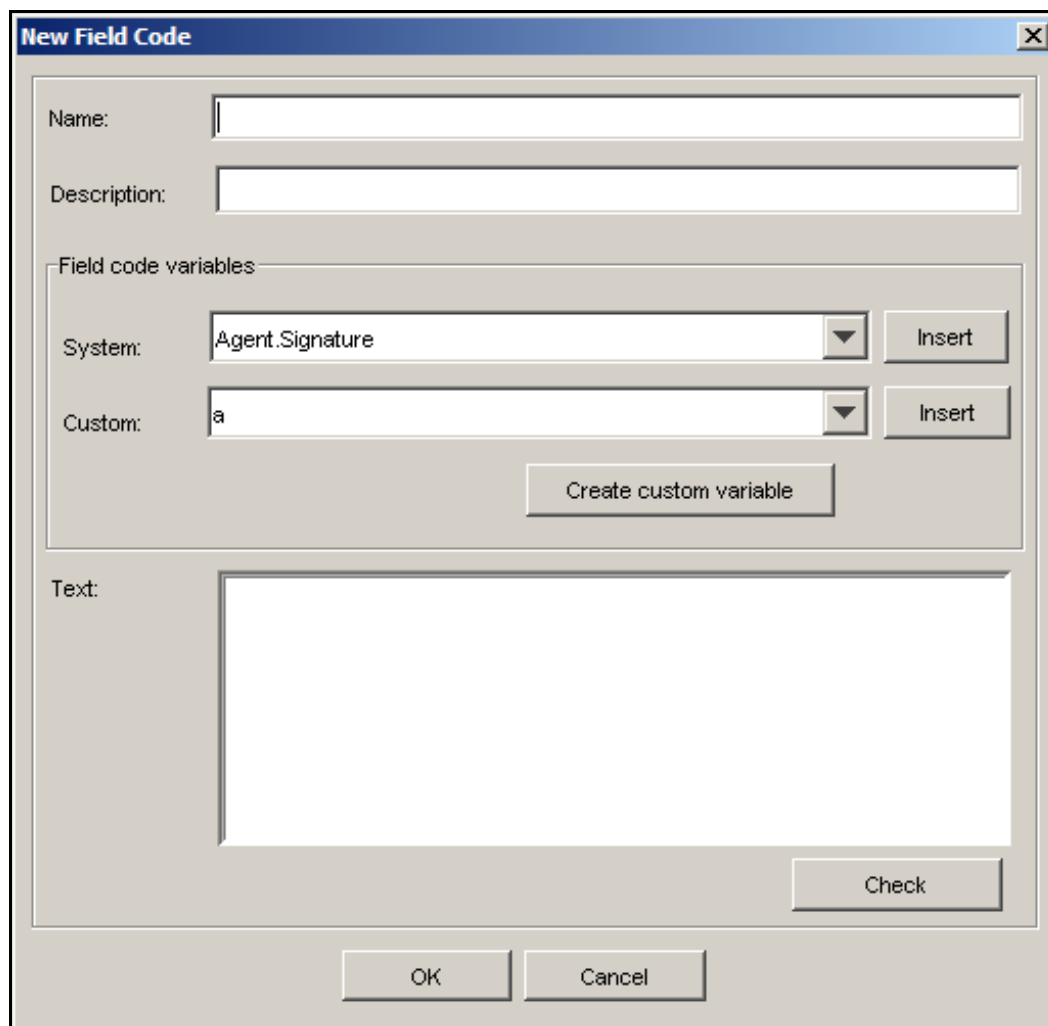
The image shows a 'New Field Code' dialog box with a title bar and a close button. It contains several input fields: 'Name' (a single-line text box), 'Description' (a single-line text box), and 'Text' (a large multi-line text box). Below the 'Description' field is a section titled 'Field code variables' which contains two dropdown menus labeled 'System' and 'Custom'. The 'System' dropdown is set to 'Agent.Signature' and the 'Custom' dropdown is set to 'a'. Each dropdown has an 'Insert' button to its right. Below these dropdowns is a 'Create custom variable' button. At the bottom of the dialog are 'OK' and 'Cancel' buttons. A 'Check' button is located at the bottom right of the 'Text' area.

Figure 184: New Field Code Dialog Box

Note: Figure 168 on [page 184](#) shows a completed dialog box.

As an alternative method, on the **Field Codes** tab of Knowledge Manager, right-click and select **New Field Code**. The **New Field Code** dialog box, shown in [Figure 184](#), opens.

The **Text** field shows the Field Code as you create and edit it.

3. Enter a name and description for the Field Code. **Name** is the only required field in this dialog box.

Enter the **Field Code variables** section, which includes two fields:

- **System.** Click the down arrow to display a list of all system variables.
- **Custom.** Click the down arrow to display a list of all custom variables that you have created.

4. To create a new Field Code, click **Create custom variable**. The **New Custom Variable** dialog box opens (see [Figure 185](#)).

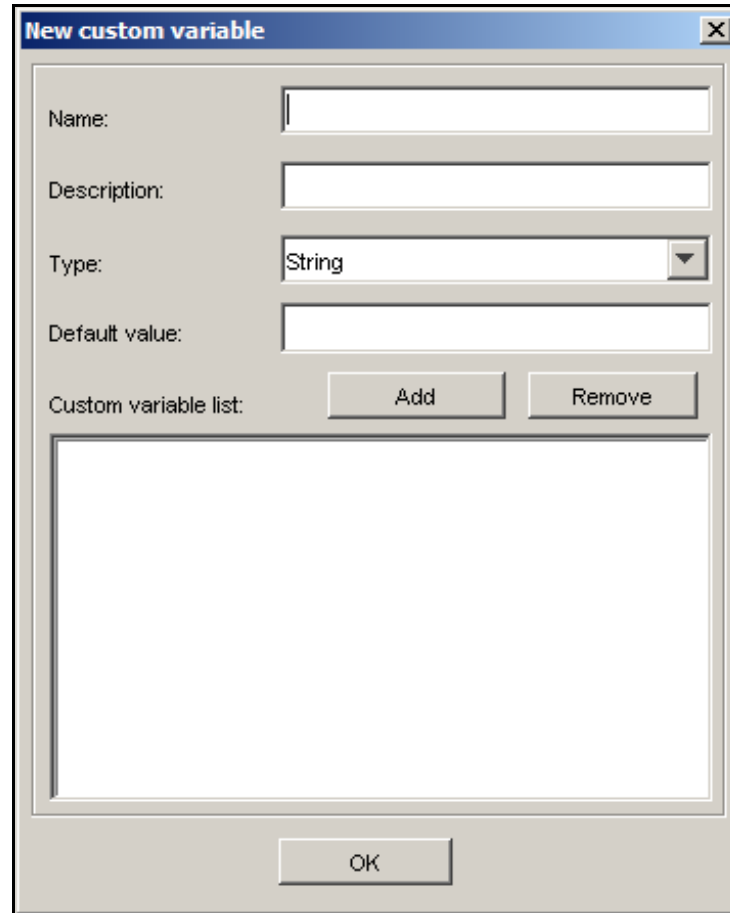
The image shows a 'New custom variable' dialog box. It has a title bar with the text 'New custom variable' and a close button (X). The dialog contains several input fields: 'Name:' with an empty text box, 'Description:' with an empty text box, 'Type:' with a dropdown menu showing 'String', and 'Default value:' with an empty text box. Below these fields are two buttons, 'Add' and 'Remove', next to the label 'Custom variable list:'. At the bottom of the dialog is an 'OK' button.

Figure 185: New Custom Variable

5. For information about creating Custom Variables, see the *eServices (Multimedia) 8.0 User's Guide*. Also see that guide for information about the following:
 - Inserting Field Codes into a Standard Response.
 - Editing an Existing Field Code.
6. Click **OK**.

End of procedure

Creating Screening Rules

Note: To review the difference between screening and classification, see Table 5 on [page 176](#).

When constructing a routing strategy that screens e-mails for certain words or word patterns, you use the Screen or Multi-Screen IRD object. Each of these objects requires Screening Rules, which must be set up in Knowledge Manager in order to be selectable from the object dropdown menus.

Figure 186 shows the Screening tab of Knowledge Manager filled in with sample Screening Rules.

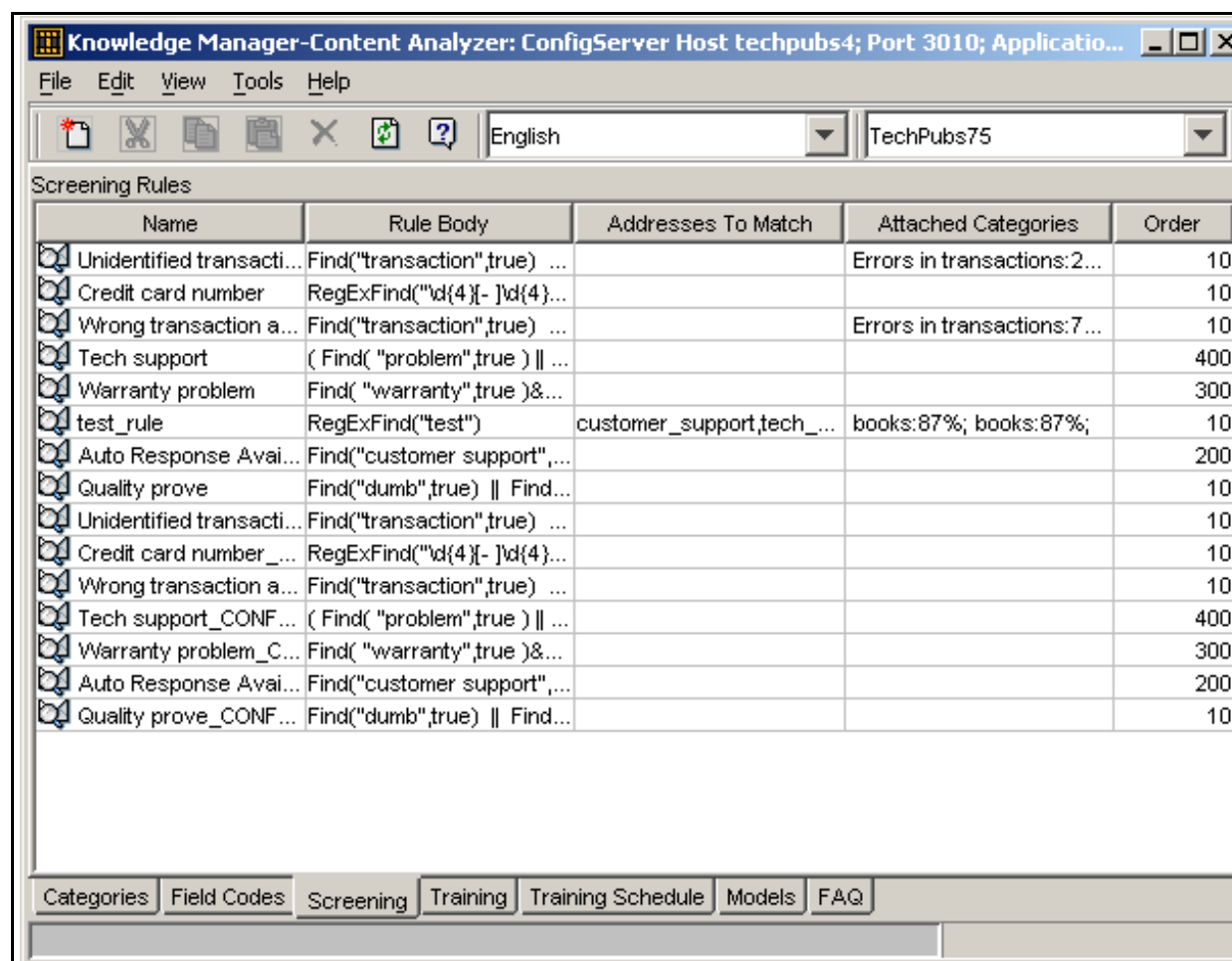


Figure 186: Knowledge Manager Screening Tab

Procedure: Creating a Screening Rule

Purpose:

To create or edit a Screening Rule that can be used in the Screen or MultiScreen IRD strategy object to filter interactions for specific words or word patterns.

Start of procedure

1. Go to the Screening tab in the Knowledge Manager main window (see Figure 186 on [page 234](#)).
2. Do one of the following:
 - a. Select New from the File menu.
 - b. Right-click anywhere on the Screening tab and select New.
 - c. Select an existing Screening Rule and double-click or select Edit from the File menu.

The Screening Rule dialog box opens, as shown in [Figure 187](#).

Figure 187: New Screening Rule Dialog Box

Note: In the case of Steps 2a or 2b, its title is New Screening Rule; in the case of Step 2c, its title is Edit Screening Rule.

3. Complete this dialog box using the detailed instructions on creating a Screening Rule found in the *eServices (Multimedia) 8.0 User's Guide*.

End of procedure

Notes: To obtain all available screening functionality, Genesys recommends that you use the MultiScreen object instead of the Screen object. Use the Screen object for backward compatibility only (for example, for 7.0 backward compatibility).

When you first start creating routing strategies, you might want to use the Screen object instead of the Classify object if your site's classification Categories are not yet defined or if your site has not purchased the Content Analysis option required by the Classify IRD object.

9

Creating Configuration Manager Objects

This chapter provides step-by-step instructions for creating Configuration Manager objects that are used by IRD's strategy-building objects. It contains the following sections:

- [Opening Configuration Manager, page 237](#)
- [Defining Skills, page 239](#)
- [Defining Persons, page 241](#)
- [Defining Agent Groups, Places, and Place Groups, page 243](#)
- [Defining Business Attributes, page 243](#)

For background information, see “Configuration Layer Interface” on [page 155](#).

Opening Configuration Manager

The information in this section assumes you have already set up the Genesys Configuration Layer as described in *Framework 8.1 Deployment Guide*.

Procedure: Logging into Configuration Manager

Start of procedure

1. Click the desktop shortcut if one appears (see [Figure 188](#)).



Figure 188: Configuration Manager Desktop Icon

As an alternative, use the Start button and select Programs > Genesys Solutions > Framework > Configuration Manager.

2. Respond to any security-related screens that your company may have configured to appear before the Configuration Manager login dialog box. The Configuration Manager login dialog box appears as shown in [Figure 189](#).

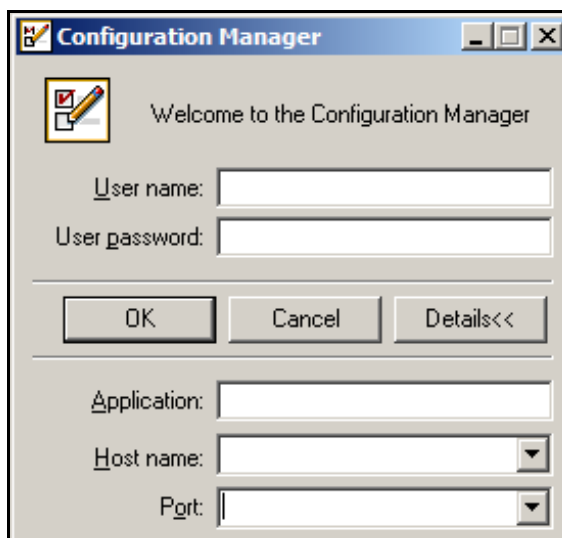


Figure 189: Configuration Manager Login Dialog Box

3. Use the information in [Table 20](#) to complete the Configuration Manager login dialog box:

Table 20: Configuration Manager Login Dialog Box

Field	Description
User name:	Name of the Person object that is defined in Configuration Manager.
User password:	Password of the Person object that is defined in Configuration Manager.
Application:	Use default to have the Application object selected automatically or enter the name of an Configuration Manager Application object.
Host name:	Name of computer on which Configuration Server is located.
Port:	Port number that is used by Configuration Server. By default, this value is 2020.

4. Click OK. Configuration Manager opens (see “Environment Folder and Tenants” on [page 156](#)).
5. If working in a Multi-Tenant environment, select a Tenant object (one of the tenants is named Environment).

End of procedure

Note: All figures in this chapter are based on a Multi-Tenant environment.

Defining Skills

If you plan to route based on agent skills or skill levels, you must first create Skill objects and then assign those Skill objects to agents (Persons).

Procedure: Defining Skill objects that can be assigned to agents

Start of procedure

1. Log in to Configuration Manager, as described on [page 237](#).
2. Expand the Resources folder.
3. Right-click the Skills folder and select New > Skill. The New Skill Properties dialog box opens (see [Figure 190](#)).

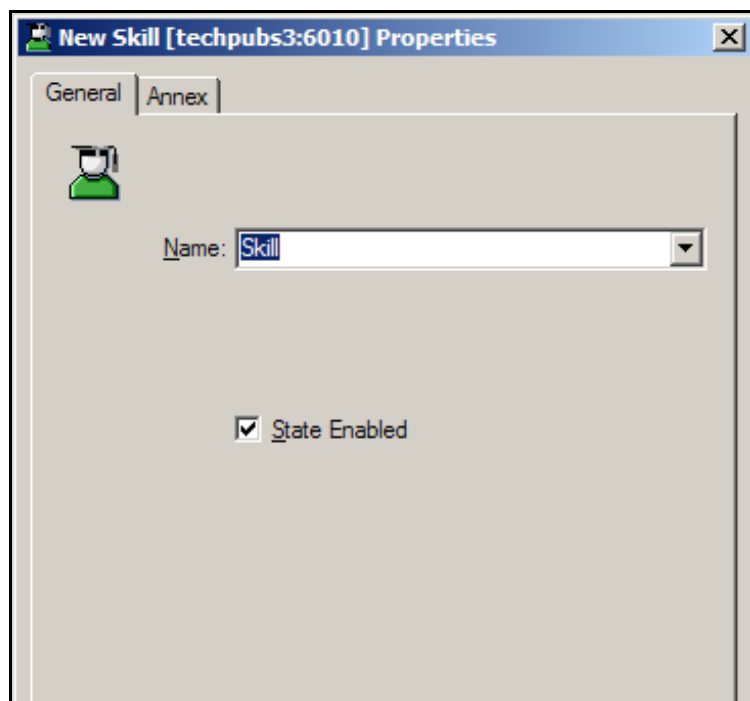


Figure 190: Skill Properties Dialog Box

4. Type the Skill name. Examples: Email, Chat, English, Spanish, New Accounts, Existing Accounts.
5. Leave State Enabled checked.
6. The Annex tab is not required (if it does not display, select View > Options).

Note: Annex is an additional data structure Genesys uses to quickly introduce additional information properties for any object. Annex describes such properties as simple text options arranged in sections, where each section typically relates to the product that uses this set of properties. You can find information about when and how to add and change information in Annexes in the configuration sections of application-specific manuals.

7. Click OK in the properties dialog box.
8. Continue defining Skills in this manner.

End of procedure

Note: In addition to assigning Skills to agent Persons as described below, you can also route based on the value of a skill expression (see Figure 121 on [page 138](#)).

Defining Persons

Once you have defined Skills, you can assign them to Persons, such as agents, QA, managers, and supervisors. You can then route interactions to Persons that have specific Skills and Skill Levels.

Procedure: Defining Person objects

Purpose: To represent agents that can be routed to in the Configuration Database.

Start of procedure

1. Log into Configuration Manager as described on [page 237](#).
2. Under Resources, right-click the Persons folder and select New > Person. The New Person Properties dialog box opens (see [Figure 191](#)).

The screenshot shows a Windows-style dialog box titled "New Person () [techpubs4:3010] Properties". It has four tabs: "General", "Agent Info", "Ranks", and "Annex". The "General" tab is selected. Inside the dialog, there is a small icon of a person. Below it are several input fields: "First:" with a dropdown menu showing "Person", "Last:" with an empty dropdown, "Tenant:" with a dropdown showing "TechPubs75" and a small icon, "Employee ID:" with an empty text box, and "E-Mail:" with an empty text box. There are two sections for authentication: "Internal Authentication" with fields for "User Name:", "Enter Password:", and "Re-enter Password:", and "External Authentication" with a field for "External User ID:". At the bottom, there are two checked checkboxes: "State Enabled" and "Is Agent". At the very bottom are four buttons: "OK", "Cancel", "Apply", and "Help".

Figure 191: New Persons Dialog Box, General Tab

3. Complete the General tab. If you need help, click the Configuration Manager Help menu and select Help Topics.
4. Click the Agent Info tab. Figure 192 on page 242 shows the dialog box filled in with sample data.

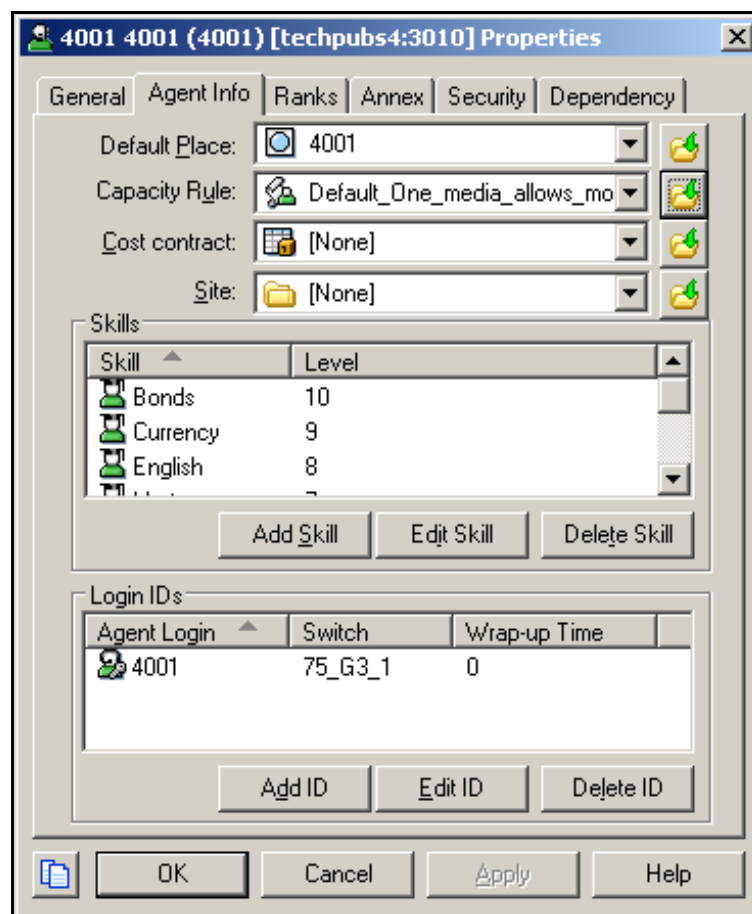


Figure 192: Person Dialog Box, Agent Info Tab

5. Complete the Agent Info tab. Click the Add Skill button to add a previously defined agent skill. If you need help, click the Configuration Manager Help menu and select Help Topics.

Note: If applicable, you can assign a Capacity Rule to the agent, which defines the agent's ability to handle multiple interactions. For more information, see "Agent Capacity Rules" on page 164.

6. Click the Security tab.
7. Click the Permissions button in the Security tab and assign permissions (see "Setting Permissions" on page 173). Figure 193 shows the dialog box filled in with sample data.

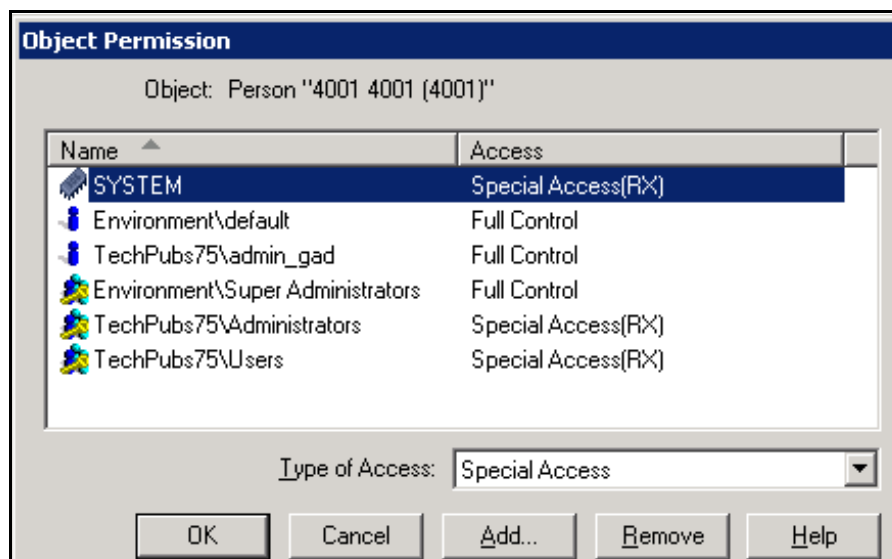


Figure 193: Object Permissions Dialog Box

8. When you are finished defining permissions, click OK to save in the Object Permission dialog box.
9. Click OK in the New Person properties dialog box.

End of procedure

Defining Agent Groups, Places, and Place Groups

Once you have defined Persons, define Agent Groups and assign Persons to each group. You only need to do this if you plan to route to agent groups. After completing the previous sections, you now understand how to create new objects in Configuration Manager:

1. Log into Configuration Manager as described on [page 237](#).
2. Under Resources, right-click the object and select New *<object_name>* to open the properties dialog box.
3. Complete the properties dialog box.
4. Click OK to save your entries.

Defining Business Attributes

The Resources folder contains a Business Attributes folder. Figure 146 on [page 162](#) shows the folder expanded.

As described in the chapter on interaction properties in the *eServices (Multimedia) 8.0 User's Guide*, the origin of Business Attributes varies:

- Some Business Attributes are predefined by Genesys and can be expanded.
- Other Business Attributes are customer-defined in Configuration Manager.
- Other Business Attributes are initially defined in Knowledge Manager and then carried over to Configuration Manager.

Business Attributes from Knowledge Manager

If you followed the “Order of Configuration” on [page 217](#):

- Names of Screening Rules, defined in Knowledge Manager, will also have carried over from the Universal Contact Server database.
- Names of classification Categories, defined in Knowledge Manager, will have carried over from the Universal Contact Server database. The names will be viewable in the Category Structure folder along with the name of the associated Standard Responses (see [Figure 194](#)).

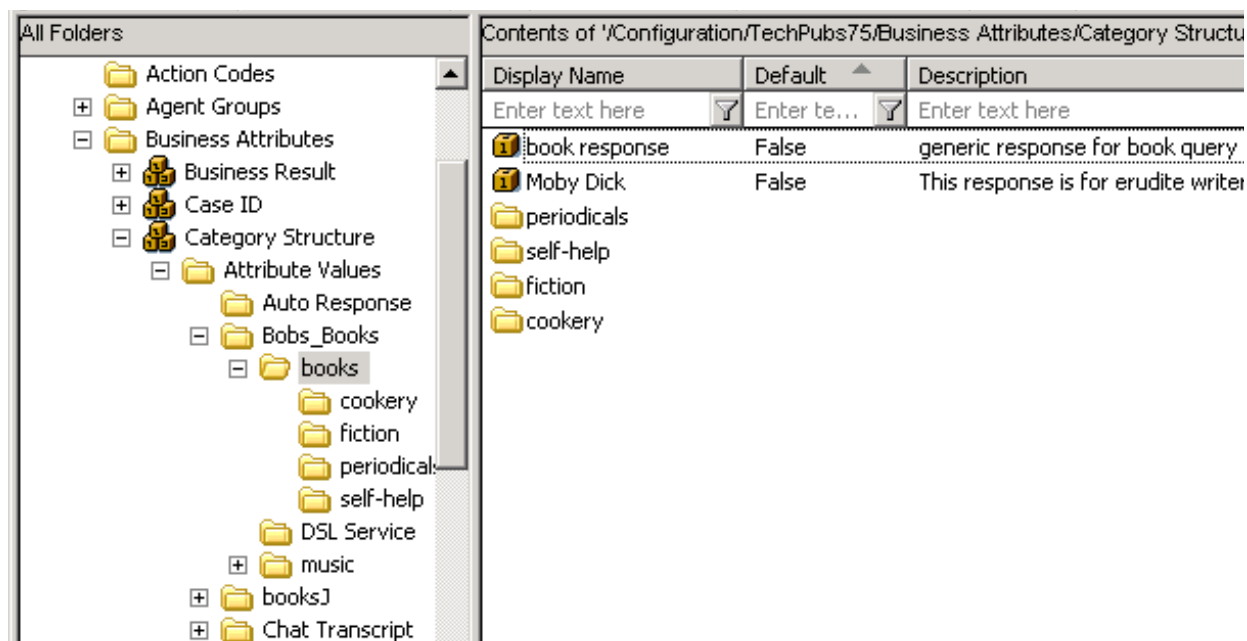


Figure 194: Classification Categories and Standard Responses

Other Business Attributes that Might Need to Be Defined

You may still need to use Configuration Manager to define the following Business Attributes:

- Service Type and Customer Segment, which are used in the MultiAttach object (see [Figure 195](#)).

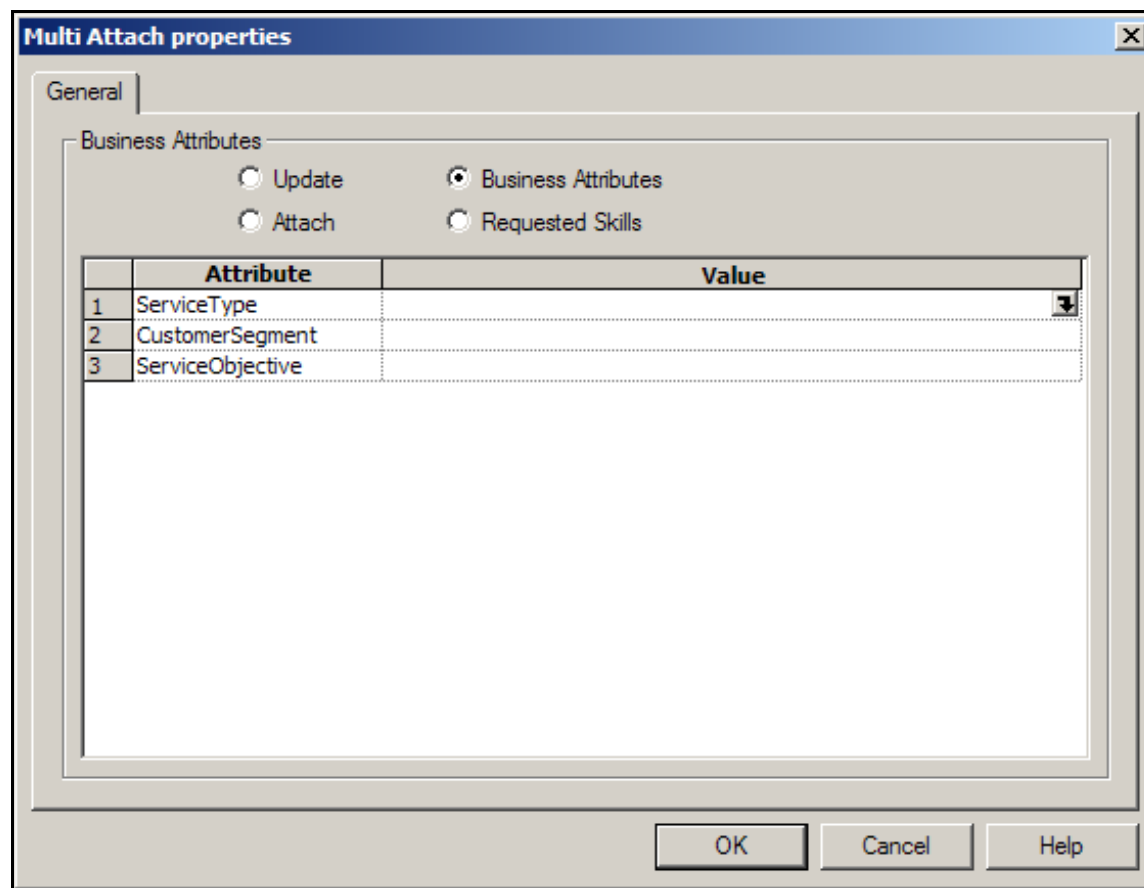


Figure 195: Multi-Attach Object Properties Dialog Box

The above three attributes are described in the chapter on IRD objects, MultiAttach object section, in the *Universal Routing 8.1 Reference Manual*.

Note: ServiceObjective is defined outside of the Business Attributes folder under Objective Tables.

- Disposition Code. Currently not used by any IRD object, but contained in the Interactions table.
- Language. The primary motivation for creating is the necessity to use this Business Attribute in conjunction with some particular Tenant in Knowledge Manager. All objects in Knowledge Manager, including classification Categories and Screening Rules, can only be created under specific combination of Language and Tenant. The following IRD objects use the Language Business Attribute: Screen, Multi-Screen, and Screen Segmentation. For more information about this attribute, see the chapter on interaction properties in the *eServices (Multimedia) 8.0 User's Guide*.
- PIN. Currently not used by any IRD object, but you might want to include in interactions.

- Reason Code and Stop Processing Reason, when you are using the IRD Stop object that is described in Table 8 on [page 201](#). For more information about Reason Codes, see the Stop Interaction object description in the chapter on IRD objects of this guide.
- As described in the *Universal Routing 8.1 Reference Manual*, E-mail Accounts specifies an external e-mail address that is required when you are using the following IRD objects: Acknowledgement, Autoresponse, Chat Transcript, Create Notification, Create SMS, Forward E-mail, Redirect E-mail, Reply From External Resource, and Send E-mail. See Table 8 on [page 201](#).

For additional information about E-mail Accounts, see the chapter on preparing your environment for Genesys Desktop in the *Genesys Desktop 7.6 Deployment Guide*. Also see description for the E-mail Server option `convert-idn-to-unicode` in *eServices (Multimedia) 8.0 Reference Guide*.

- Media Type. When you are implementing the Genesys Open Media concept, another Business Attribute that you might want to create is a custom Media Type that will be added to the Genesys predefined set of Media Types. A service that is performed by some third party server that is associated with a custom Media Type could be used in the External Service object that is described in Table 8 on [page 201](#).
- Contact Attributes. See the topic on matching contact attributes in the *eServices (Multimedia) 8.0 User's Guide*. Also see the chapter on contact identification and creation in that guide.

10

Creating Business Process Objects

This chapter provides step-by-step instructions for starting a new business process, including adding Queue, View, and Workbin objects, and Strategy object placeholders.

This chapter includes the following sections:

- [Distribution of Load Between Multiple Interactions Servers, page 315](#)[Simple Versus Complex, page 247](#)
- [Defining the Business Process Object, page 248](#)
- [Using Media Server Objects, page 252](#)
- [Adding Endpoints, page 254](#)
- [Adding a Queue, page 258](#)
- [Adding a Synthetic Queue, page 262](#)
- [Adding a View, page 267](#)
- [Adding Workbins, page 292](#)
- [Strategy Placeholder Option, page 299](#)
- [Adding a Submitter, page 303](#)
- [About Connector Lines, page 305](#)
- [Exporting and Importing a Business Process, page 306](#)
- [Distribution of Load Between Multiple Interactions Servers, page 315](#)[Simple Versus Complex](#)

Note: See “Order of Configuration” on [page 217](#).

The chapter “Planning a Business Process” on [page 195](#) discusses two types of business processes:

1. A complex business process that encompasses many different functional areas, such as the Genesys-supplied Default_BP (see [Figure 174 on page 198](#)).

2. Smaller, less complex business processes, each of which encompass a single functional area, such as the Genesys-supplied step-numbered business processes (see Figure 175 on [page 199](#)).

This guide assumes that, as a new user, you will create smaller, less complex business processes and connect them via queues. This chapter assumes that you want to create something similar to the Step 1. Pre-Routing business process that is shown in Figure 175 on [page 199](#).

Defining the Business Process Object

Note: When you run IRD on a clean configuration, it automatically creates a default Business Process object for you, which you can rename or use to create other Business Process objects. The instructions and figures in this section assume that you do not have a clean computer, but that you have loaded the samples as described in “Using the Samples” on [page 197](#).

Procedure: Defining a Business Process Script object

Purpose: To define the Business Process Script object in Configuration Layer.

Start of procedure

1. Log in as described in “Opening IRD” on [page 57](#).
2. Click the Interaction Design shortcut bar on the left.
3. Click the Business Process icon. Existing business processes are listed for selection as shown in Figure 35 on [page 60](#).
4. If a folder is already selected, from the File menu, click New. You can also right-click any folder on the list pane and select New; The New dialog box opens. A temporary name for the business process appears in the browser as shown in [Figure 196](#).

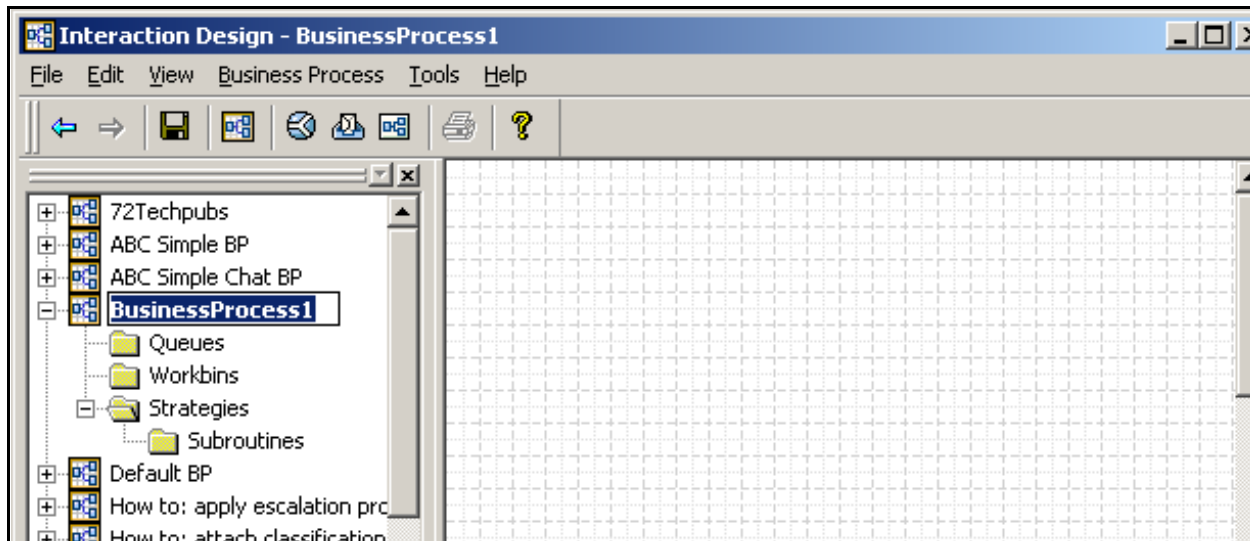


Figure 196: New Business Process with Temporary Name

5. Select (slowly double-click) temporary name and replace it, supplying the name that is to be used for the Script object (see Figure 143 on [page 159](#)). Assume that you enter Preprocessing. Because the browser lists business processes in alphabetical order, it now appears as shown in [Figure 197](#).

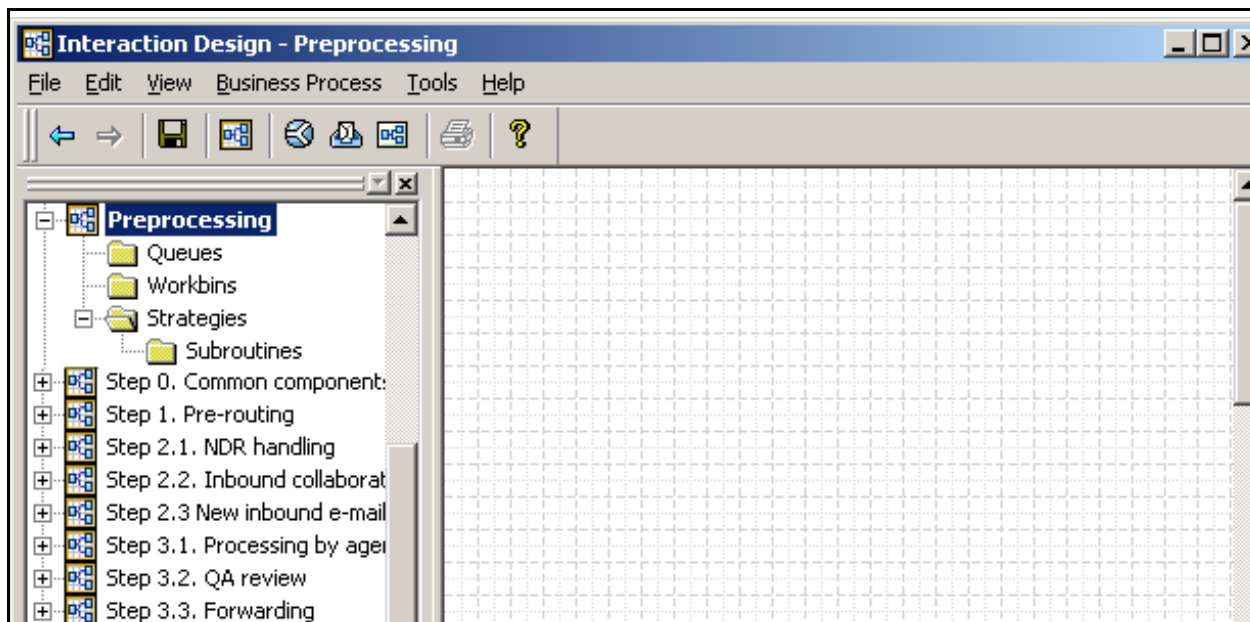


Figure 197: Business Process Renamed

Note: If you change your mind at any point, click the **Edit** menu and select **Undo Creating** or **Undo Updating**.

6. Right-click the business process and select **Properties** from the shortcut menu. The **Business Process Properties** dialog box opens (see [Figure 198](#)).

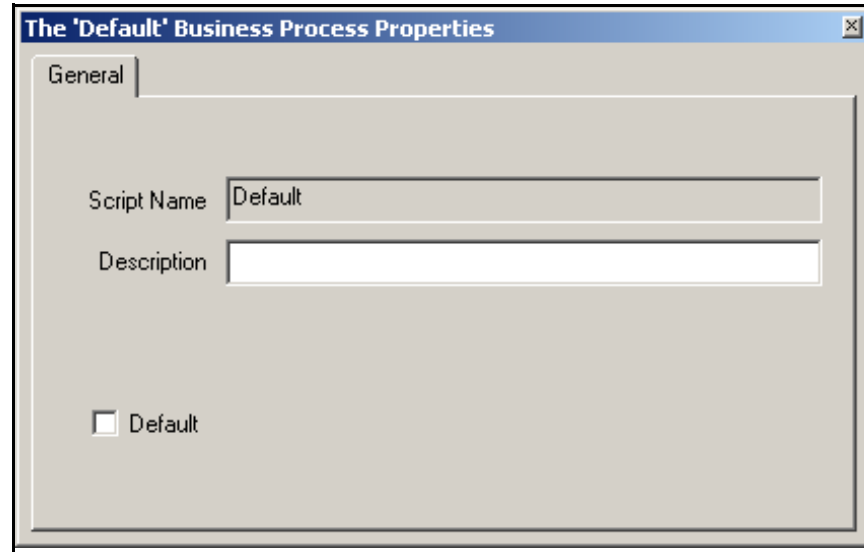


Figure 198: Business Process Dialog Box

7. In this dialog box, describe the business process.
8. A Business Process can be the default Business Process for the Tenant by selecting the **Default** check box. The configuration of the default Queue and default Business Process simplifies Media Server configuration, and enables interactions to be submitted without having to specify the initial interaction queue. Only one Business Process within a Tenant can be set as default.

Note: See the eServices documentation to develop a Media Server object that takes advantage of the default Business Process and default Queue configuration.

9. After completing the dialog box, click its upper-right corner. The new Business Process object remains selected in the viewer.

10. Select **Save** from the **File** menu. This creates a new **Script** object in the Configuration Database of type **Business Process** (see Figure 143 on page 159). You can still change the name in the **Interaction Design** window as shown in Figure 73 on page 89.

End of procedure

Notes: To switch to another business process, save the changes in the current business process, and double-click the business process you want to switch to.

Unlike the **Routing Design** window, the **Interaction Design** window does not allow you to save a business process within a tree of customized folders/subfolders, which is then viewable on an **IRD** list pane. You may save a business process only in the predefined default **Scripts** folder (see Figure 35 on page 60).

Warning! Do not use **Configuration Manager** to manually create business process and the other **Script** objects described in this guide. To ensure database integrity, use only **IRD** to create these objects.

Procedure:

Deleting a previously saved business process

Warning! If you do not want to delete the strategies that are associated with a business process, move them to the **Independent Objects** folder (see Figure 38 on page 63) before you delete the business process.

If you have not yet saved the business process, you can delete it by exiting the **Interaction Design** window and clicking **no** to the prompt indicating that the configuration has been changed.

Start of procedure

1. To delete a business process, right-click it in the object browser.
2. Select **Delete** from the shortcut menu. If the business process was previously saved, the message shown in Figure 199 appears.

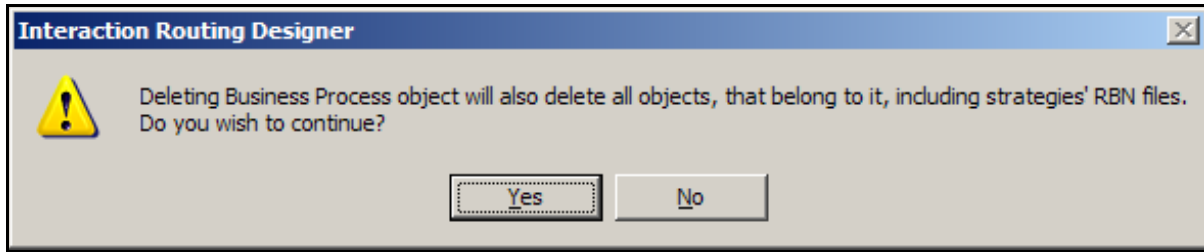


Figure 199: Delete Confirmation Message

3. Click Yes. See [page 172](#) if you need to review strategy *.rbn files.

End of procedure

Procedure: Switching to another business process

Start of procedure

Later on, if you wish to switch to a different business process, you can double-click that business process or use the shortcut menu:

1. Select the business process in the object browser,
2. Right-click to open a shortcut menu.
3. Select Open the Process from the menu. The business process is highlighted in the object browser.

End of procedure

Using Media Server Objects

For background information about Media Server objects, see [page 39](#).

The eServices software components include five *media servers*—E-mail Server, Chat Server, SMS Server, iWD Capture Points, which process e-mail, chat, SMS/MMS interactions, and iWD tasks respectively—and Third Party Servers. For more information about these servers, start with the *eServices (Multimedia) 8.0 Deployment Guide*.

E-mail Server (see [page 52](#)) Chat Server, and iWD Capture Point Application objects and their *endpoints* that are already defined in your Configuration Environment are listed in the object browser of the Interaction Design window. [Figure 200](#) shows an example Media Servers folder.

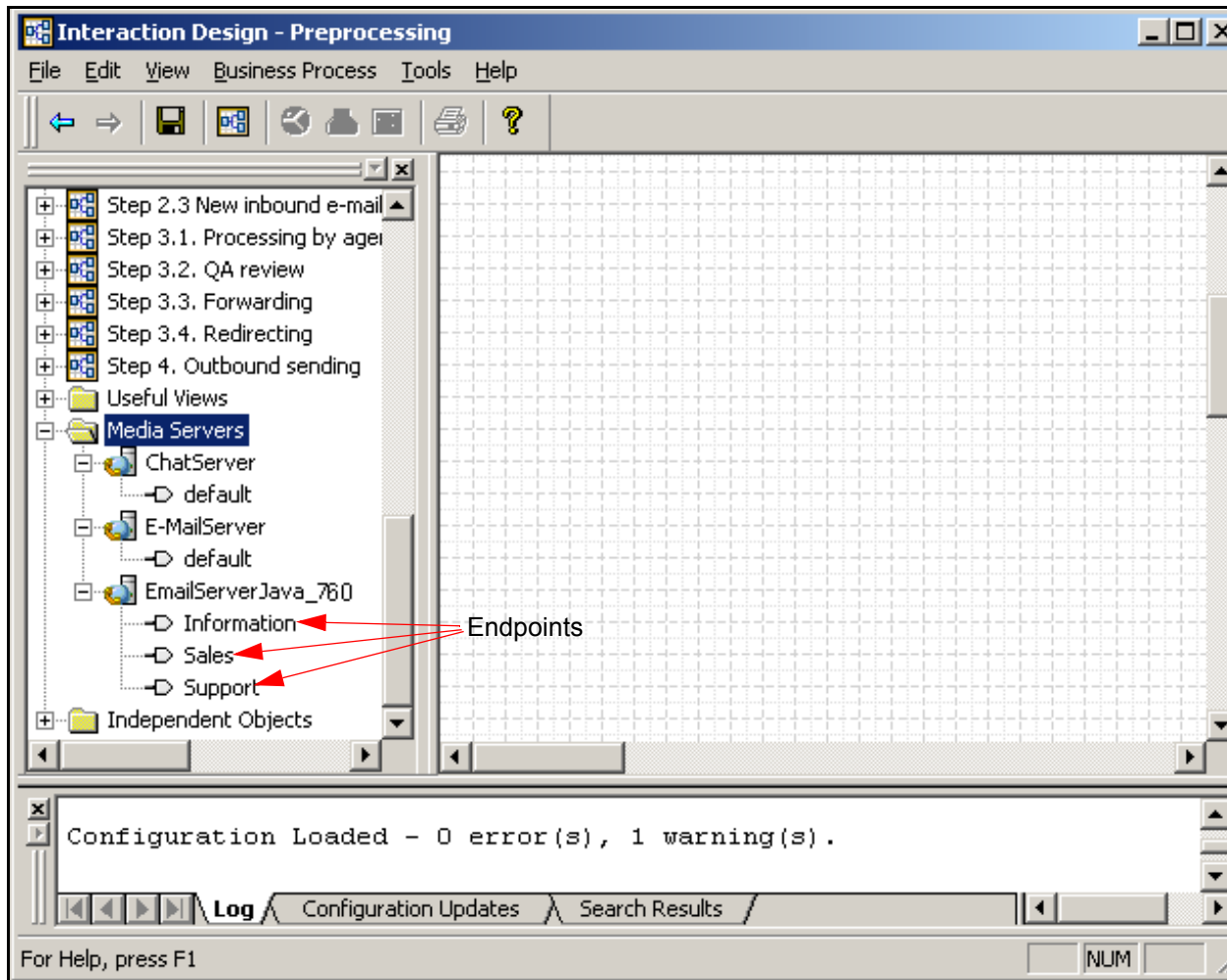


Figure 200: Media Servers and Endpoints in Object Browser

In the example in [Figure 200](#), there are three Media Server objects: ChatServer, E-MailServer and EmailServerJava_760. Note the arrow-shaped objects under each media server. These are Endpoint objects (see [page 41](#) if you need a review).

Placing a Media Server Object

To get interactions of a particular media type into a business process, you have the option of placing a Media Server object, and then connecting some or all of its endpoints to queues. After you do this, you can continue processing the media server's interactions in the current business process and in subsequent business processes. Follow these steps:

1. First determine whether the Media Server object has already been placed in the workflow via a previously configured business process.
 - If yes, continue with [“Adding Endpoints”](#).
 - If no, continue with step 2.

2. To place a Media Server object in this particular business process, drag the Media Server object from the object browser and drop it into the workflow viewer.

Adding Endpoints

You may or may not need to configure additional endpoints for your media server in order to get interactions into the proper queue. To determine this, review the information in “Media Server Object” on [page 39](#) and “Endpoint Object” on [page 41](#).

Note: You can add endpoints before or after you drag a Media Server object into a business process. Endpoints added to a Media Server in the object browser automatically appear in the workflow viewer.

Procedure: Adding endpoints

Purpose: To connect a media server and its interactions with a queue in a business process.

Start of procedure

1. Select Add Endpoint by using one of the following methods:
 - From the shortcut menu that appears when you open the Media Servers folder in the object browser and right-click a media server.
 - From the shortcut menu that appears when you right-click a media server in the workflow viewer (if a media server has already been placed there).
 - From the Business Process menu, when you select a media server in the object browser or workflow viewer.

The new Endpoint object appears in the object browser with a temporary name, which you can edit (see [Figure 201](#)).

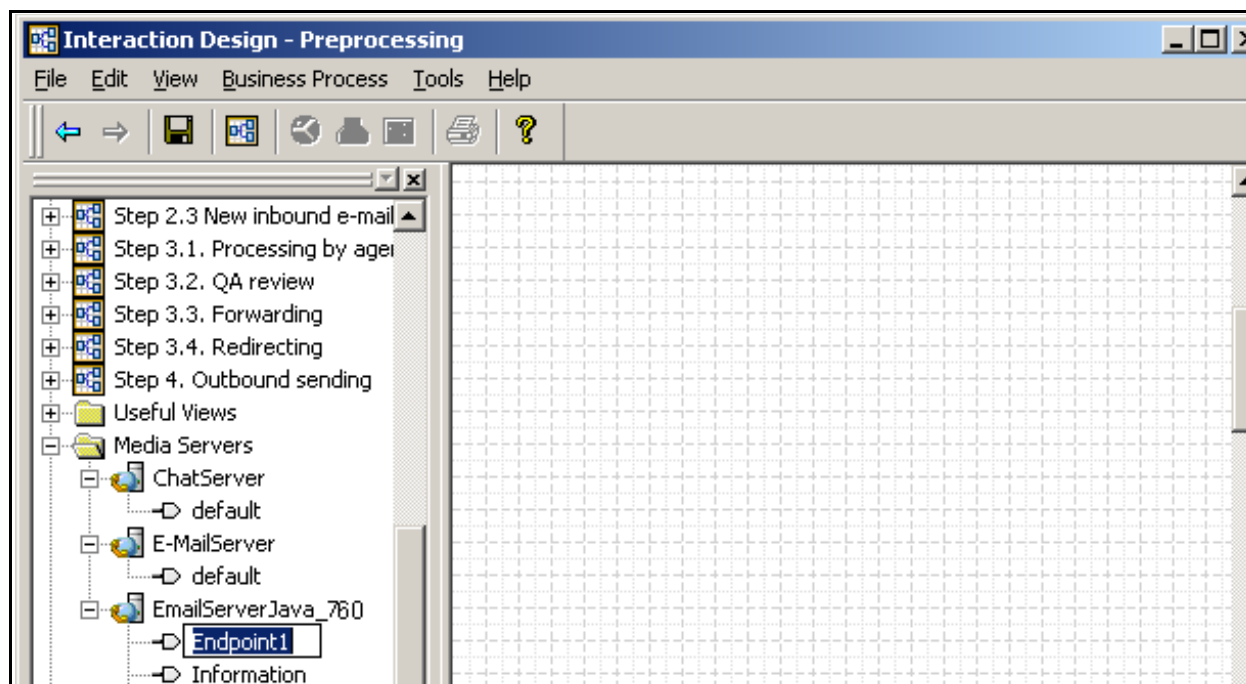


Figure 201: Object Browser After Selecting Add Endpoint

If the media server is already in the workflow viewer, the new endpoint with its temporary name appears there as a port on the right side of the media server (see [Figure 202](#)).

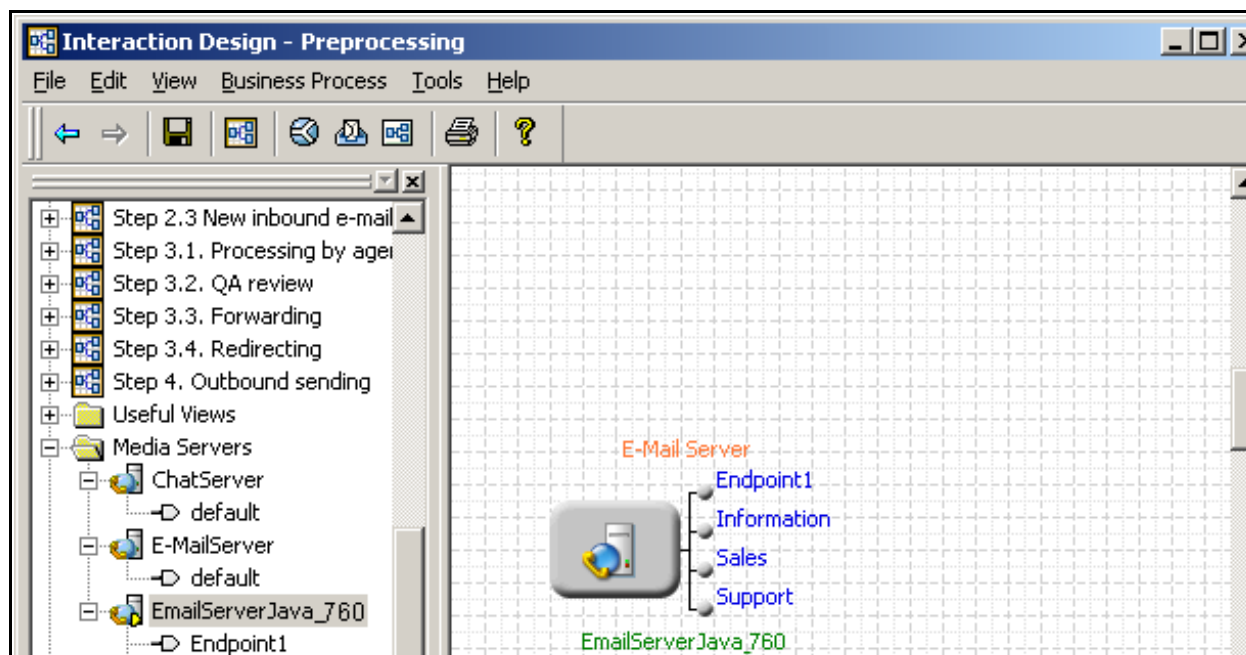


Figure 202: Workflow Viewer After Selecting Add Endpoint

2. Select (slowly double-click) the temporary name to edit it. You have the option of supplying a more descriptive name. Assume you name it ProductB. IRD moves the endpoint down to maintain alphabetical order.
3. Save the business process as it exists so far.
4. Define the queue to be connected to the endpoint (see “Adding a Queue” on [page 258](#)). Assume you name it ProductB.
5. Connect the endpoint(s) to the queue(s). [Figure 203](#) shows the endpoint connected to a queue.

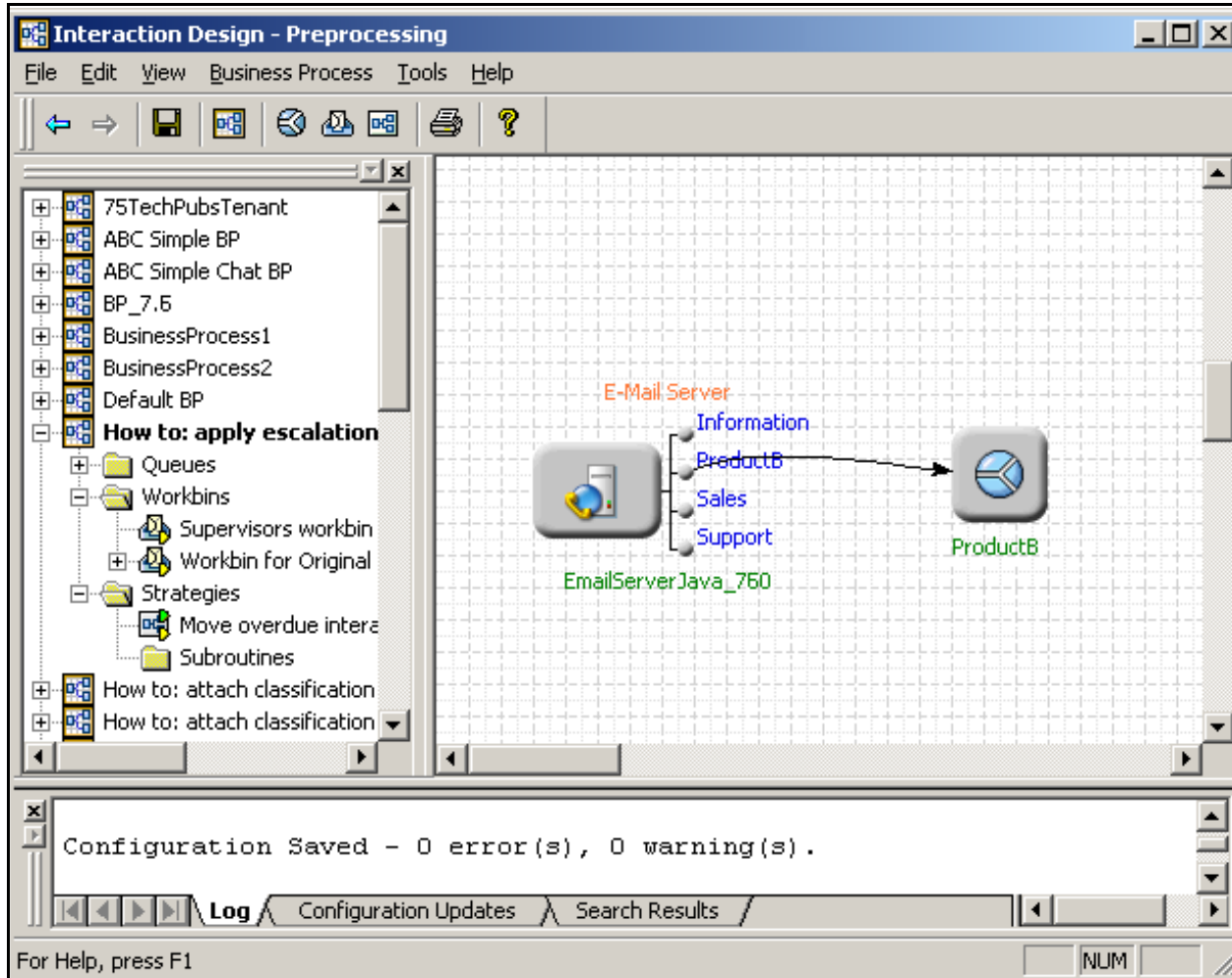


Figure 203: Media Server Endpoint Connected to Queue

Note: If an endpoint is used in another business process, IRD allows you to draw the connector. In the business process where the endpoint was previously used, IRD outlines the endpoint in red and no longer shows connector. This ensures a single endpoint is only connected to a single queue.

6. Save the business process, as it exists so far.

End of procedure

The endpoint appears in the endpoints:<endpoints::DBID> section in the media server Application object. Figure 204 shows an example for a Multi-Tenant Application object.

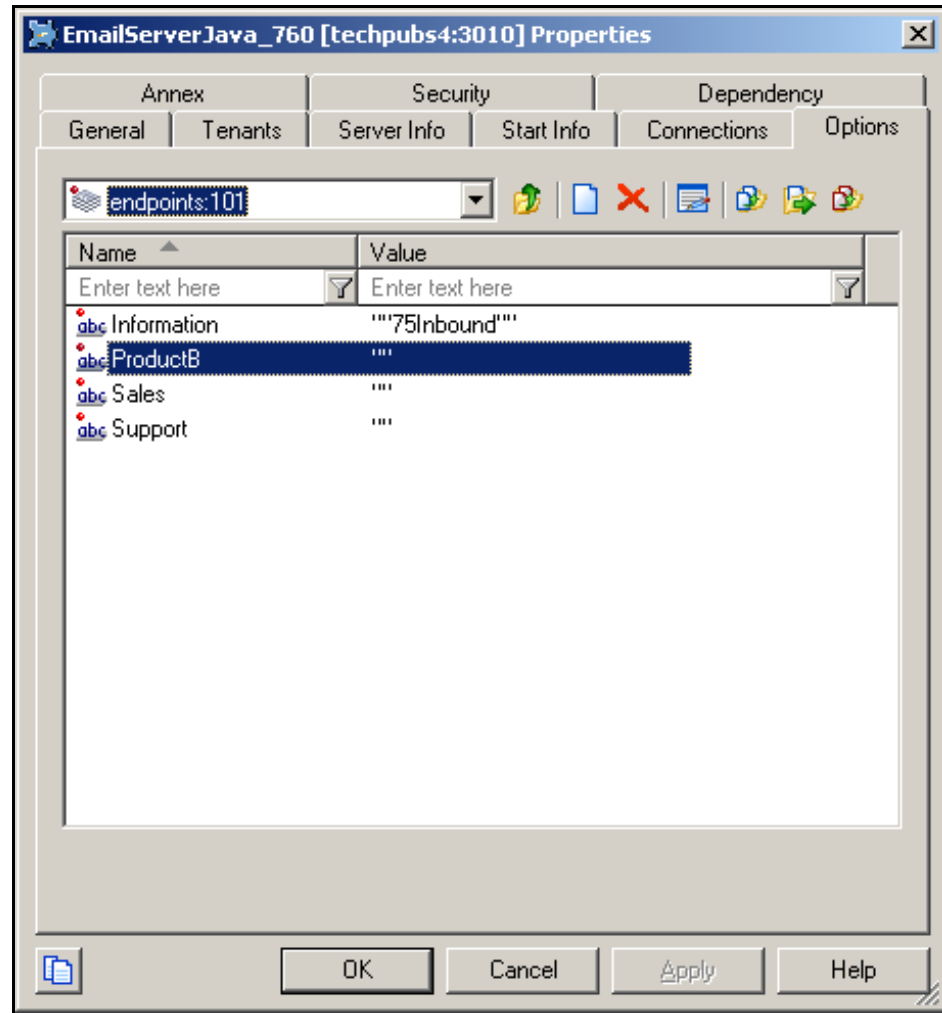


Figure 204: E-mail Server, Example Endpoints Section

Note: If you are planning to use a single Interaction Server as a Multi-Tenant Application, you can configure as many inbound queues as you need for directing media server interactions into queues by creating Endpoint objects in the Interaction Design window, which writes to the endpoints:<tenant_DBID> section in the media server Application object.

Adding a Queue

For background information about Queue objects, see [page 27](#). For information about connector lines, see [page 305](#).

The next step is to define a Queue object. For information about the initial inbound queue, see Figure 3 on [page 23](#).

Procedure: Adding a Queue object

Purpose: Associating a Queue object with a business process.

The following instructions assume that you are continuing from the previous section.

Start of procedure

1. Click the **Business Process** menu.
2. Select **New Queue**. A new Queue object appears in the object browser with a temporary name (see [Figure 205](#)).

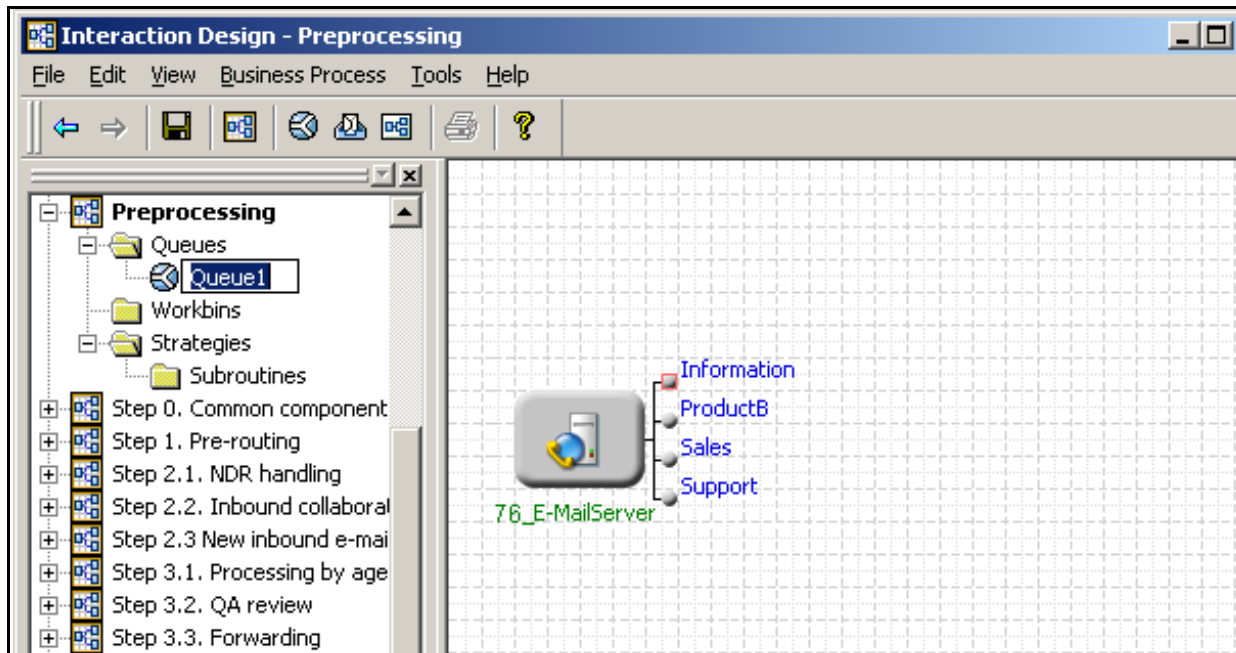


Figure 205: New Queue with Temporary Name

3. Select (slowly double-click) the temporary name and replace it with the name to be used for the **Script** object (see [Figure 143](#) on [page 159](#)). [Figure 206](#) shows the queue as it appears in the Object Browser after it has been renamed.

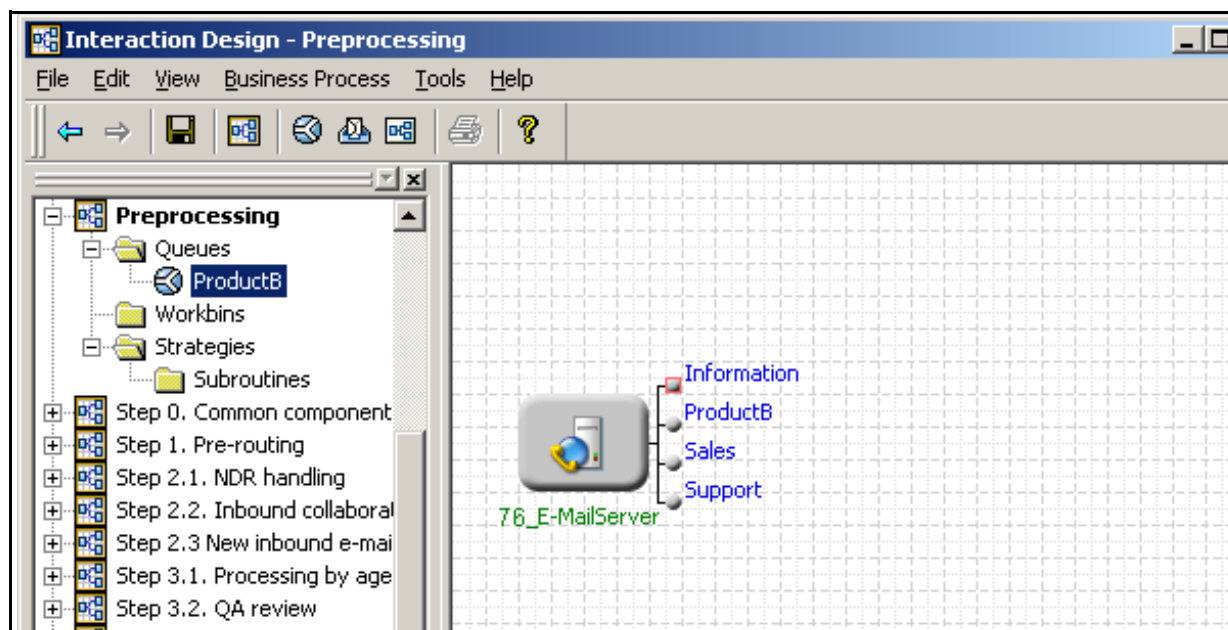


Figure 206: New Queue Renamed

4. Drag the Queue object to the viewer and drop it there (see Figure 207).

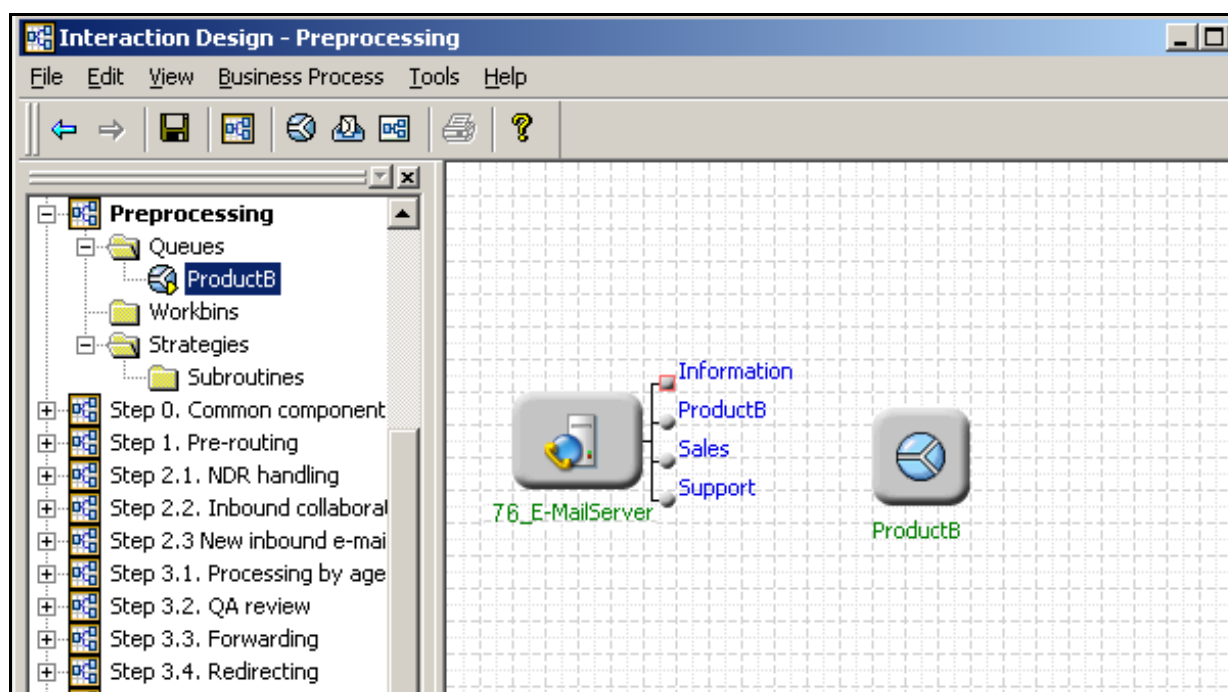


Figure 207: Queue in Workflow Viewer

5. Right-click the Queue object in the right pane and select **Properties** of and then select the queue name. The Queue Properties dialog box opens (see Figure 208).

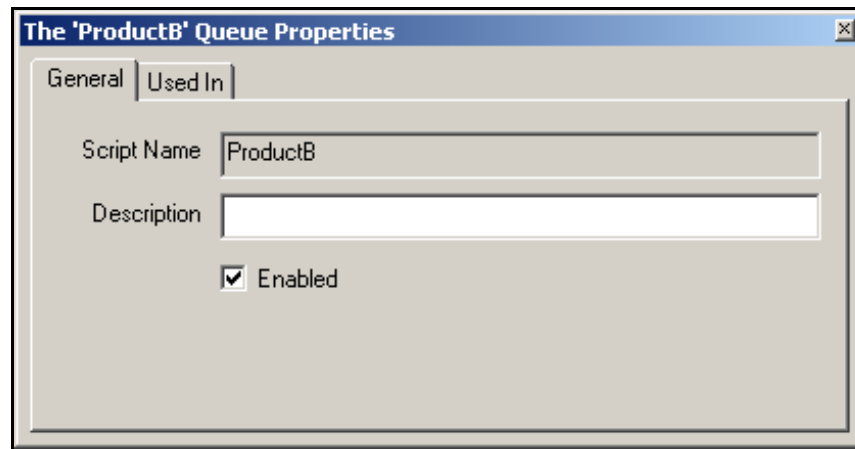


Figure 208: Queue Properties Dialog Box, General Tab

Note: You can also enable/disable Queue objects the same as any other object in Configuration Manager.

The **Used In** tab names the business process in which the queue is used.

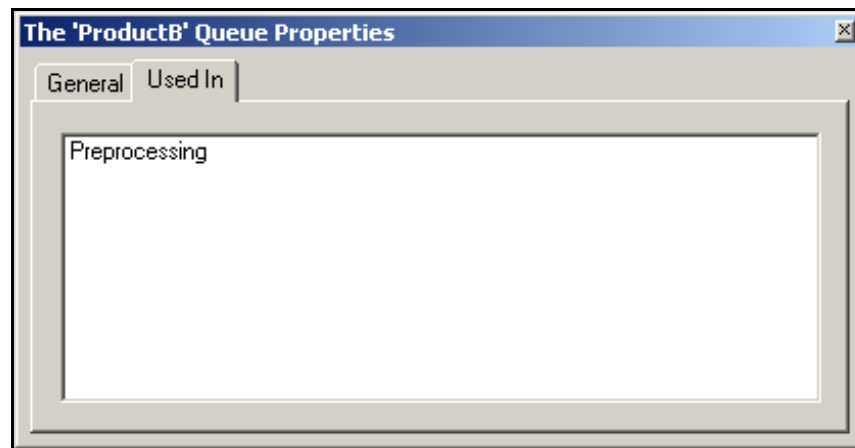


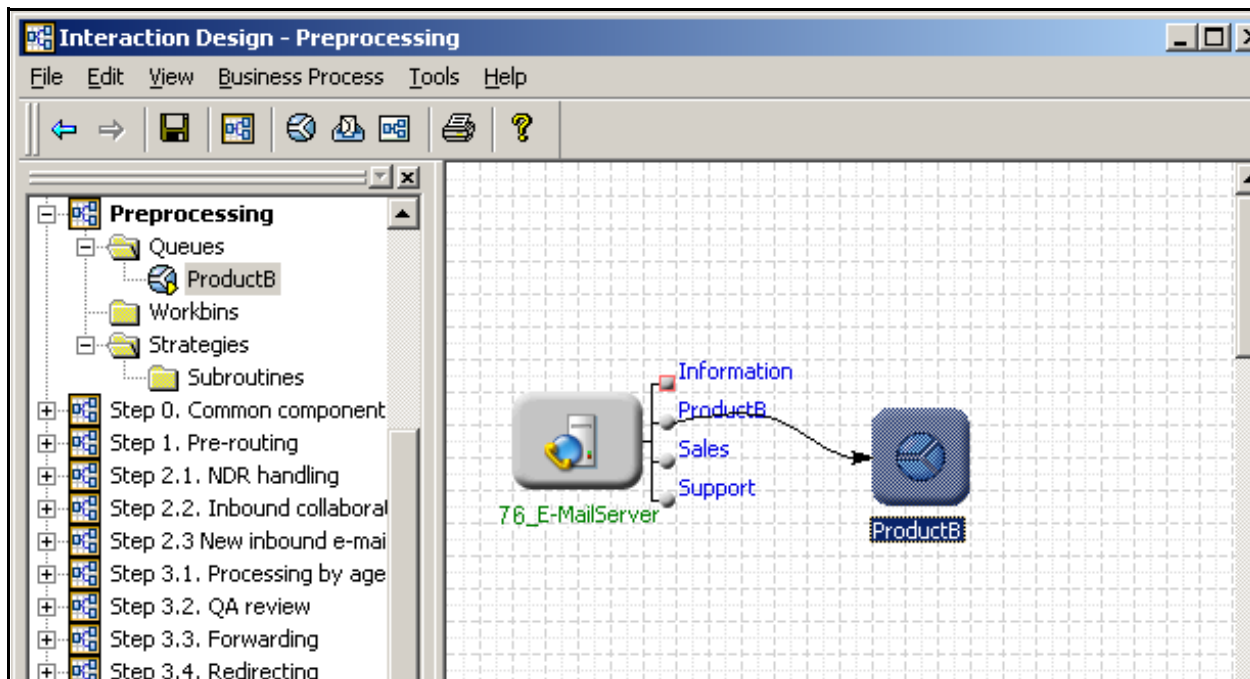
Figure 209: Queue Properties Dialog Box, Used In Tab

6. Use the information in [Table 21](#) to complete the **General** tab of the Queue Properties dialog box:

Table 21: Queue Properties Dialog Box

Field	Description
Script Name	Reflects the name that is entered in the object browser. When you save, the definition will be saved as a Script of type Interaction Queue in the Configuration Database (see Figure 143 on page 159).
Description	Describe the queue.
Enabled	After activating strategies as described on page 361 , open the Queue Properties dialog box and select the Enabled check box to specify the queue state as ready to accept interactions. The default is checked (enabled).

- If this queue will receive media server interactions via an Endpoint object, connect the Endpoint object to the Queue object (see [Figure 210](#)).

**Figure 210: Media Server Endpoint Connected to Queue**

- Select Save from the File menu.

End of procedure

Later, when creating routing strategies, the queue will be selectable in the properties dialog box for all IRD objects that let you select queues, such as

Queue Interaction. You will find it under the associated business process (see [Figure 211](#)).

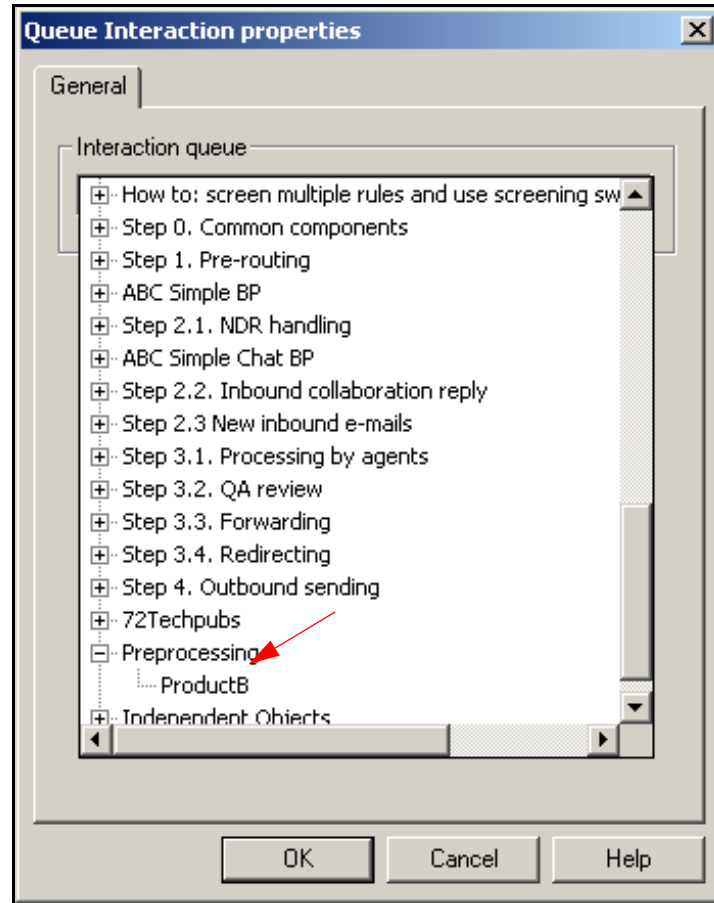


Figure 211: Queues Available for Selection

Note: Be sure that you define separate interaction queues and workbins for each Open Media type.

Adding a Synthetic Queue

A synthetic queue is a queue that is composed of multiple interaction queues. Creating a synthetic queue simplifies workflow configuration by enabling you to specify interaction processing by multiple queues in a single step.

Three types of synthetic queues can be created:

- **Business Process Queue**—represents interactions located in any queue that belongs to the same Business Process as the Business Process queue. A Business Process Queue can be used to define processing for all interactions of a given Business Process.

- **Synthetic Queue**—represents interactions located in any queue that is listed in the Synthetic Queue configuration. A Synthetic Queue can be used to define processing for all interactions in a specific group of Interaction Queues.
- **Tenant Queue**—represents interactions located in any queue that belongs to the same tenant as the Tenant Queue. A Tenant Queue can be used to define processing for all interactions that belong to a tenant.

Procedure: Adding a Synthetic Queue object

Purpose: To associate a Synthetic Queue object with a business process.

The following instructions assume that you are continuing from the previous section.

Start of procedure

1. Click the **Business Process** menu.
2. Select **New Synthetic Queue**.
3. In the **Type** drop-down list, select the synthetic queue *type* for this synthetic queue (Business Process, Synthetic, or Tenant, as described above), then click **OK**.
4. A new Queue object appears in the object browser with a temporary name (see [Figure 212](#)).

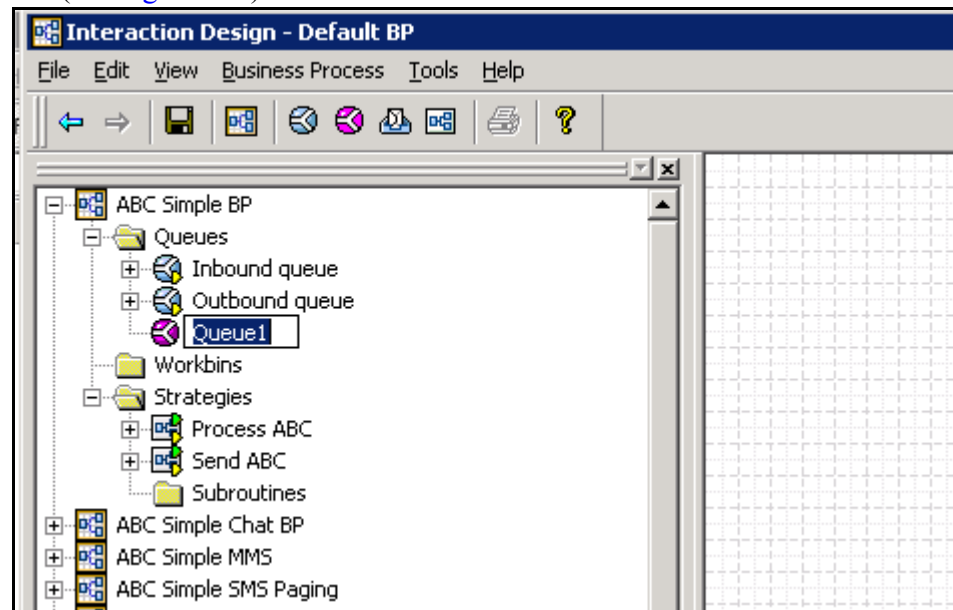


Figure 212: New Synthetic Queue with Temporary Name

5. Select (slowly double-click) the temporary name and replace it with the name to be used for the Script object (see Figure 143 on page 159).
Figure 213 shows the synthetic queue as it appears in the Object Browser after it has been renamed.

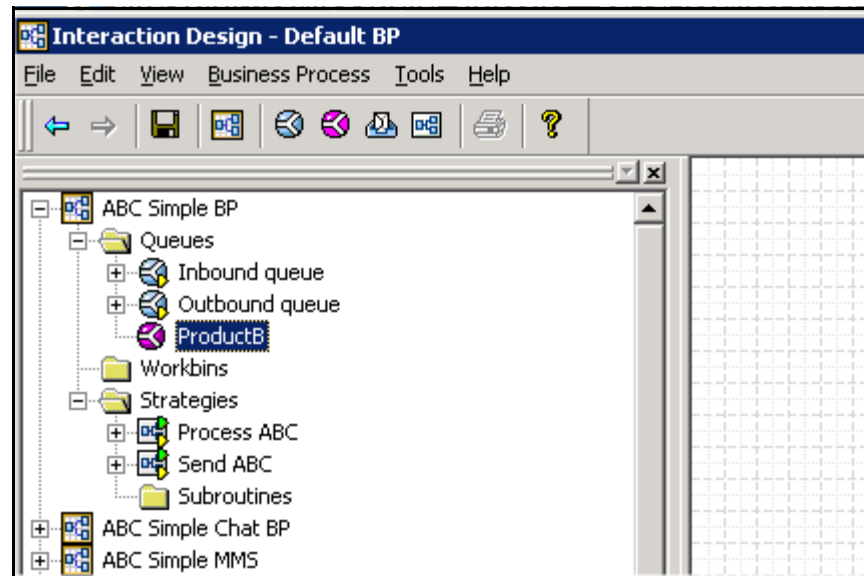


Figure 213: New Synthetic Queue Renamed

6. Drag the Synthetic Queue object to the viewer and drop it there (see Figure 214).

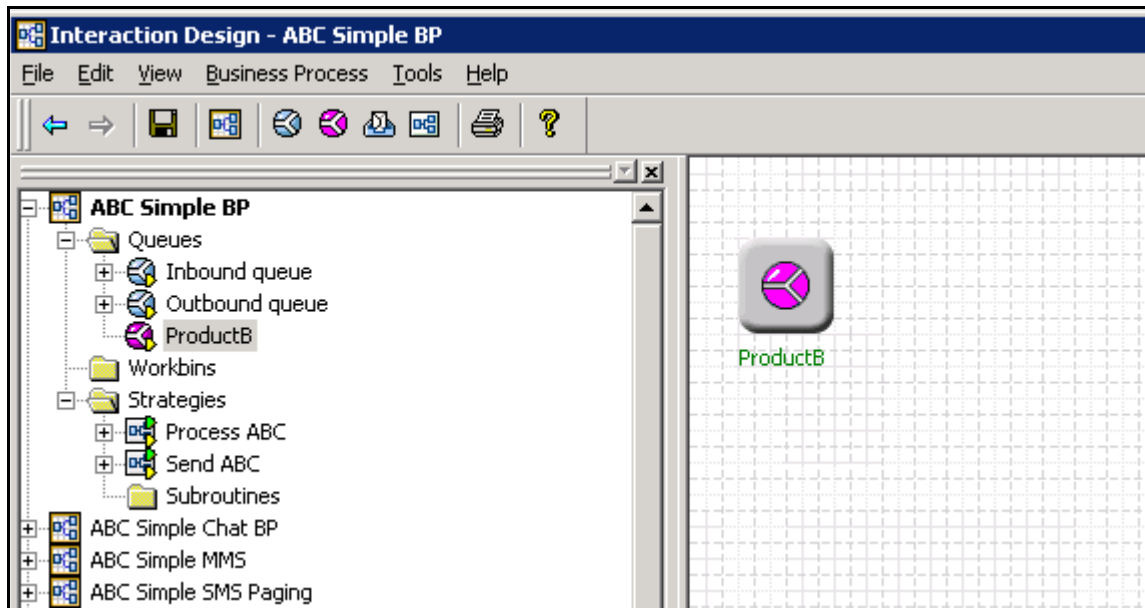


Figure 214: Synthetic Queue in Workflow Viewer

7. Right-click the Synthetic Queue object in the right pane and select Properties. The Interaction Queue Properties dialog box opens (see [Figure 215](#), [Figure 216](#), and [Figure 217](#)).

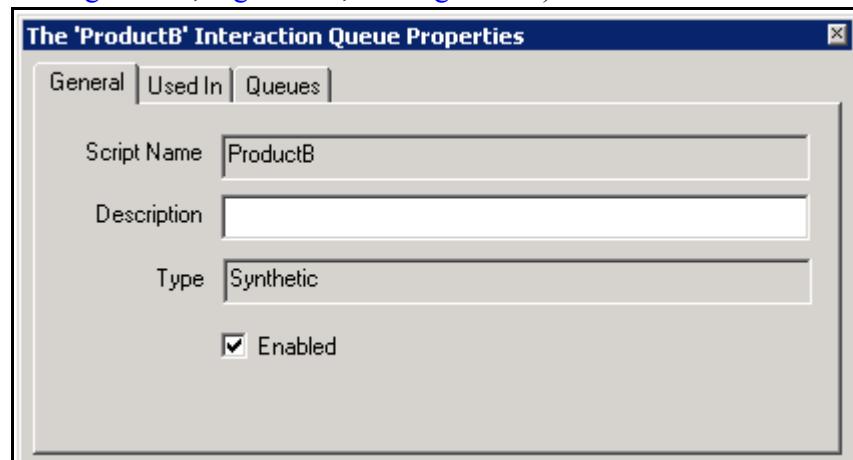


Figure 215: Synthetic Queue Properties Dialog Box, General Tab

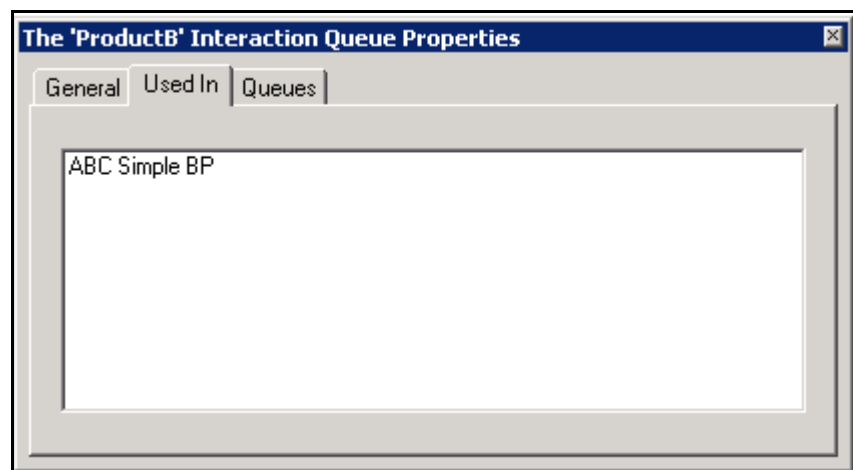


Figure 216: Synthetic Queue Properties Dialog Box, Used In Tab

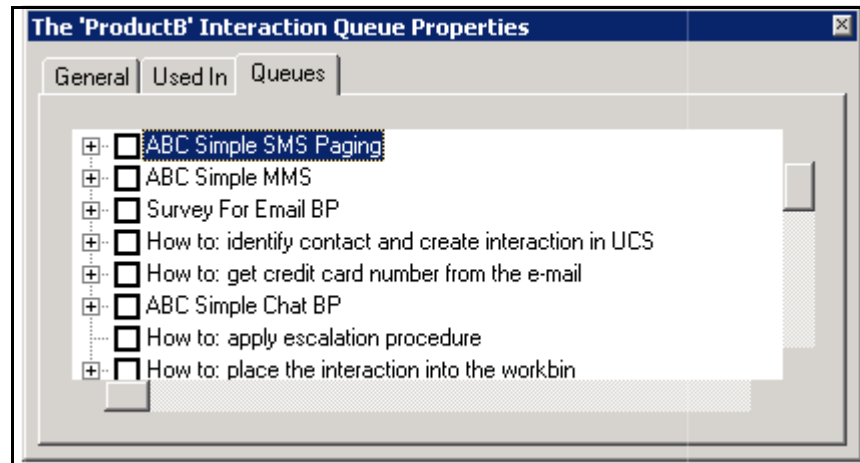


Figure 217: Synthetic Queue Properties Dialog Box, Queues Tab

8. Use the information in [Table 22](#) to set values in the Interaction Queue Properties Dialog box.

Table 22: Synthetic Queue Properties Dialog Box

Tab	Field	Description
General (All Synthetic Queue Types)	Script Name	(Read-only) Displays the name that you assigned to the synthetic queue in the Object Browser. When you save, the definition will be saved as a Script of type Interaction Queue in the Configuration Database (see Figure 143 on page 159).
	Description	Describe the synthetic queue.
	Enabled	After activating strategies as described on page 361 , open the Queue Properties dialog box and select the Enabled check box to specify the synthetic queue state as ready to accept interactions. The default is checked (enabled).
Used In (All Synthetic Queue Types)		This read-only tab lists the Business Processes in which this synthetic queue has been placed.
Queues (“Synthetic” Type Only)		Select the interaction queues to be included in this synthetic queue from the tree on this tab. The interaction queues are listed under the Business Processes in which they were initially configured.

9. If this queue will receive media server interactions via an Endpoint object, connect the Endpoint object to the Queue object (see [Figure 210](#) on [page 261](#) for an example).

10. Select Save from the File menu.

End of procedure

Later, when creating routing strategies, the queue will be selectable in the properties dialog box for all IRD objects that let you select queues, such as Queue Interaction. You will find it under the associated business process (see Figure 211 on [page 262](#)).

Adding a View

For background information about View objects, see [page 28](#). For information about connector lines, see [page 305](#). A View object allows you to define one or more of the following:

- The name for the View object in the Configuration Manager Scripts folder (see [page 271](#))
- The conditions for interaction selection including parameterized conditions, such as those that are used by Agent Desktop (see [pages 272 and 282](#))
- The order of interaction selection (see [page 274](#))
- The time interval that Interaction Server uses to check for interactions ([page 275](#))
- The schedule for submitting interactions to strategies (see [page 275](#)).
- Database hints (see [page 283](#))
- The number of interactions of different segments (see [page 284](#))

In addition, you can use Configuration Manager to limit the number of interactions based on interaction properties, such as Customer Segment (see [page 287](#)).

You can set other values in the Interaction Server Application object, as described in the chapter on configuration options in the *eServices (Multimedia) 8.0 Reference Manual*.

Same Queue, Multiple Views

You can define multiple View objects for a single queue or workbin. The examples that follow use queues. For an example of a view attached to a workbin, see “How To: Apply Escalation Procedure” on [page 411](#).

Example #1

You must define multiple views for a queue if you want to deliver interactions from one queue to different routing strategies. For example, if you have E-mail Server submit all e-mails into one queue, but you have two separate

strategies—one for normal e-mail and another for nondeliverable e-mail—you must define two views.

Example #2

You might want to define multiple views for a queue for priority escalation:

- You could use one view to pull interactions for standard processing by a routing strategy that delivers interactions to agents.
- You could use a second view to select interactions for special processing by a routing strategy that changes interaction priority and then returns the interaction to the same queue.

Warning! If you configure multiple views for the same queue and the view-selection conditions overlap, more than one view could potentially select the same interaction. When configuring views, be sure conditions do not overlap. Also, make sure that conditions process all the interactions in the queue.

Procedure: Adding a View to a Queue object

Purpose: Views enable you to extract interactions from queues, either all interactions or interactions that are based on specific selection criteria.

Note: This section describes attaching a view to a queue. The instructions also apply to attaching a view to a workbin.

Start of procedure

The following instructions assume that you are continuing from the previous section.

1. Select the queue to which you want to attach the view, either in the object browser or in the workflow viewer.
2. Right-click and select **New View** from the shortcut menu that opens (see [Figure 218](#)). You can also select **New View** from the **Business Process** menu.

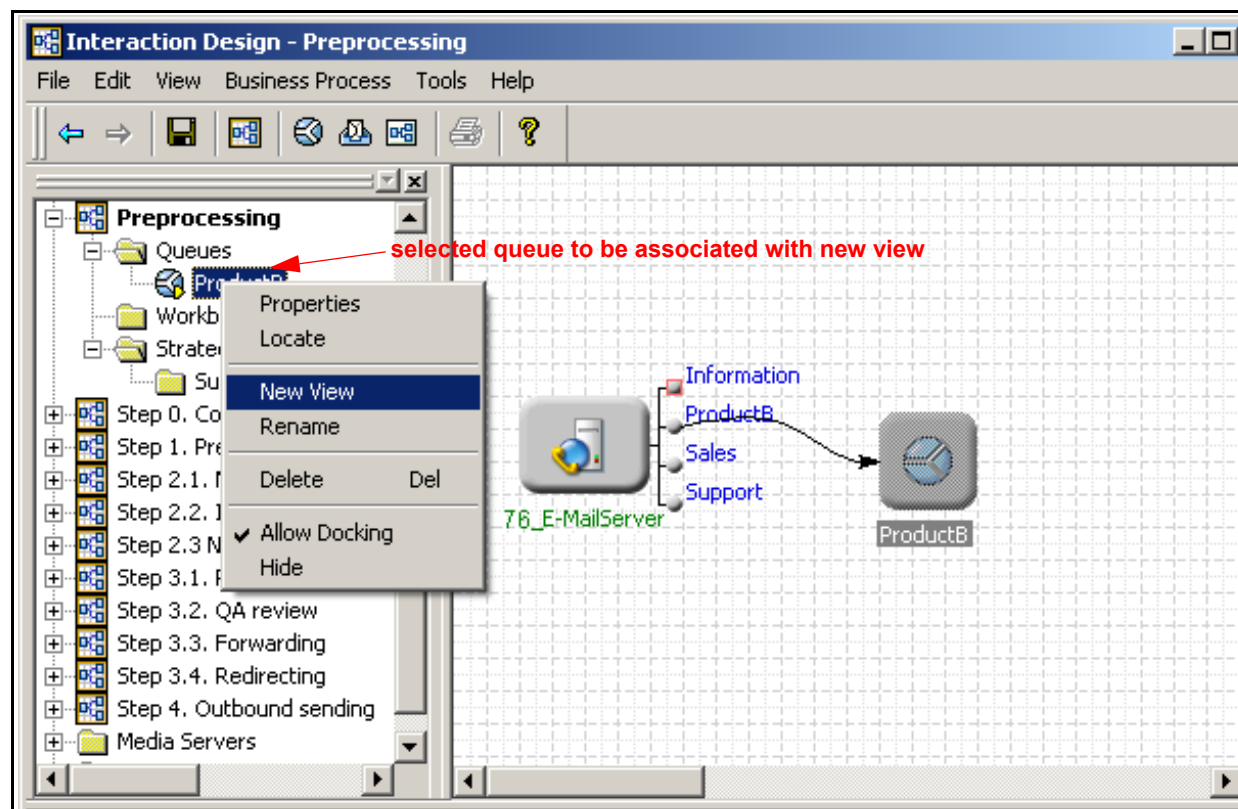


Figure 218: New View From Context Menu

After you select New View, the object browser and viewer show a new view with a temporary name (see Figure 219).

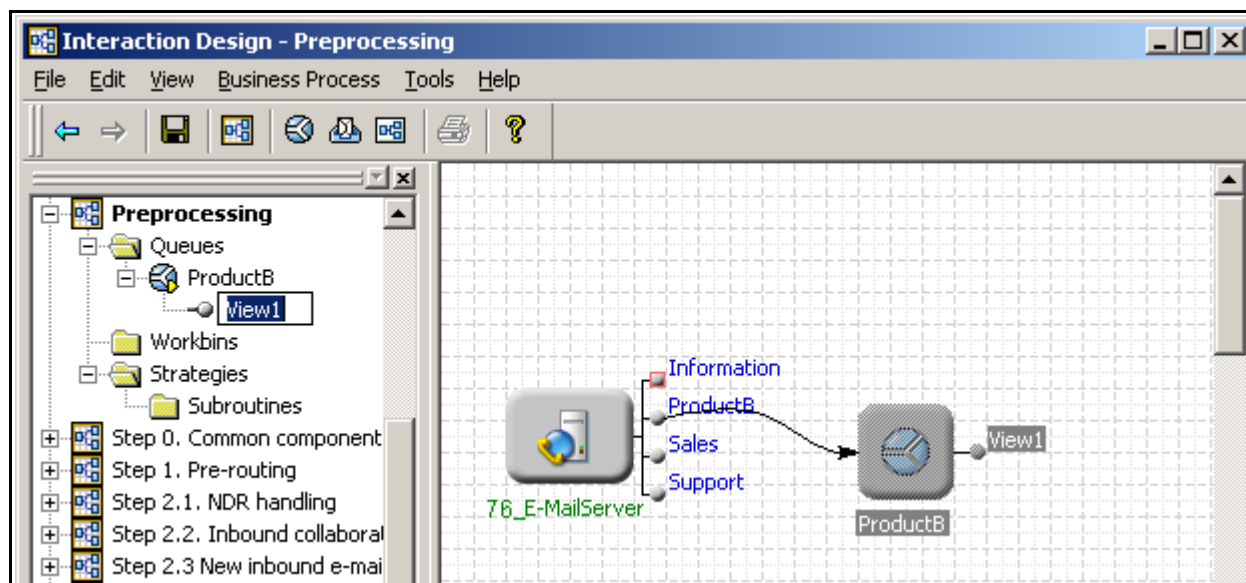


Figure 219: New View with Temporary Name

3. Select (slowly double-click) the temporary name and replace it with the name to be used for the Script object.
Assume that you rename it ProdBView1
4. Double-click the small circle that represents the new view (see [Figure 220](#)).

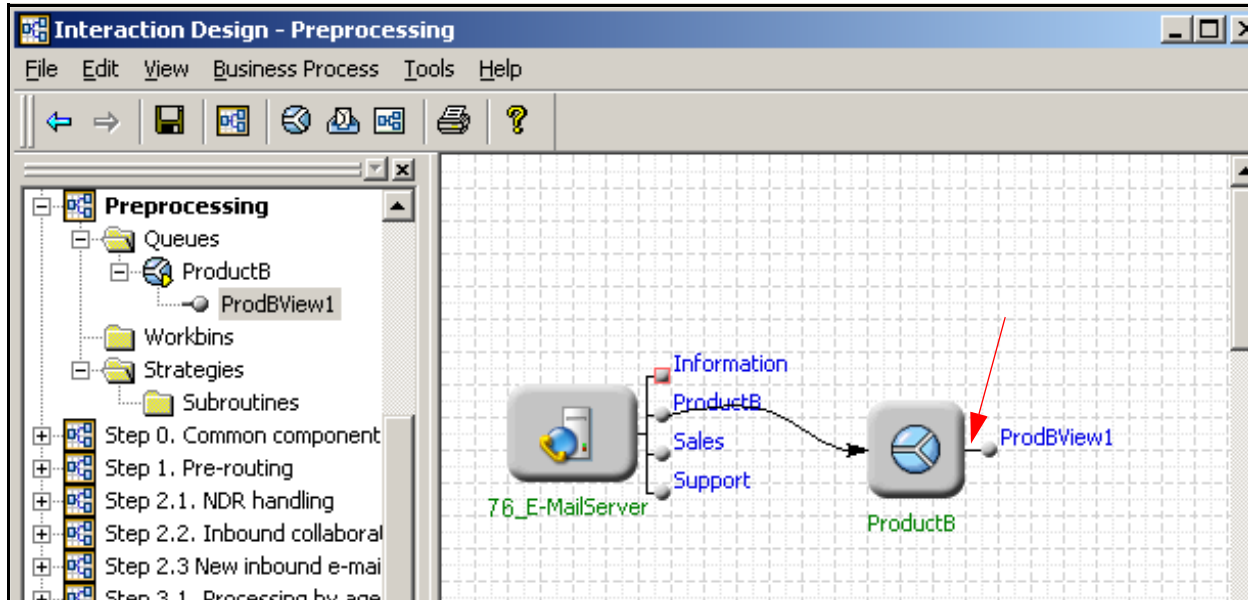


Figure 220: New View Attached to Queue Object

The View Properties dialog box opens (see [Figure 221](#)).

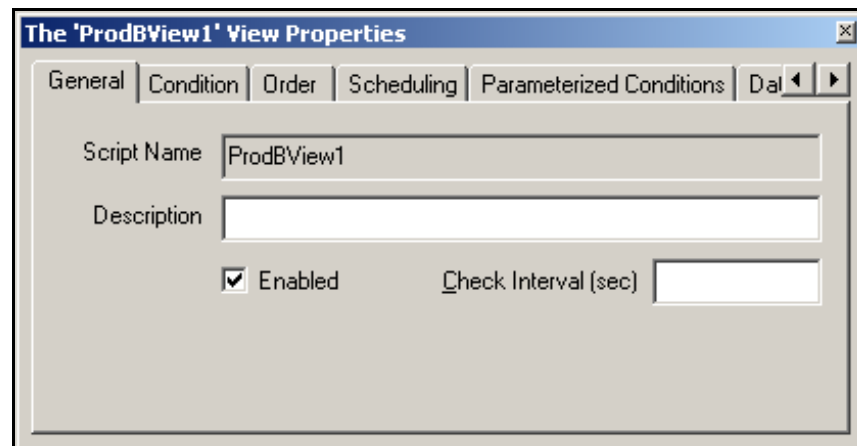


Figure 221: View Properties Dialog Box, General Tab

Note: You can also enable/disable View objects the same as any other object in Configuration Manager.

End of procedure

Next Steps

- Complete the `General` tab (optional step).

General Tab

This section contains procedures for completing each tab in the `View Properties` dialog box.

Procedure:
Completing the View object General tab

Purpose: To describe the view and to specify the frequency for checking the queue if the default will not be used.

Start of procedure

1. Click the `General` tab in the `View Properties` dialog box.
2. Use [Table 23](#) to complete the `General` tab of the dialog box shown in [Figure 221](#).

Table 23: View Properties Dialog Box, General Tab

Field	Description
Script Name	Reflects the name that is entered in the object browser. When you save, the definition will be saved as a Script of type Interaction Queue View in the Configuration Database (see Figure 143 on page 159).
Description	Enter a description for the view.

Table 23: View Properties Dialog Box, General Tab (Continued)

Field	Description
Enabled	After activating strategies as described on page 361 , open the Queue Properties dialog box and select the Enabled check box to specify the view as ready to extract interactions. The default is checked (enabled).
Check Interval (sec)	<p>Enter the number of seconds to specify the frequency (time interval) that Interaction Server will use to check the queue and, if necessary, adjust the number of interactions that can be submitted to the strategy based on options in the Scheduling tab (Figure 225 on page 275). Acceptable values are 0~300 seconds. You might want to use this field for high-value interactions or time-sensitive conditions, such as when checking should be performed more frequently.</p> <p>This field creates or updates option freeze-interval for the view. It overrides option default-view-freeze-interval (in the settings section of Interaction Server options) for the view. The freeze-interval defines how long Interaction Server suspends database checking for a view if no interactions were selected. If option freeze-interval is not present for a particular view, the value of default-view-freeze-interval is used. If option default-view-freeze-interval is not specified, Interaction Server uses the default of 300 seconds.</p>

- When you have finished completing the General tab, select Save from the File menu.

End of procedure

Next Steps

- Complete the Condition tab (optional step).

Condition Tab

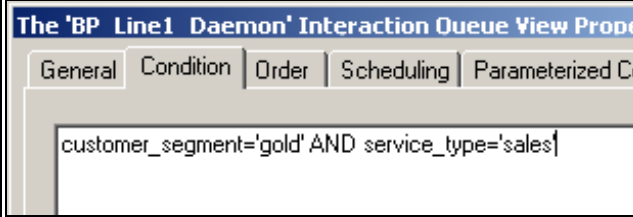
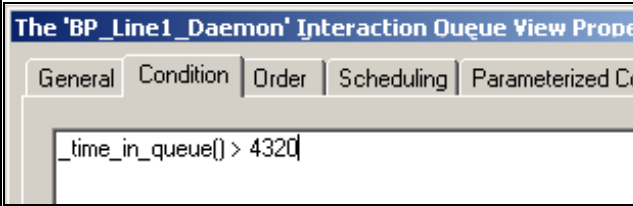
This section describes the tab on which you specify the condition for extracting interactions from queues.

Procedure: Completing the View object Condition tab

Start of procedure

- Click the Condition tab in the View Properties dialog box.
- Use [Table 24](#) to complete the Condition tab that is shown in the following figures.

Table 24: View Properties Dialog Box, Condition Tab

Field	Description
Condition	<p>Here you have the option of creating an expression. Figure 222 shows an example from another business process.</p>  <p>Figure 222: Extracting Based on Customer Segment</p>
	<p>Another example from another business process:</p>  <p>Figure 223: Extracting Based on Time in Queue</p> <p>As an alternative to the <i>Condition</i> tab, the <i>Segmentation</i> tab (see page 285) uses a more complex approach that involves specifying limits and submitting equal numbers of interactions.</p>

The expression defines the conditions for interaction selection. You can specify one or more expressions, which can be comprised of:

- An interaction attribute name from the *interactions* table. *eServices (Multimedia) 8.0 User's Guide* lists and describes the interaction attributes that you can use when building an expression.
- A relational operator, such as an equal sign or a greater than sign.
- The attribute value in single quotes.

The expression is used for interaction selection as if you were constructing a SQL *SELECT* statement and specifying a *WHERE* clause.

For a comparison of the *Condition* tab with the *Parameterized Condition* tab, see [page 282](#).

3. When you have finished completing the *Condition* tab, select *Save* from the *File* menu.

End of procedure

Next Steps

- Complete the Order tab (optional step).

Order Tab

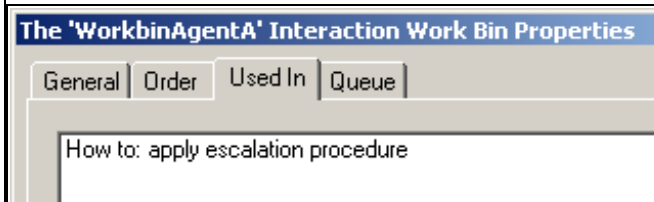
This section describes how to specify the order of interaction selection.

Procedure: Completing the View object Order tab

Start of procedure

1. Click the Order tab in the View Properties dialog box.
2. Use [Table 25](#) to complete the Order tab that is shown in [Figure 224](#).

Table 25: View Properties Dialog Box, Order Tab

Field	Description
Order	<p>Here you have the option of defining the order for pulling interactions from the queue when using this view.</p> <p>order:= [property_order[,order]]property_order:= property_name [asc desc]</p> <p>Example using an attribute found in the interactions table.</p> <div data-bbox="487 1106 1136 1306">  </div> <p>Figure 224: Order Tab</p> <p>For more information interaction attributes that can be used on the Order tab, see the section on System Properties in the chapter on Interaction Properties in the <i>eServices (Multimedia) 8.0 User's Guide</i>.</p>

3. When you have finished completing the Order tab, select Save from the File menu.

End of procedure**Next Steps**

- Complete the Scheduling tab (optional step).

Scheduling Tab

This section describes how to schedule submitting interactions to a routing strategy. You might want to do this for various reasons, such as scheduling of a customer callback or to escalate overdue interactions.

Procedure: Completing the View object Scheduling tab

Start of procedure

1. Click the Scheduling tab in the View Properties dialog box (see [Figure 225](#)).

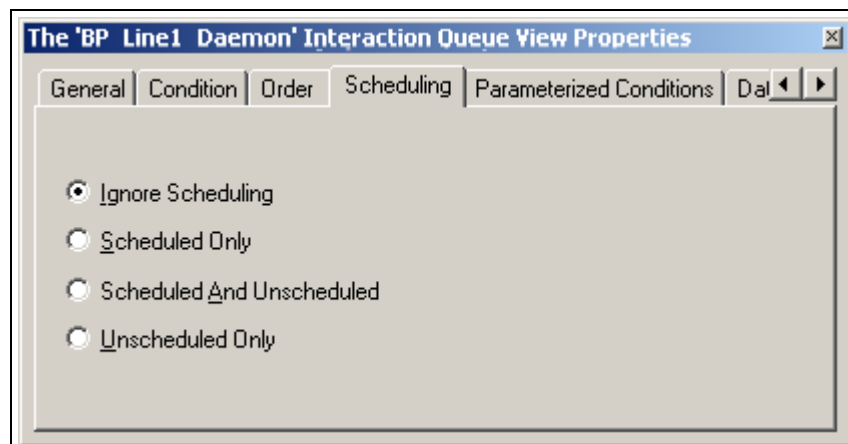


Figure 225: Scheduling Tab

2. Use [Table 26](#) to complete the Scheduling tab.

Table 26: View Properties Dialog Box, Scheduling Tab

Field	Description
Scheduling	The Scheduling tab shown in Figure 225 on page 275 lets you specify the scheduling condition that Interaction Server should use, based upon the scheduled time contained in interactions (see “Setting the ScheduledAt Property” on page 276). Background: The interaction scheduling functionality uses a database field called <code>scheduled_at</code> , which is mapped to an interaction property called <code>ScheduledAt</code> . For information about this field, see the chapter on interaction properties in the <i>eServices (Multimedia) 8.0 User's Guide</i> .
Ignore Scheduling	Default. Select if there is no scheduled processing. Even if the value of <code>ScheduledAt</code> is set for some interactions, Interaction Server ignores it.

Table 26: View Properties Dialog Box, Scheduling Tab (Continued)

Field	Description
Scheduled Only	Select to process only interactions that are scheduled (ScheduledAt is set) as per the value of the scheduled time. If selected, Interaction Server uses the following condition: (<code>_current_time() >= scheduled_at</code>) and the following order: <code>scheduled_at</code> , <code>received_at</code> , <code>id</code> . This condition and the conditions that follow are stored in the Scripts folder of Configuration Manager, Interaction Queue View object, Annex tab.
Scheduled and Unscheduled	Select to process scheduled interactions at scheduled times (ScheduledAt is set) and after that, process unscheduled interactions. In this case, scheduled interactions are delayed until the scheduled time, and all others are processed immediately afterwards. If selected, Interaction Server uses the following condition: ((<code>scheduled_at</code> is NULL) OR (<code>_current_time() >= scheduled_at</code>)) and the following order: <code>scheduled_at</code> , <code>received_at</code> , <code>id</code> .
Unscheduled Only	Select to process only interactions that are unscheduled ('ScheduledAt' is not set). Interaction Server uses the following condition: (<code>scheduled_at</code> is NULL)

- When you have finished completing the Scheduling tab, select Save from the File menu.

End of procedure

Next Steps

- Complete the Parameterized Conditions tab (optional step) as described on [page 282](#).

Setting the ScheduledAt Property

There are several methods for setting the scheduled time:

- Setting scheduled time directly.** You can directly set the value of the ScheduledAt property using:

`RequestChangeProperties`, `RequestUpdateUserData`, `RequestAttachUserData`, or `RequestDeletePair` from URS. For information about these message types, start with the *Multimedia 7.5 Interaction Models Reference Manual*.

Note: This method is more likely to be used by custom applications that use the `RequestChangeProperties` API (Open Media Platform SDK).

2. **Setting processing delay relative to the current time.** You can configure a routing strategy to set the special interaction property `ScheduleDelay` to the number of seconds to schedule processing at timestamp `current time + ScheduleDelay`.

Note: This property is not stored in the database and is not maintained as an interaction property in the Interaction Server protocol. Instead, the `ScheduledAt` property is calculated as `current time + ScheduleDelay` and is stored at the time when the interaction is placed in queue (`current time` is a timestamp of `RequestChangeProperty`).

This method is particularly useful to schedule processing of interaction in strategy. Property 'ScheduleDelay' is not visible to reporting (it is not propagated in any reporting events). Instead it appears that property `ScheduledAt` is changing.

3. **Setting processing delay relative to a fixed timestamp.** Sometimes it is useful to schedule processing delay for a specific timespan relative to a well known timestamp such as `ReceivedAt`, `SubmittedAt`, `MovedToQueueAt`, `PlacedInQueueAt`, `DeliveredAt`, `SubmittedToRouterAt`, or possibly any other timestamp not related to interactions.

To accomplish this, Interaction Server can interpret another special interaction property, `ScheduleBase`. In this case, the `ScheduledAt` timestamp is calculated as `ScheduleBase + ScheduleDelay`. The `ScheduleBase` must be in the standard date format of Interaction Server protocol YYYY-MM-DD HH:MM:SS. If the property is not present in the update request (when `ScheduleDelay` is present), then it is considered as a current time, which leads to the scenario described above in setting processing delay relative to current time.

This schema of scheduling allows URS (via the strategy) to schedule processing using a calculated delay in seconds and a fixed (existing) timestamp. For example, it is easy to schedule processing for two hours after interaction submission by simultaneously updating `ScheduleBase` to `SubmittedAt` and `ScheduleDelay` to 7,200. Setting `ScheduleBase` to `SubmittedAt` does not require any date manipulation in the URS strategy; it is simply a substitution of an existing value.

Sample Strategy to Set the Scheduled Time

IRD's Function object contains several Date and Time functions that you can use when setting the scheduled time: `GetUTC`, `UTCAdd`, `UTCFromString`, and `UTCToString`. For information about these functions, as well as the `Attach` and `Update` functions that you may also use when setting the scheduled time in interactions, see the chapter on functions in the *Universal Routing 8.1 Reference Manual*. [Figure 226](#) shows a sample strategy, which uses these functions.

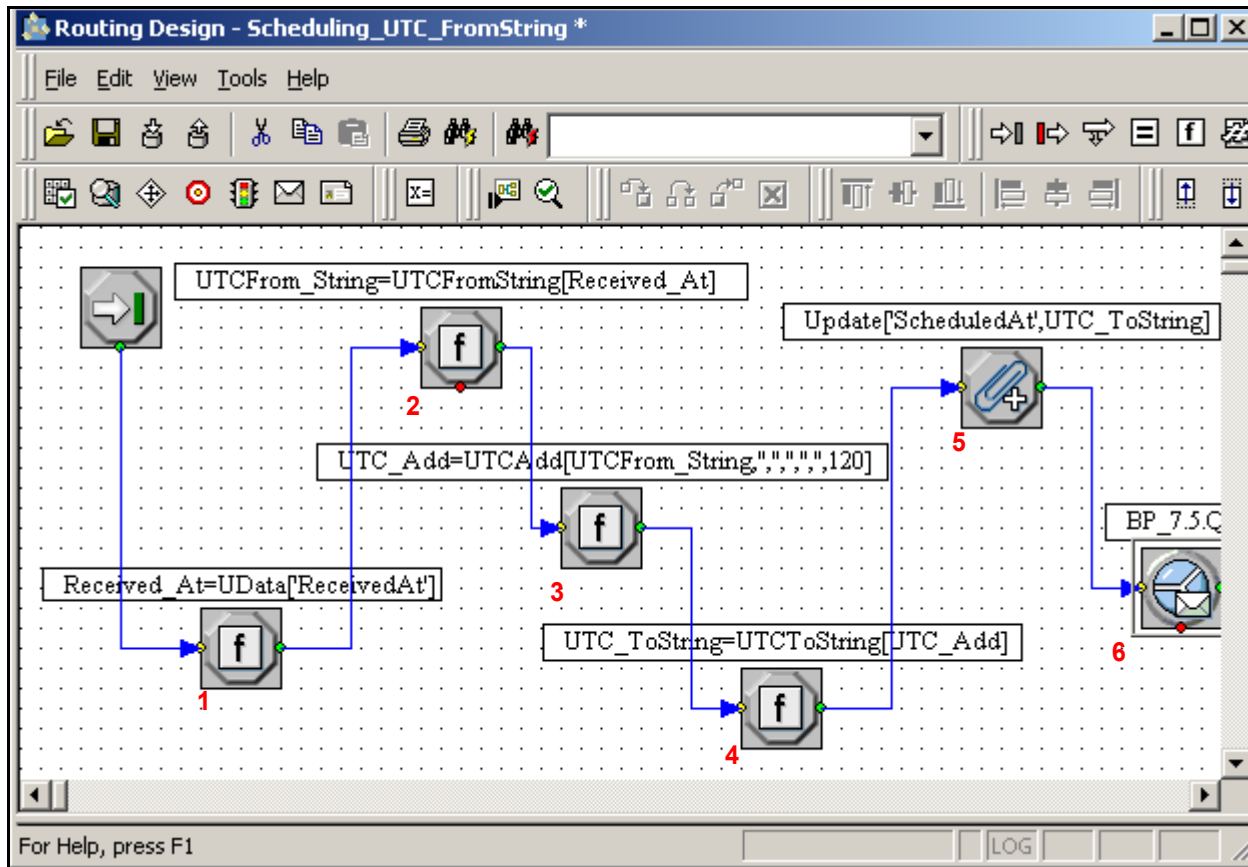


Figure 226: Strategy for Setting Scheduled Time and Placing in Queue

Strategy Flow

1. The UData function specified in object 1 in Figure 226 retrieves the value from the ReceivedAt attribute. It points to the time when the interaction was received (see Figure 227).

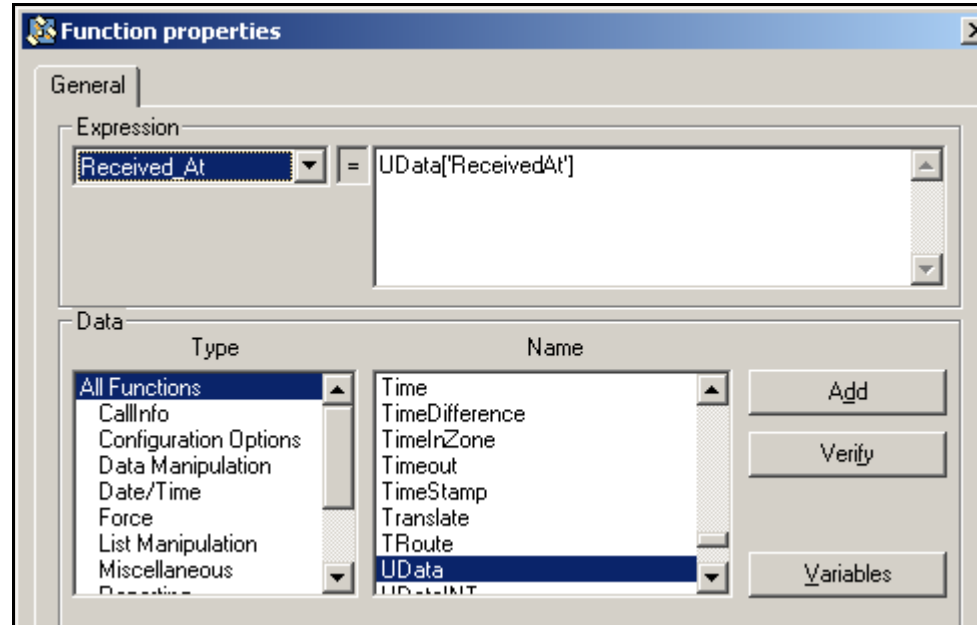


Figure 227: Retrieving Time Interaction Received

2. The UTCFromString function in object 2 in Figure 226 on [page 278](#) takes the time string from the ReceivedAt attribute (presented in YYYY-MM-DDTHH:MM:SSZ UTC format) and returns it as the number of seconds (see [Figure 228](#)).

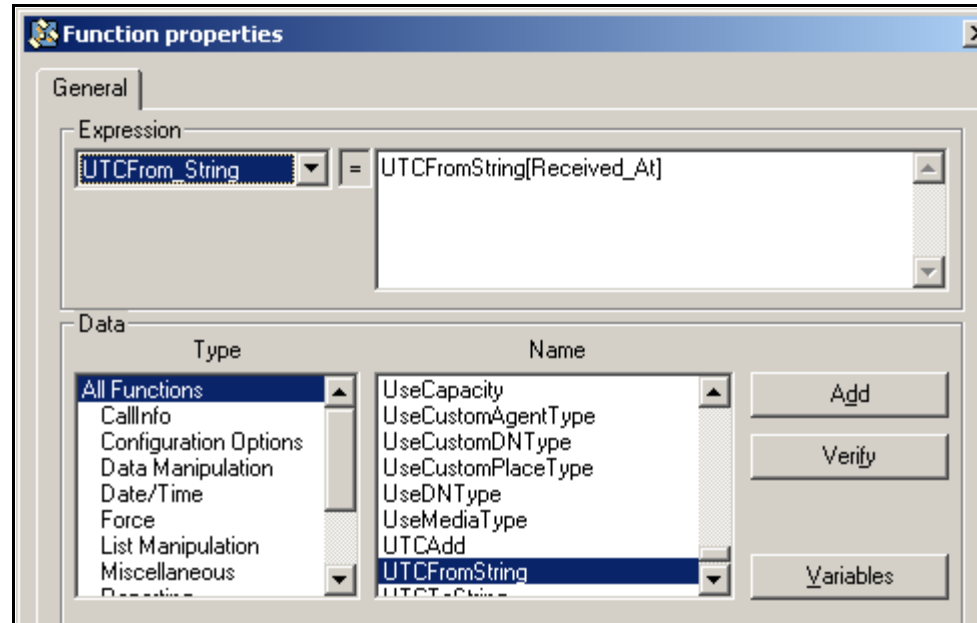


Figure 228: Returning Number of Seconds

3. The UTCAdd function in object 3 increments the time string supplied by the UTCFromString function by 120 seconds (see [Figure 229](#)).

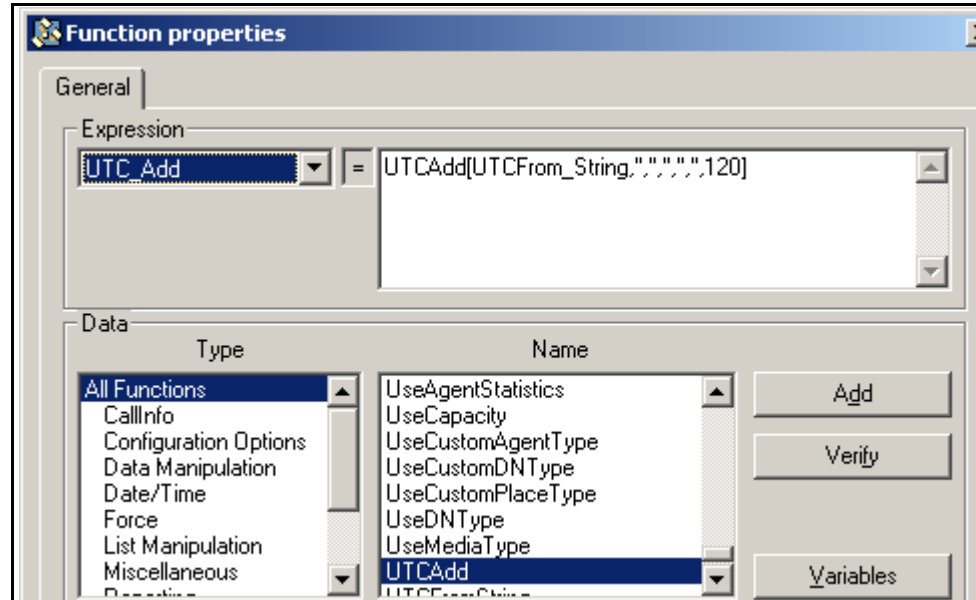


Figure 229: Incrementing Time

4. The `UTCToString` function in object 4 in Figure 226 on [page 278](#) takes the updated UTC time in seconds (supplied by the `UTCFromString` function) and converts it back into `YYYY-MM-DDTHH:MM:SSZ` UTC format (see [Figure 230](#)).

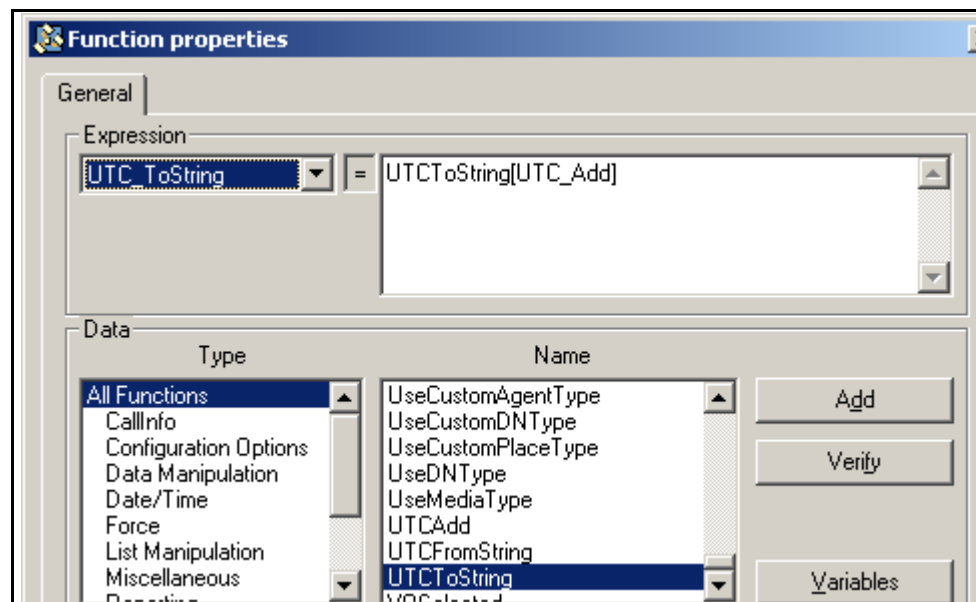


Figure 230: Convert Back to UTC Format

5. In object 5, the time in the `ScheduledAt` attribute in the interaction is updated by the time (in `YYYY-MM-DDTHH:MM:SSZ` format) supplied by the `UTCToString` function (see [Figure 231](#)).

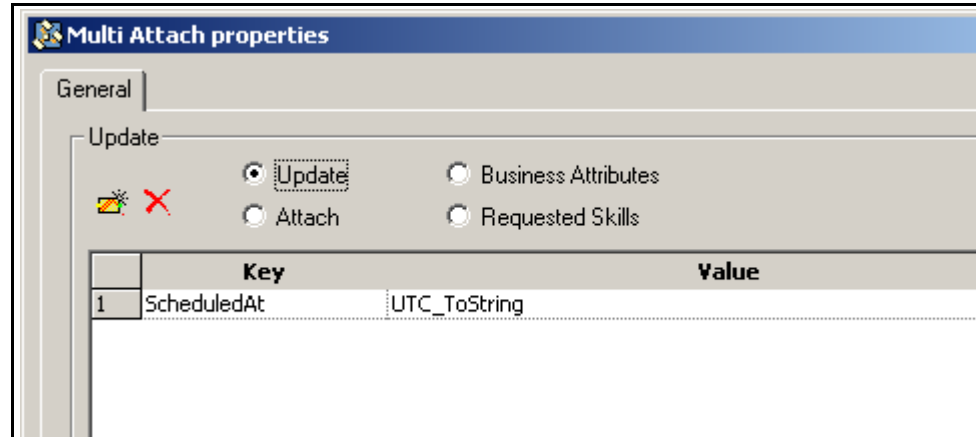


Figure 231: Update ScheduledAt Attribute

6. In object 6, the interaction takes its place in queue. From there (see [Figure 232](#)), it will be executed by the time set in the ScheduledAt attribute.

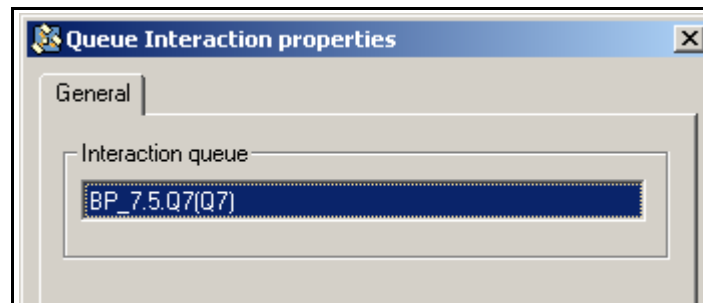


Figure 232: Interaction Placed in Queue

Cancelling Scheduling

To cancel scheduling, you must configure a strategy to delete the property ScheduledAt using attribute attr_deleted prop of RequestChangeProperties or by using RequestDeletePair. Setting the value of this property to an empty string will also lead to deletion of this property.

When property attr_deleted prop is deleted, the corresponding field (scheduled_at) is set to NULL and property ScheduledAt is no longer present in the interaction data (not visible in Events).

Note: The Script file for the View object reflects what you select in the Scheduling tab. To preserve database integrity, do not change this field in the Script object; use only the Scheduling tab.

Parameterized Conditions Tab

The **Parameterized Conditions** tab lists the interaction attributes that can be used in pull requests from clients of Interaction Server (for example, from Agent Desktop). Each pull request can use any listed attribute, a combination of listed attributes, or none. If an attribute is not listed on this tab, then client applications cannot use it. For details on pull requests, see the “RequestPull” section in the chapter on Interaction Management Protocol in the *Multimedia 7.5 Open Media Interaction Models Reference Manual*.

For example, if the **Parameterized Conditions** tab lists the `from_address` attribute, then a pull request from a client can include a condition such as `from_address=joe_customer@myisp.com`. This would retrieve all interactions from a particular contact.

The **Condition** tab and the **Parameterized Conditions** tab both make use of interaction attributes (see the chapter on Interaction Properties in the *eServices (Multimedia) 8.0 User's Guide*). The difference between them is:

- The **Condition** tab states a condition that applies to all pull requests.
- The **Parameterized Conditions** tab only lists attributes that can be used as parameters in a pull request, but it is up to the client whether or not to use these attributes.

You can:

- Select the attribute from a drop-down list of interaction attributes. This list includes most of the attributes in the `interactions` table. The exceptions are `abandoned_at`, `destinations`, `moved_to_queue_at`, `scheduled_at`, `server_id`, and `snapshot_place_id`.
- Enter the name of a custom property that you have created in Configuration Manager. Creating custom properties is described in the “Interaction Properties” section of the chapter on Interaction Properties in the *eServices (Multimedia) 8.0 User's Guide*.

Procedure: Completing the Parameterized Conditions tab

Start of procedure

1. Click the **Parameterized Conditions** tab in the **View Properties** dialog box. This tab is used by Genesys Supervisor Desktop interface. See the *Genesys Desktop 7.6 Supervisor Help* for more information about this interface.
2. There are two ways to add an attribute:
 - Click **Add** and manually type the attribute name in the text box (where [Figure 233](#) shows `NewCondition`).

- Click the down arrow opposite `NewCondition` and double-click an attribute name from the `interactions` table (described in the *eServices (Multimedia) 8.0 User's Guide*). [Figure 233](#) shows the tab after clicking `Add` and selecting `NewCondition`.

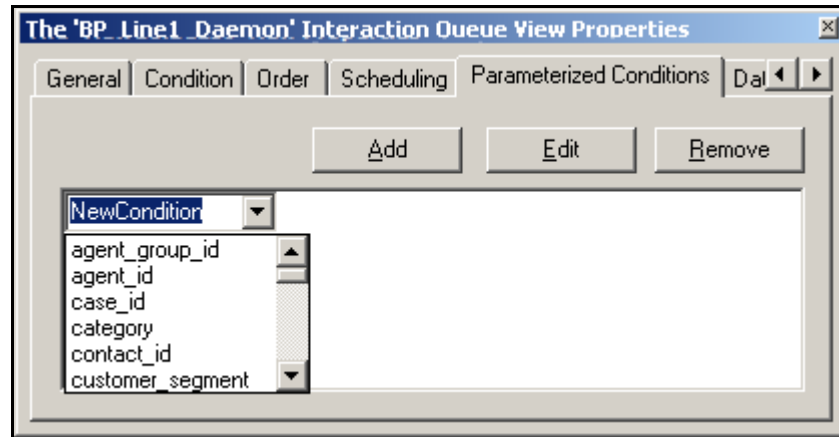


Figure 233: Parameterized Conditions Tab

- You can add multiple attributes.
- To change an attribute, select the attribute, click `Edit` and then select the attribute to substitute.
- To remove an attribute, select it and click `Remove`.
- When finished completing the `Parameterized Conditions` tab, select `Save` from the `File` menu.

End of procedure

Next Steps

- Complete the `Database Hints` tab (optional step).

Database Hints Tab

The `View Properties` dialog box has `Database Hints` tab, which is applicable to an Oracle database.

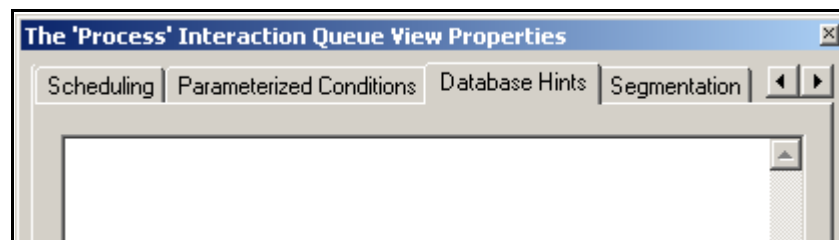


Figure 234: Database Hints Tab

Oracle allows special tags in SQL queries that cause queries to execute in a way that optimizes performance. These tags are called *Hints*. For example, you might want Oracle to use a certain index to reorder data during query execution. You can apply a Hint, which will cause Oracle to use a specific index. One Hint that Oracle provides is the following:

```
/*+ index (interactions interactions_default_view_idx) */.
```

You could enter this Hint in the Database Hints tab of the View object.

Procedure: Completing the View object Database Hints tab

Purpose: To accommodate Oracle Database users.

Start of procedure

1. Click the Database Hints tab in the dialog box.
2. Use the information given above under Purpose to apply an Oracle Database Hint.
3. Save your entry.

End of procedure

Next Steps

- Complete the Segmentation tab (optional step).

Segmentation Tab

Use the Segmentation tab on the View Properties dialog box to submit an equal number of interactions of different segments and to limit the total number of interactions that can be submitted to a strategy.

Use Case

Assume the following:

- You have a simple business process: a queue, the queue's view, a strategy, and a submitter that submits interactions from the queue to the strategy through the view.
- There are two groups of agents equal in number. One group is trained to handle only customers of the gold Customer Segment (see note on [page 163](#)) and another group is trained to handle only customers of the bronze Customer Segment.

- The strategy directs interactions to the corresponding group of agents based on the value of the `customer_segment` property of an interaction (assume the value could be either `gold` or `bronze`).
- Next, start placing interactions into the queue, five interactions from bronze customers, then four interaction from gold customers, then again five interactions from bronze customers, three from gold, and so on.

If the strategy has a limit (see “Total Limit” on [page 287](#)) of five interactions that may be submitted into it, when the limit is reached, the strategy will be full of interactions from bronze customers, but will have no interactions from gold customers. As a result, interactions from gold customers will be waiting back in the queue and free agents, who are able to handle them, will also be waiting. Because the interactions are not yet in the strategy, the strategy is unable to route the interactions.

To avoid such a scenario, you could add the `customer_segment` value to the Segmentation tab of the View Properties dialog box. After that, Interaction Server will fetch all interactions from the queue, grouping by the `customer_segment` property. It will find two distinct values of the property: `gold` and `bronze`. Interaction Server will then divide strategy limit by two (the number of distinct values) and limit the submission of each group of interactions to the strategy by the calculated value. As a result, Interaction Server submits an equal number of interactions from each group.

Procedure: Completing the View object Segmentation tab

Start of procedure

1. Click the Segmentation tab in the View Properties dialog box (see [Figure 235](#)).

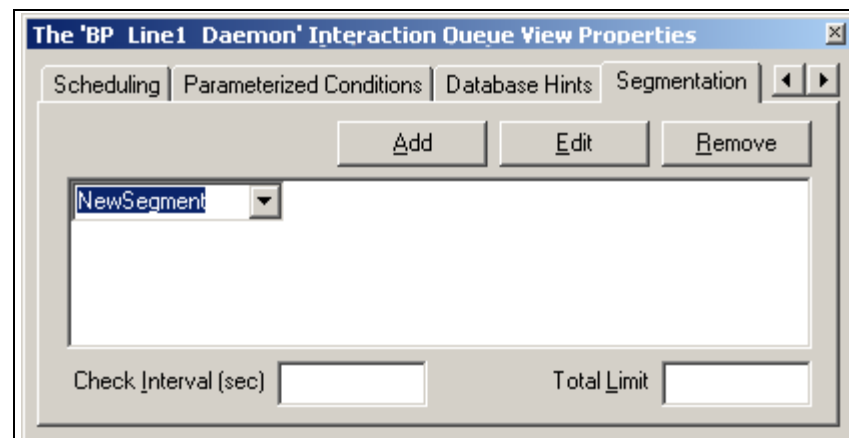


Figure 235: Segmentation Tab

2. Use [Table 27](#) to complete the Segmentation tab (optional step).

Table 27: View Properties Dialog Box, Segmentation Tab

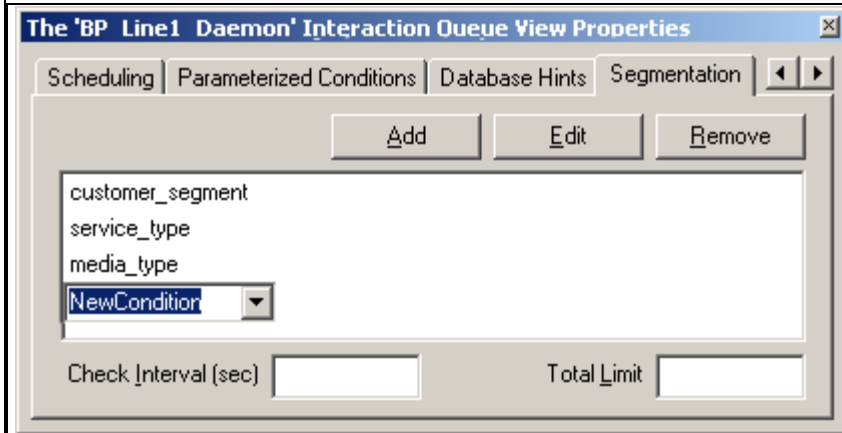
Field	Description
Segmentation	For background information about this tab, see “Use Case” on page 284 .
Add	<p>Figure 235 on page 285 shows the Segmentation tab after clicking Add. There are two ways to add an attribute in this dialog box:</p> <ul style="list-style-type: none"> Click Add and manually type the attribute name in the text box (where Figure 233 shows NewSegment). Click the down arrow opposite NewSegment and double-click an attribute name from the interactions table (described in the <i>eServices (Multimedia) 8.0 User's Guide</i>).
	<p>Figure 236 shows the Segmentation tab after adding several segments and clicking Add.</p>  <p>Figure 236: Segmentation Tab After Specifying Segments</p> <p>Option segment-by (see Figure 237) reflects the added segments.</p> <p>If the routing strategy connected to the view uses the Generic Segmentation object (see “Segmenting Interactions” on page 328), the segments you specify in the Scheduling tab should match those segments.</p>
Edit	To change an attribute, select the attribute, click Edit. You can then manually type the name of another attribute or select the segment to edit from the drop-down menu.
Remove	To remove an attribute, select it and click Remove.

Table 27: View Properties Dialog Box, Segmentation Tab (Continued)

Field	Description
Check Interval (sec)	Enter the number of seconds that Interaction Server should use for checking the queue connected to this view. This interval controls how often Interaction Server checks the main queue and adjusts the number of interactions that will be submitted to the strategy according to the Total Limit field. Option <code>segment-check-interval</code> (see Figure 237) reflects the number of seconds.
Total Limit	Enter the total number of interactions that can be submitted to the strategy connected to the View object. This option allows you to override the maximum number of interactions that can be submitted to the strategy according to the specified segments. Option <code>segment-total-limit</code> (see Figure 237) reflects Total Limit.

Notes: If segments are not configured but `Total Limit` is configured, then Interaction Server calculates a dynamic value. It divides `Total Limit` by the number of *actual types present* in the main queue and uses the result to limit the number of each interaction type in the cache queue.

When some segments are specified, Interaction Server adheres to `Total Limit`. If/when there is room for more interactions to be submitted to the strategy after submitting the specified segments, Interaction Server divides the remaining types up equally.

End of procedure

Setting Numerical Limits for Segments

In some cases, instead of having Interaction Server submit equal numbers of specified interaction segments to a strategy as just described, you might want to set numerical limits for those segments and save that configuration information for reuse with another queue. You can do this in Configuration Manager via the `segment-limits` section in an Interaction Queue View object in the `Scripts` folder (see [Figure 143](#) on [page 159](#)). As described later, to specify limits for specific segments, you use a combination of values for segmentation attributes separated by a semicolon.

Assume that you wish to configure limits for attributes entered in the Segmentation tab of the View Properties dialog box (see [Figure 236](#) on [page 286](#)). After entering the attributes shown in [Figure 236](#), assume the View section in the Annex tab of the corresponding Interaction Queue View Script object appears as shown in [Figure 237](#):

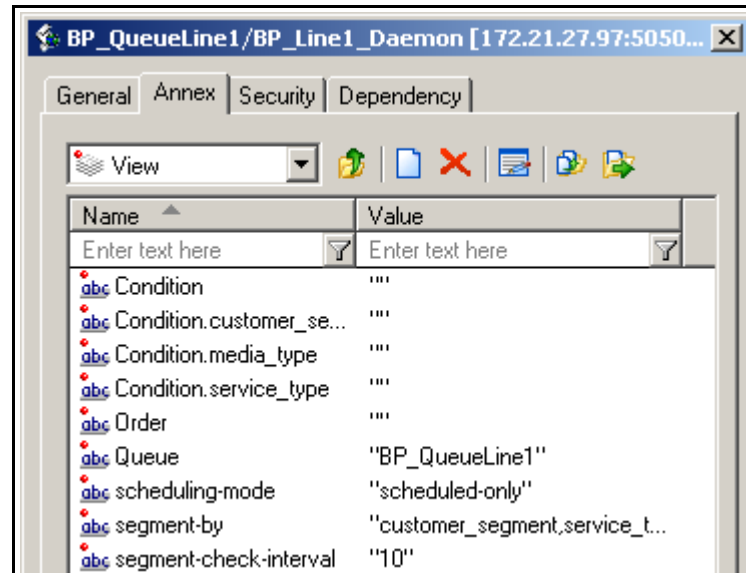


Figure 237: Interaction Queue View Script Object

Warning! To ensure database integrity, you must define the options that are shown in [Figure 237](#) only in IRD's Interaction Design window; do not define them in Configuration Manager. The only exception is the segment-limits option described below.

The following procedure describes how to specify limits for different interaction segments, such as work item interactions for different types of services for customers of the Gold, Silver, and Bronze revenue potential.

Procedure: Limiting submission of segments by using Configuration Manager

Start of procedure

1. Open Configuration Manager (see [page 237](#)) and go to the Scripts folder for the Tenant.
2. Select the Interaction Queue View Script object that you wish to configure with segment limits.
3. Click the Annex tab.
4. Double-click the View section so it appears under the Annex tab (see [Figure 238](#)).

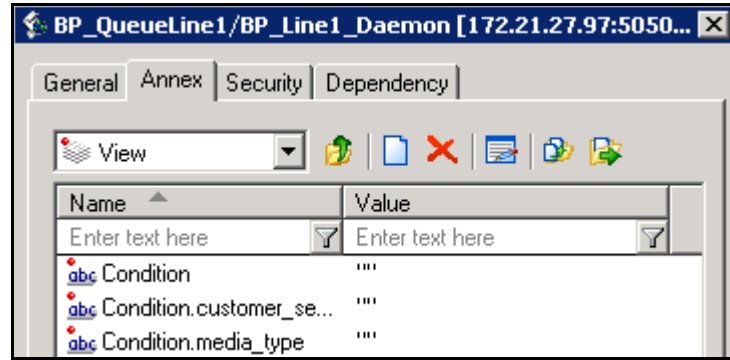


Figure 238: View Section in Annex of View Object Properties Dialog Box

5. Click the button to create a New Section/Option.
6. In the resulting Add Section dialog box, enter segment-limits as the Option Name. In the Option Value field, enter the name of another Script object (to be created) that contains the segment limits configuration. Genesys suggests creating a Script object of type Data Collection for this purpose as described ahead. [Figure 239](#) shows an example completed dialog box.

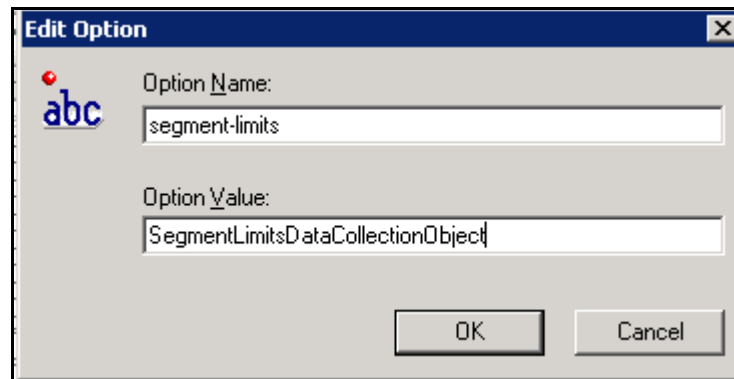


Figure 239: View Object Edit Option Dialog Box for segment-limits

7. Click OK in the Edit Option dialog box. The option is added to the View section (see [Figure 240](#)).

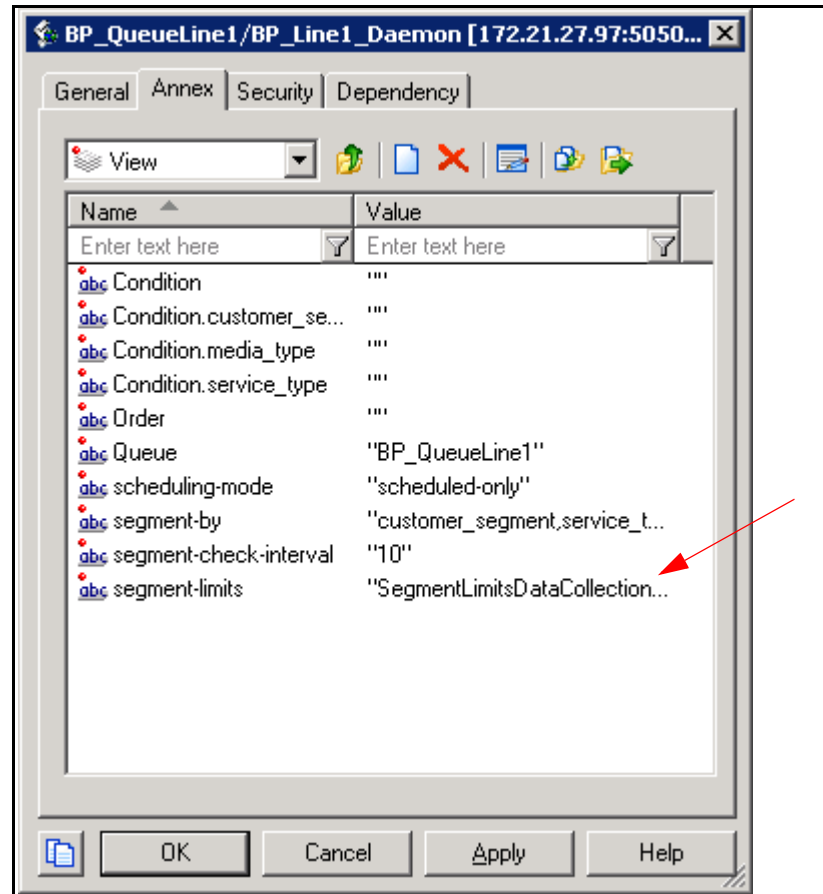


Figure 240: View Object, View Section, segment-limits

8. Still in the Configuration Manager Scripts folder, create a new Script object of type Data Collection. Continuing with this example, assume that you name it SegmentLimitsDataCollectionObject, the same as the Option Value shown in Figure 239.
9. Click the Annex tab. There will be no existing sections.
10. Click the button to create a New Section/Option.
11. In the Add Section dialog box, enter segment-limits as the section name and click OK.
12. Double-click segment-limits so it appears in the drop-down under the Annex tab.
13. Click the button to create a New Section/Option. The Edit Option dialog box opens.
14. In the Option Name field, enter one or more interaction attributes separated by semi-colons. Figure 241 shows an example.

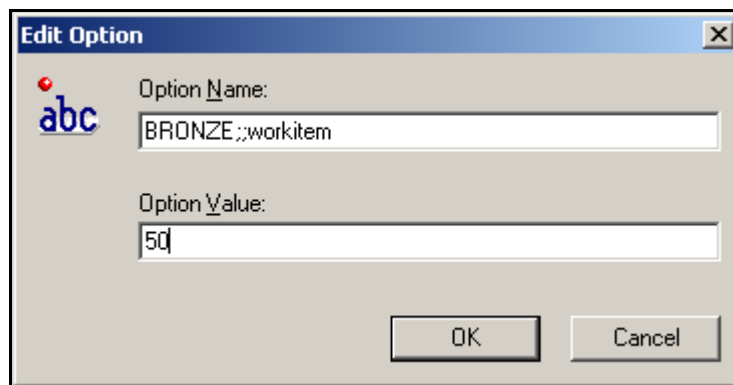


Figure 241: Sample Entry in Edit Option Dialog Box

Note: In the above example, there are two semicolons. The second semicolon indicates an unspecified attribute (see [Figure 242](#)).

15. In the Option Value field, enter a number to specify a limit for this interaction type and click OK.
16. Repeat steps 13~15 for the next type of interaction that you wish to limit.
17. Click OK.

End of procedure

[Figure 242](#) shows the example Data Collection Script object for segment-limits.

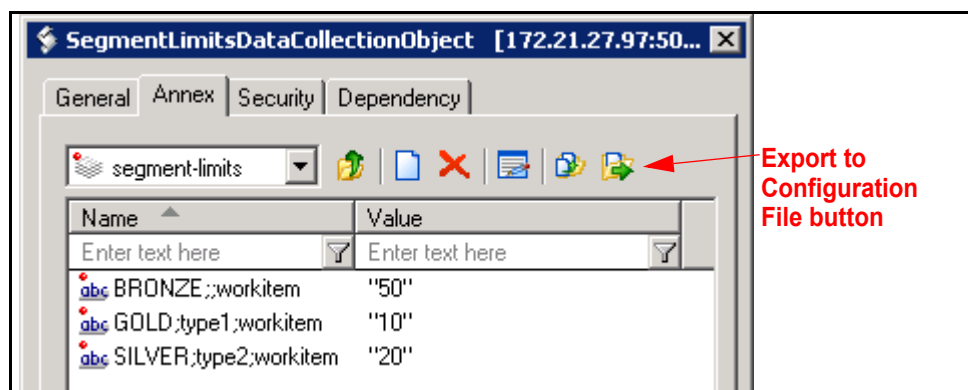


Figure 242: Example Entries for segment-limit option

In this example, the Script object sets limits for submitting three types of interactions to a strategy:

- For segment customer_segment=GOLD, service_type=type1, media_type=workitem (see [Figure 148](#) on [page 164](#)), the limit is set to 10.
- For segment customer_segment=SILVER, service_type=type2, media_type=workitem, the limits is set to 20.

- The first segment sets a limit of 50 for interactions (`workitems`) of BRONZE customers for which `service_type` is not set.

Reusing a Configuration

To reuse a `segment-limits` configuration for use with another queue, click the `Export to Configuration File` button in the `Interaction Queue View Script` object (see [Figure 242](#)). This opens a `Save As` dialog box where you can save the information to a file. You can then import the file for a different `Interaction Queue View Script` object by opening that object, clicking the `Import from Configuration File` button, and selecting the export file. To import only the `segment-limits` configuration, click `No` when the dialog asks whether you wish to overwrite existing data.

View Configuration Caveats

- Do not use attached data for interaction attributes and values.
- Define conditions that process all e-mails in the queue. Any interactions not pulled by a view, remain in the queue.
- Expressions vary between underlying databases, but you can use generic expressions that provide a single interface independent of the underlying database (Oracle, MS SQL, DB2). They are called *Translations*. [Figure 223 on page 273](#) shows the `_time_in_queue` translation used in the `Condition` tab.

Note: See the chapter on interaction properties in the *eServices (Multimedia) 8.0 User's Guide* for information about translation functions.

- Logic that appears under the `Condition` tab is incorporated into the `where` clause of a SQL `select` statement and, therefore, has a direct impact on Interaction Server's performance. In some cases, you may need to create additional indexes in the underlying database to improve performance.
- The order of the view is incorporated in the `order` clause of the same SQL `select` statement, and also may impact performance. The default order (by `date_received` and `id`) and condition (filter by `queue` and `state`) both use an index on the following fields: `queue`, `state`, `date_received`, and `id`.

Adding Workbins

For background information about Workbin objects, see [page 33](#). In order for workbins to be selectable in the IRD Workbin object, they must first be defined as described in this section.

Procedure: Adding a Workbin object to a business process

Purpose: To hold interactions for later processing by a particular agent (or Agent Group, Place, Place Group).

Start of procedure

1. Right-click the Workbins folder in the object browser to bring up a menu and select New Workbin (see [Figure 243](#)). Alternative methods:
 - Select New Workbin from the Business Process menu.
 - Right-click in the workflow viewer and select New > Workbin.

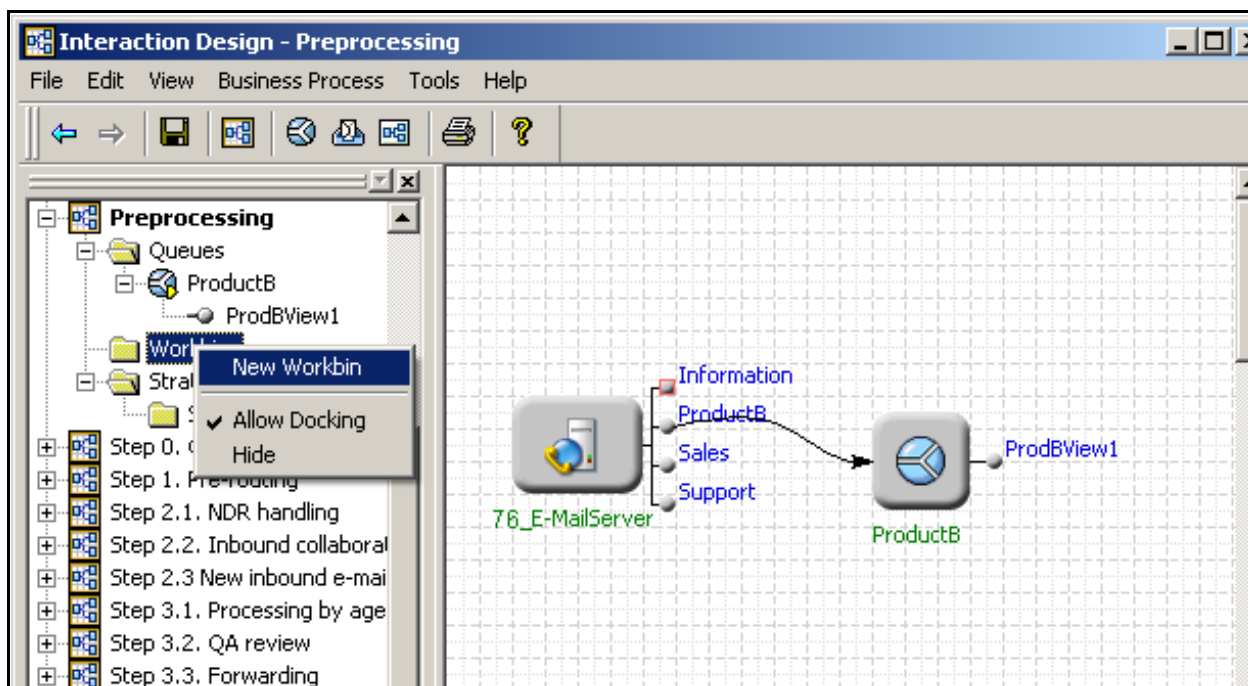


Figure 243: New Workbin Menu Item

The object browser shows a new Workbin object with a temporary name (see [Figure 244](#)).

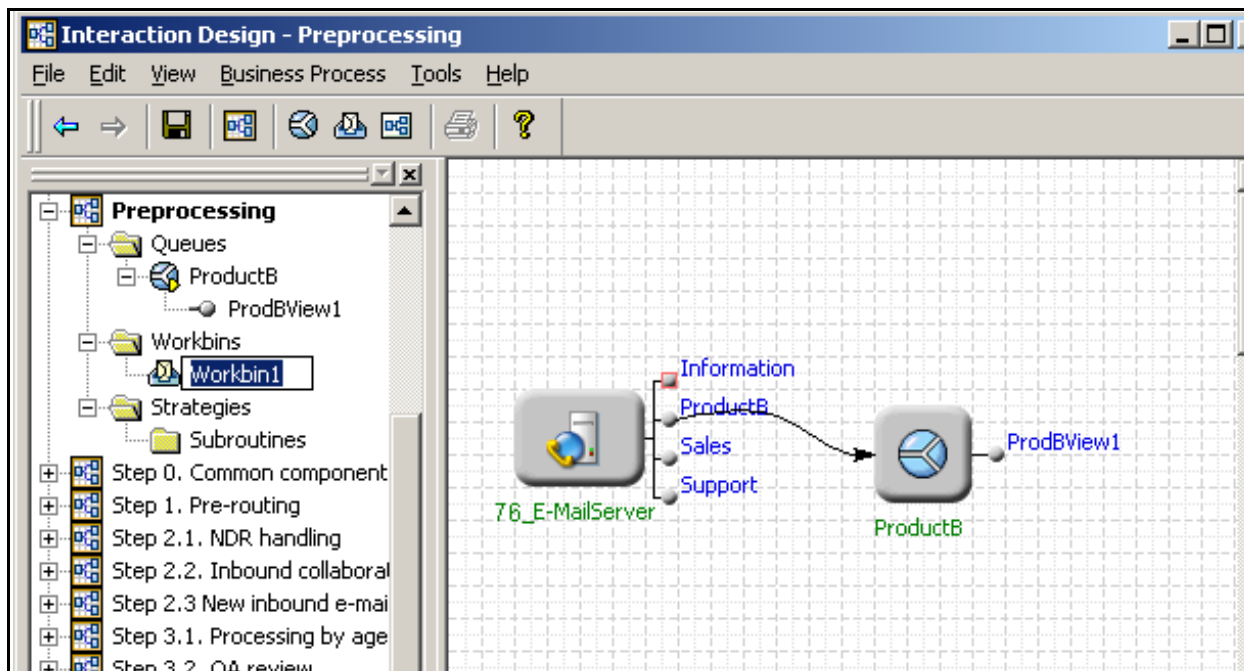


Figure 244: New Workbin with Temporary Name

2. Select (slowly double-click) the temporary name and replace it, supplying your own name. Assume that you name it WorkbinAgentA. The browser now appears as shown in [Figure 245](#).

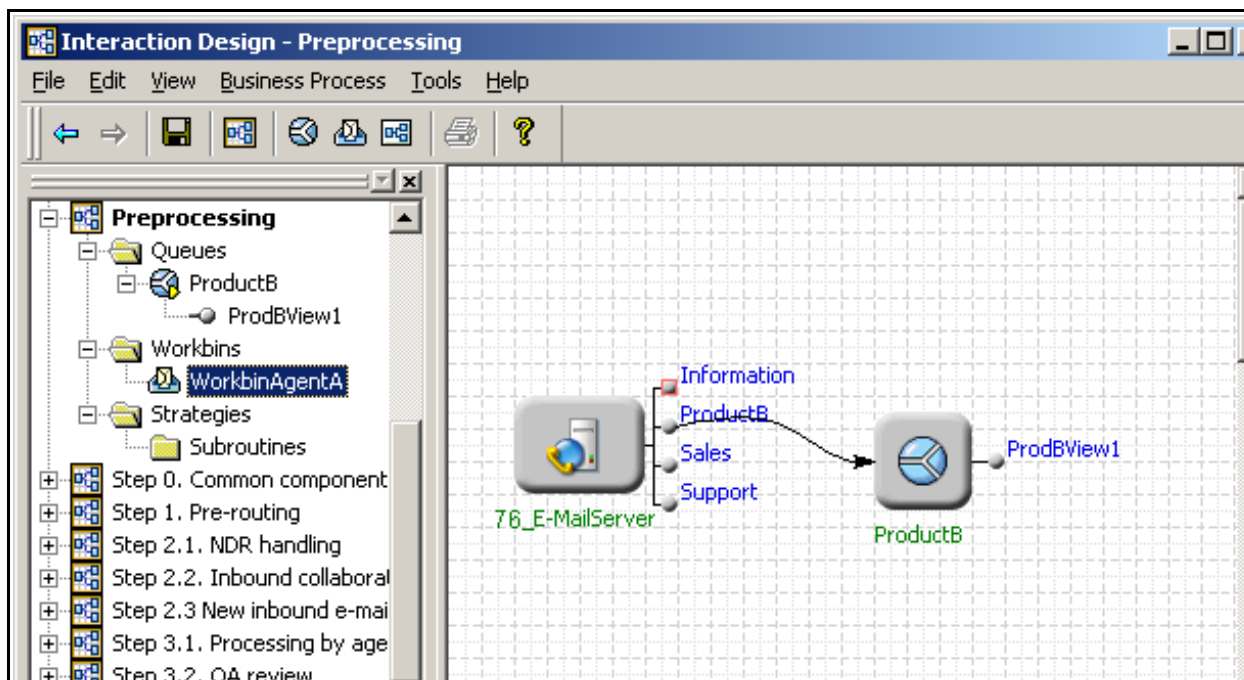


Figure 245: New Workbin Renamed

3. Drag the Workbin object into the workflow viewer now or after the next step.
4. Right-click the Workbin object and select **Properties** from the menu. The Workbin Properties dialog box opens (see [Figure 246](#)).

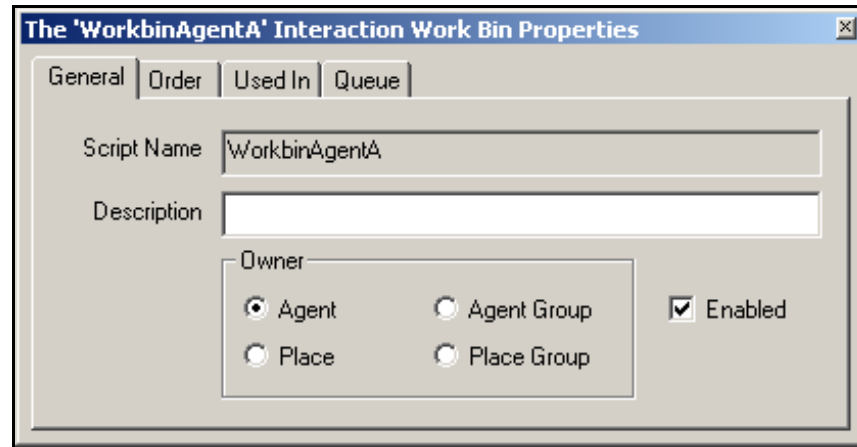


Figure 246: Workbin Properties Dialog Box

5. Use the information in [Table 28](#) to complete the Workbin Properties dialog box:

Table 28: Workbin Properties Dialog Box

Field	Description
Script Name	In Figure 246 , Script Name reflects the name that is entered in the object browser. The queue definition will be saved as a Script of type Workbin in the Configuration Database (see Figure 143 on page 159).
Description	Describe the purpose of the Workbin object.
Owner Agent Agent Group Place Place Group	Indicates whether the Workbin is associated with an agent (Person), Agent Group, Place, or Place Group. If you change the type of workbin Owner in the Workbin object properties dialog box in the Interaction Design window, you will also need to change it in the Routing Design window in the strategy containing the Workbin routing object. Otherwise, no message will be generated in the IRD Details tab or in the Log tab of the Interaction Design window. This is because Check Integrity (see page 354) was not designed to distinguish the wrong types of existing objects as in the case of selecting the wrong type of Owner in the General tab of the IRD Workbin properties dialog box.
Enabled	After activating the strategy as described on page 361 , open the Workbin Properties dialog box and select the Enabled check box to specify the workbin state as ready to accept interactions. The default is checked (enabled). <ul style="list-style-type: none"> You can also enable/disable Queue objects the same as any other object in Configuration Manager.

Table 28: Workbin Properties Dialog Box (Continued)

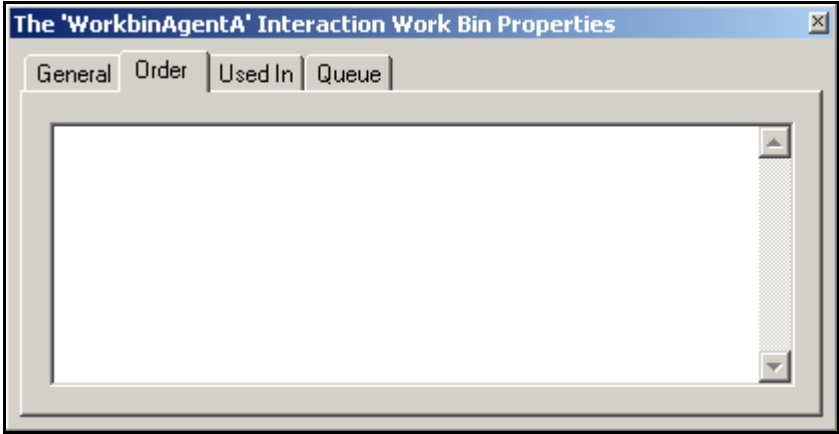
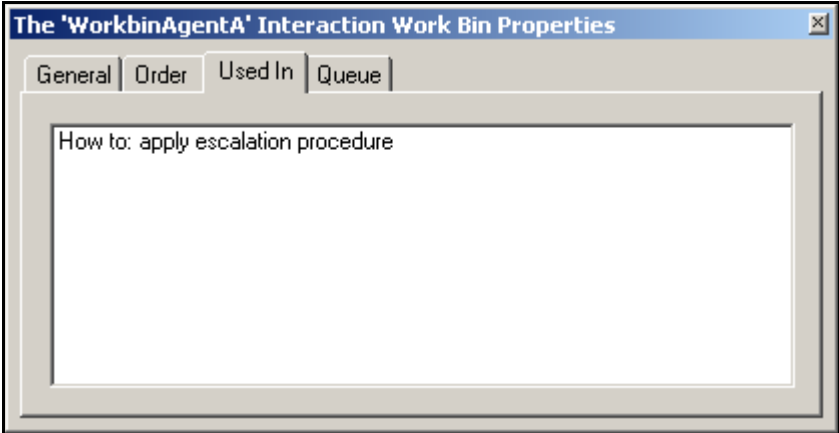
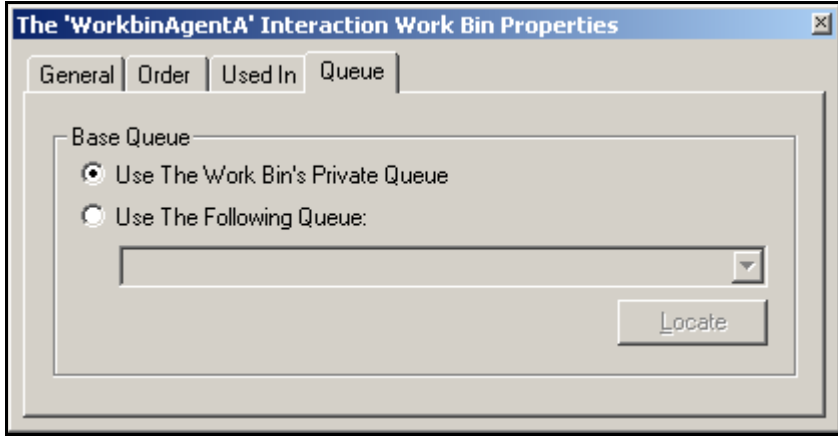
Field	Description
Order	<p>In the Order tab, you have the option of defining the order for pulling interactions from the Workbin (see Figure 247).</p>  <p>Figure 247: Order Tab</p> <p>See Figure 224 on page 274 for an example view entry.</p>
Used In	<p>If this workbin is eventually used by other business processes, the Used In tab will list the names of those business processes. Figure 248 shows an example.</p>  <p>Figure 248: Used In Tab</p>

Table 28: Workbin Properties Dialog Box (Continued)

Field	Description
Queue	<p>Use the Queue tab (see Figure 249) to associate the workbin with a base queue or when associating multiple workbins with the same queue as described in “Configuring an Escalation Workflow” on page 298.</p>  <p>Figure 249: Queue Tab</p> <p>You have two queue association options:</p> <ul style="list-style-type: none"> • Use The Work Bin’s Private Queue • Use The Following Queue (enabled when at least one queue exists in the business process)
Use The Work Bin’s Private Queue	<p>When this option is selected, IRD will:</p> <ul style="list-style-type: none"> • Create (if no such queue already exists) a private queue. • Link the workbin to it. • Hide the private queue from view (you cannot view it in the workflow). <p>When this option is selected, the next option is disabled.</p>
Use The Following Queue	<p>When this option is selected, the drop-down menu allow you to choose an existing queue. If the workbin was previously linked to a private queue, upon saving the business process, IRD will delete the private queue from the Configuration Database. Later, when you click Locate, IRD highlights the queue within the workflow.</p> <p>The dropdown menu lists the names of queues that belong to the same business process where the workbin resides. However, if you then move the queue to another business process, IRD shows this queue in the form of <business process>::<queue name>.</p>

6. Select Save from the File menu.

End of procedure

Later, when creating routing strategies, any workbins you define in the Interaction Design window will be selectable in the properties dialog box for the Workbin object in the Routing Design window (see [Figure 250](#)).

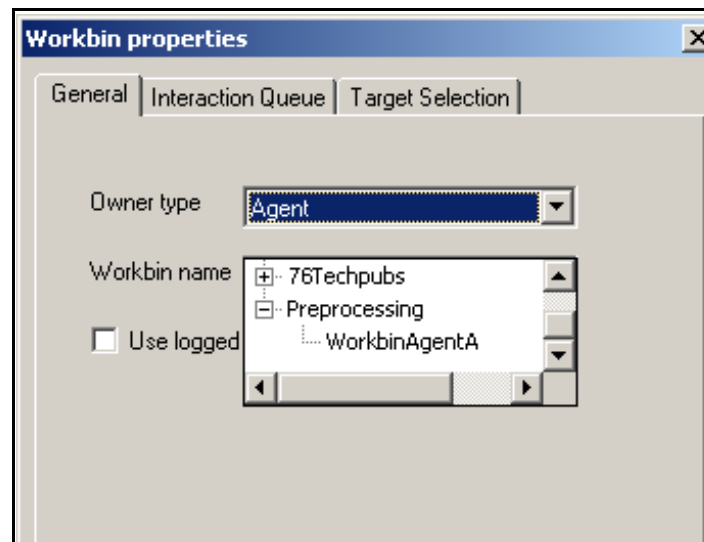


Figure 250: Workbin Properties Dialog Box

- For information about how to attach a view to a workbin, refer back to “Adding a View” on [page 267](#).
- For an example of a workbin with an attached view, see “How To: Apply Escalation Procedure” on [page 411](#).
- For information about connector lines, see [page 305](#).

Configuring an Escalation Workflow

Assume that you have a single workbin and want to submit interactions from the workbin that are over three days old for special processing (escalation). For a single workbin, you could:

- Define a View object for the workbin (see [page 267](#)).
- In the Condition tab of the View Properties dialog box, define the following condition to specify the number of seconds in three days:
- `age() > 259200`
- Draw a Submitter from the view to the escalation strategy.

Now assume you have *five different workbins* and want to perform the same special processing. You could configure five additional View objects with the same condition and draw five additional Submitters. This “long way” would not only repeats steps, but also would make the workflow picture more complex.

A more efficient way is to lay all the workbins on the same queue and then use the queue in the workflow. This works because a workbin can be associated

with a queue in the Queue tab of the Workbin object as shown in Figure 249 on [page 297](#). Although the queue may be hidden in the workflow picture, it does exist. The steps to implement this shortcut are listed in the following procedure.

Procedure: Configuring an escalation workflow

Start of procedure

1. Define the five Workbin objects as described on [page 293](#).
2. Set the same queue for all the workbins with the Use the Following Queue option described on [page 297](#). The queue will appear in the object browser.
3. Place the Queue object in the workflow.
4. Define a single View object for the queue with the specified escalation condition.
5. Draw a single Submitter line from the view to an escalation strategy. That's it!

End of procedure

Strategy Placeholder Option

So far you have created a Queue, View, and Workbin objects. After interactions have been extracted by using a view, you submit them to a routing strategy.

The Independent Objects folder (see Figure 38 on [page 63](#)) holds existing routing strategies that are unconnected to a business process. If the routing strategies already exist, you can simply drag and drop them into Strategies folder for the business process.

Note: After a routing strategy has been used in a business process, you can find it under that business process and reuse it, if necessary.

If the required routing strategies do not exist yet, you have two options:

1. Create a strategy placeholder and postpone the actual routing strategy configuration (which can be more time-consuming than creating queues and views) to a later time. If this option is used, you could continue creating the remaining queues and views that are required by the business process.
2. The second option is to create the routing strategy immediately, as described in “Creating Strategies” on [page 323](#).

The following instructions explain how to create a strategy placeholder in a business process. See [page 323](#) if you wish to create the routing strategy at this time.

Note: You must use the Routing Design window to create subroutines; you cannot create them in the Interaction Design window.

Procedure: Creating strategy placeholders

Purpose: To create an empty Strategy Script object as a placeholder in a business process, which can be configured later.

Start of procedure

1. With the applicable business process open and selected (see “Switching to another business process” on [page 252](#)), click the Business Process menu and select New Strategy. The New dialog box opens in the Routing Design window (see Figure 251 on [page 300](#)).

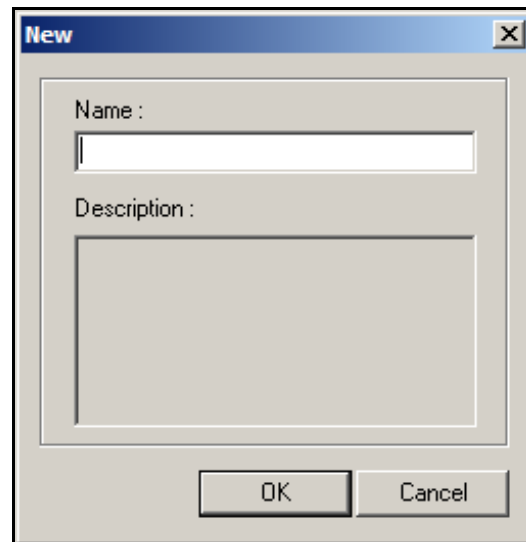


Figure 251: Dialog Box for Creating New Strategy

2. Name and describe the strategy and click OK. The Routing Design window opens with the name of the strategy in the title bar (see [Figure 252](#)).

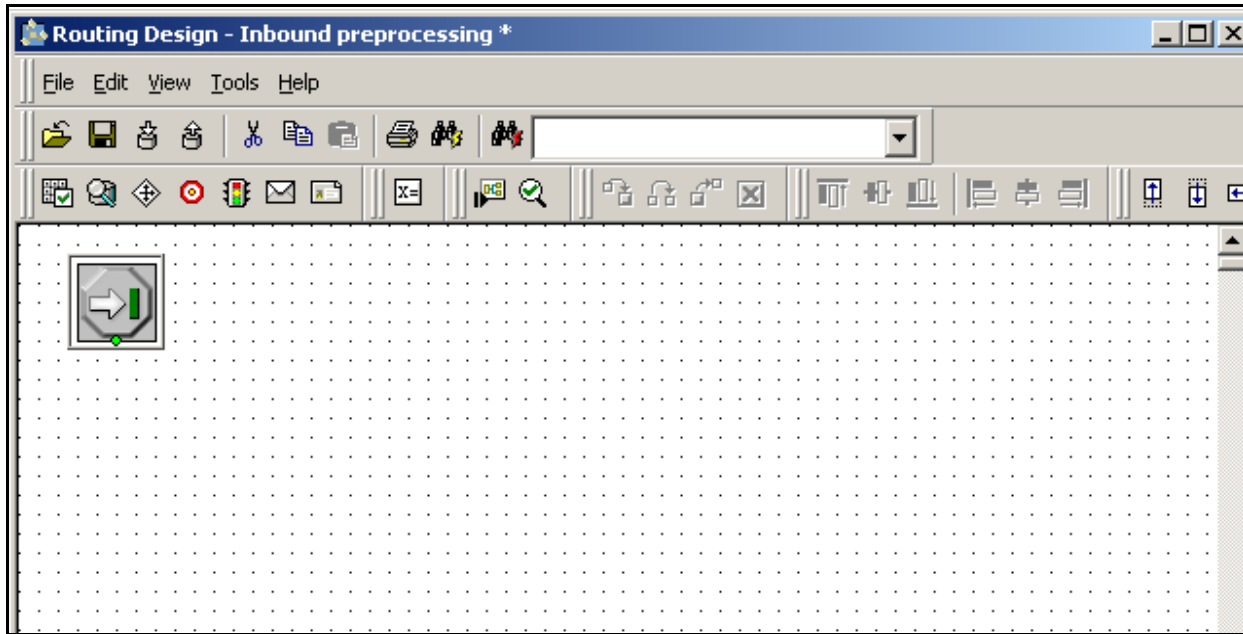


Figure 252: Routing Design Window

3. Click the File menu and select Save. The Save dialog box opens (see Figure 253 on [page 301](#)).

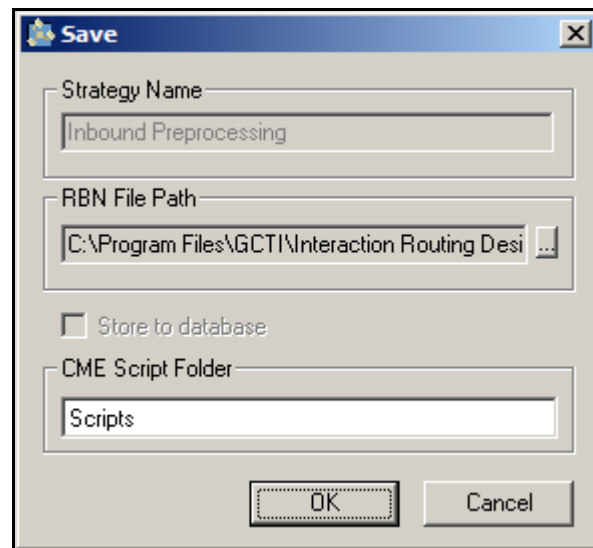


Figure 253: Save Dialog Box

4. Keep the path for the graphical portion (see [page 172](#)) of the strategy (RBN File Path) or click the browse button (...) to select a new path.
5. Optional step. Click in the box under CME Script Folder and double-click a subfolder under the Scripts folder.
6. Click OK in the Save dialog box.

7. Click the x in the upper right corner of the Routing Design window to close the strategy. A dialog box requesting update confirmation appears (see [Figure 254](#)).

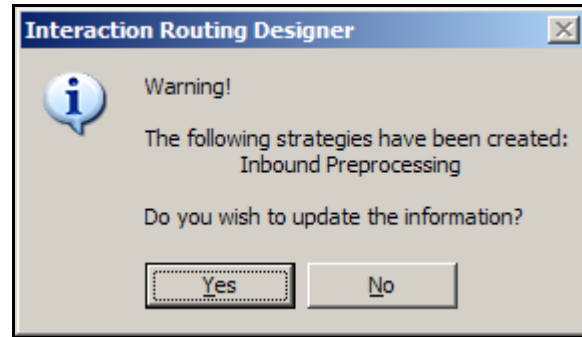


Figure 254: Update Dialog Box

8. Click Yes. The following message box opens (see [Figure 255](#)).

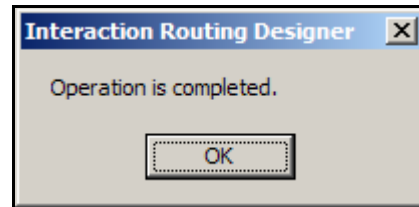


Figure 255: Operation Is Completed

9. Click OK. The strategy name appears under the Strategies folder in the business process (see [Figure 256](#)).

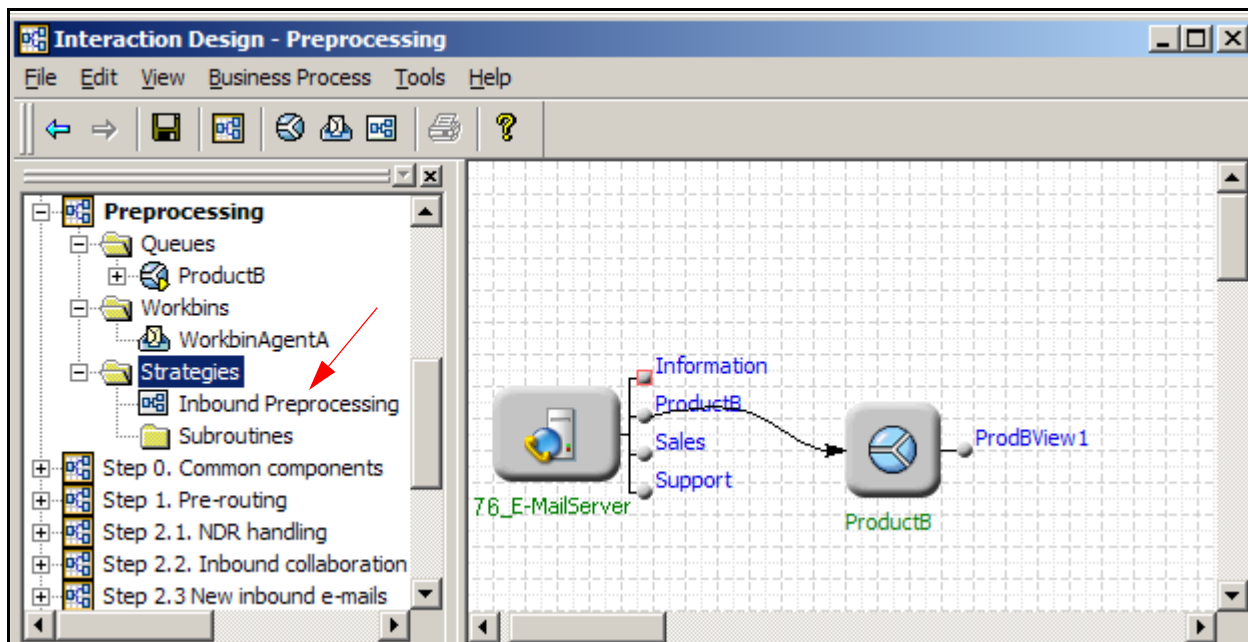


Figure 256: Strategy Placeholder

10. Drag the strategy from the browser to the viewer (see [Figure 257](#)).

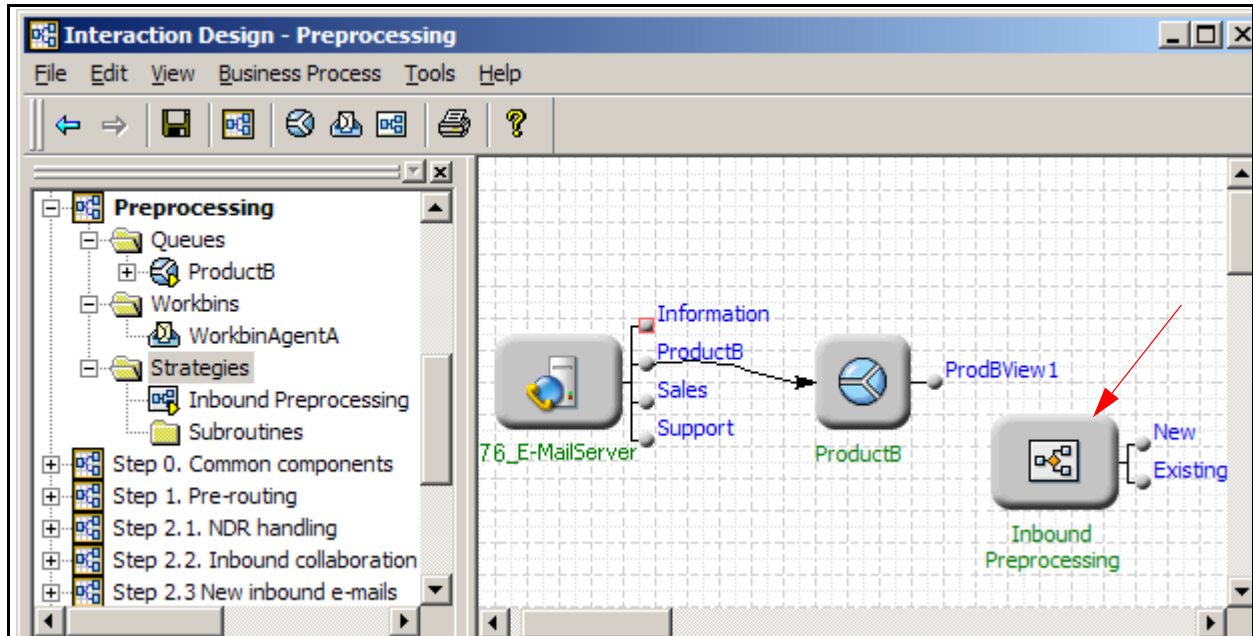


Figure 257: Strategy in Viewer

11. Select Save from the File menu.

End of procedure

Next Steps

- Use the information in the next section to connect the queue to the strategy.

Note: Later on, when you are ready to configure the strategy, right-click the strategy in the browser and select Edit/View Strategy.

Adding a Submitter

Now that you've created queue-processing rules in the form of a view, and a routing strategy placeholder, the next step is to connect these objects. You do this by drawing a line called a *Submitter object*. It represents interactions being pulled from the queue and pushed (submitted) to a routing strategy.

Figure 258 graphically depicts an interaction submitter in relation to views and routing strategies.

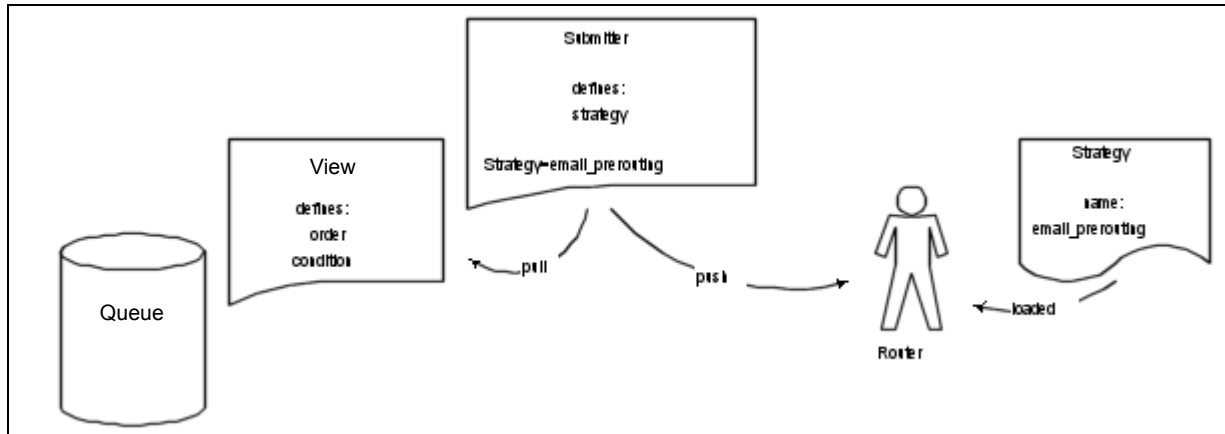


Figure 258: Submitter Actions

Procedure: Creating a Submitter object

Purpose: To connect a view extracting interactions from a queue to a routing strategy where the interaction can have specialized processing tasks applied.

Start of procedure

1. Draw a submitter (see “Submitters” on [page 39](#)) from the View object to the Strategy object. This tells Interaction Server to submit interactions extracted from the queue using the view to the strategy (see [Figure 259](#)).

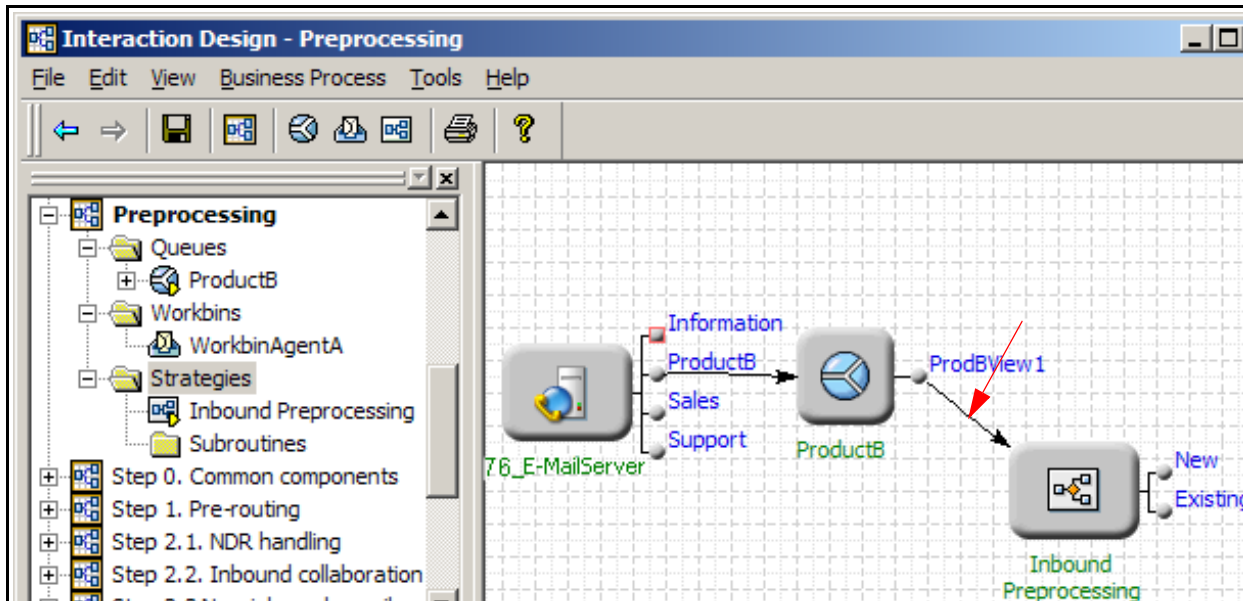


Figure 259: Submitter Object

- Click the **File** menu and select **Save**.

End of procedure

Next Steps

- Later, when you are ready to configure the strategy, right-click it and select **Edit/View Strategy** from the menu (see [Figure 260](#)).

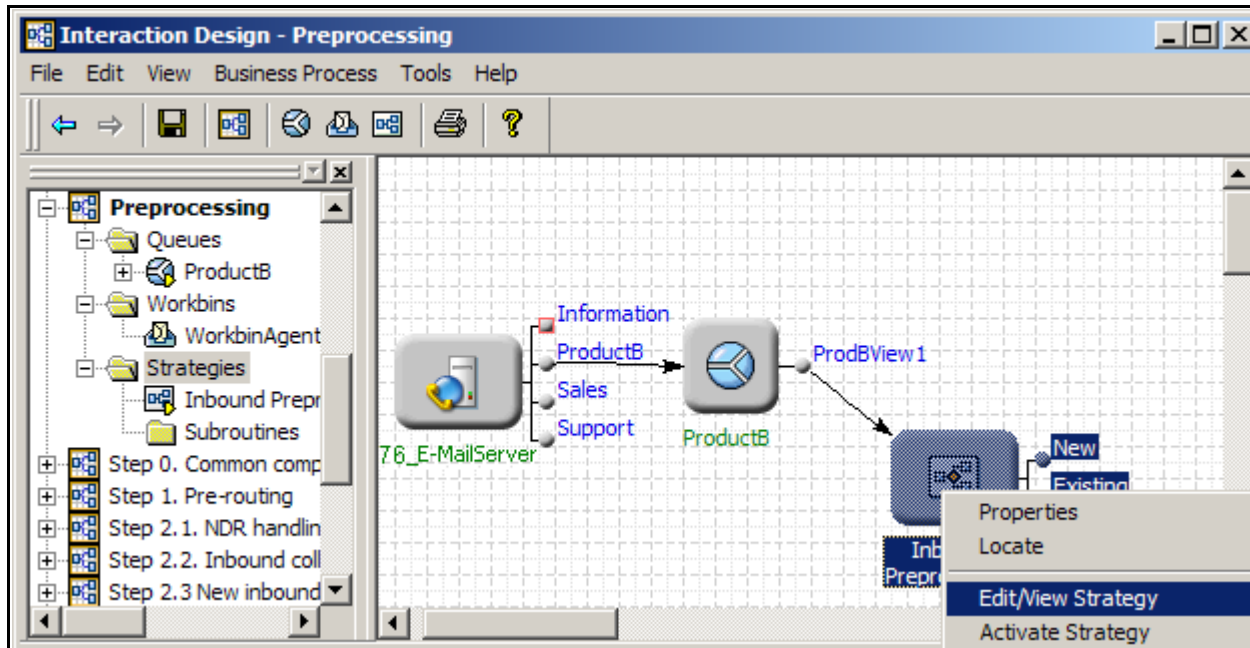


Figure 260: Edit/View Strategy

Note: For information about options that affect the submission of interactions to routing strategies, see the chapter on configuration options in the *eServices (Multimedia) 8.0 Reference Manual*.

About Connector Lines

Connector lines show the path for interactions (how interactions must be processed) by joining one object in a business process to another. Sometimes IRD draws the lines automatically such as when an interaction path is specified inside a strategy. You draw the line at other times, and thereby specify the path for interactions.

- A **black line** indicates a the path for an existing interaction (the same interaction that came into the object).
- A **red line** indicates a path for an interaction that has been newly created in the object.

Depending on the type of object, connectors may be placed automatically, or you may need to place them manually.

- To add a connector, hover your cursor over the object where the connector should start. When the cursor becomes a pointing hand, hold down the left mouse button and move the cursor to the object where the connector should end.
- To delete a connector, select it, and then press the Delete key; or, right-click the connector, and then select **Disconnect** and/or **Hide** from the shortcut menu.

Note: You cannot delete a connector that has been automatically placed, or delete the object to which it connects. Instead, you must edit the object that generated the automatically placed connector, so that it no longer contains that particular strategy-linked node. In the figure above, to remove the Stop interaction node and its connector, you must edit the Forward e-mail processing strategy.

- To reshape a connector, select it, place the cursor over one of the red x's that mark the ends of the lines and the control points along the line's Bezier curve, and drag the x to a new location.

Removing an Object

To remove an object from a business process: in the object browser, drag it from the business process folder and drop it into the **Independent Objects** folder.

Exporting and Importing a Business Process

Notes: In addition to exporting and importing business processes in the Interaction Design window as described in this section, you can also use IRD's **Export solution** and **Import solution** views to:

- Export/import objects between strategies.
- Export strategies using archive, native, open, and text format.
- Export a group of strategies or subroutines.

For more information about these views, see the chapter on routing strategies, *Migrating Strategies and Other Objects* section, in the *Universal Routing 8.1 Reference Manual*.

This section describes how to export and import business processes. Having the ability to export and import business processes allows you to:

- Store the information contained in a business process; for the purpose of creating a backup copy, for example.
- Easily move business processes located in your Test environment to your Production environment.
- Share or consult on workflow design with a co-worker.
- Automatically create all the required Configuration Layer objects during the export process and write them to a Configuration Database during the import process.

IRD simplifies the operation by letting you export/import multiple business processes at once. You will most likely use this feature since one business process may depend on processing that occurs in another business process or use objects that originate outside of itself.

Procedure:

Exporting a business process

Perform the following steps to export a business process. If the business process is already open, skip to step 5.

Start of procedure

1. Log in as described in “Opening IRD” on [page 57](#).
2. Click the **Interaction Design** shortcut bar on the left.
3. Click the **Business Processes** icon. Existing business processes are listed for selection as shown in Figure 35 on [page 60](#).
4. Double-click any business process to open the **Interaction Design** window.
5. Click the **File** menu and select **Export**. The **Export** dialog box opens (see Figure 261 on [page 308](#)).

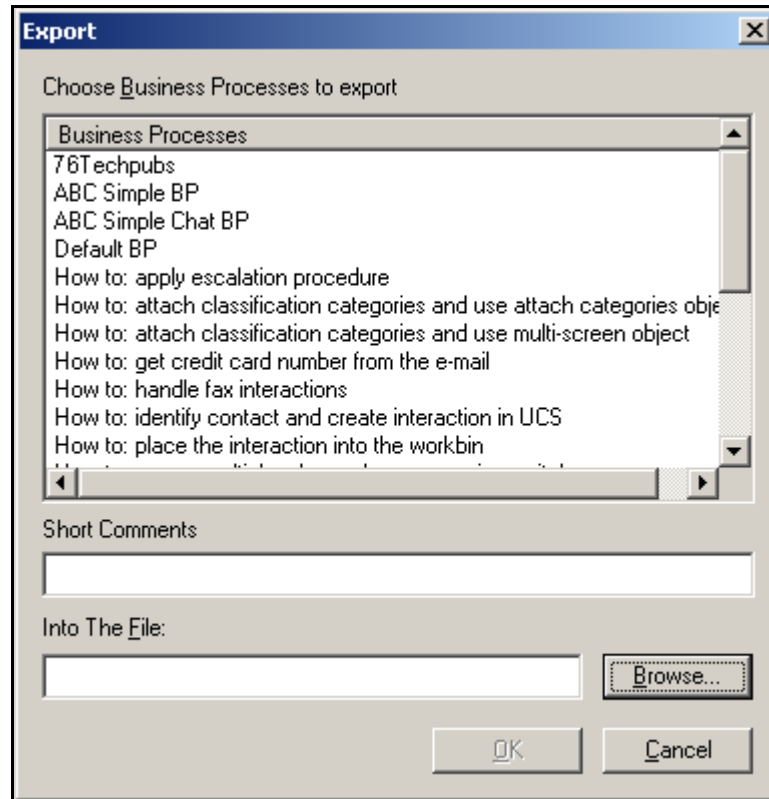


Figure 261: Export Dialog Box

6. In the Export dialog box, select the business processes that you wish to export so they are highlighted.
 - To select individual business processes, hold down the **Ctrl** key while you select.
 - To group-select, hold down the **Shift** key while you select.

Note: Media servers (see [page 39](#)) are not included in IRD's export/import process.

7. Under Short Comments in the Export dialog box, enter any comments (optional).
8. Click the Browse button. The Choose File Name dialog box opens (see [Figure 262](#)).

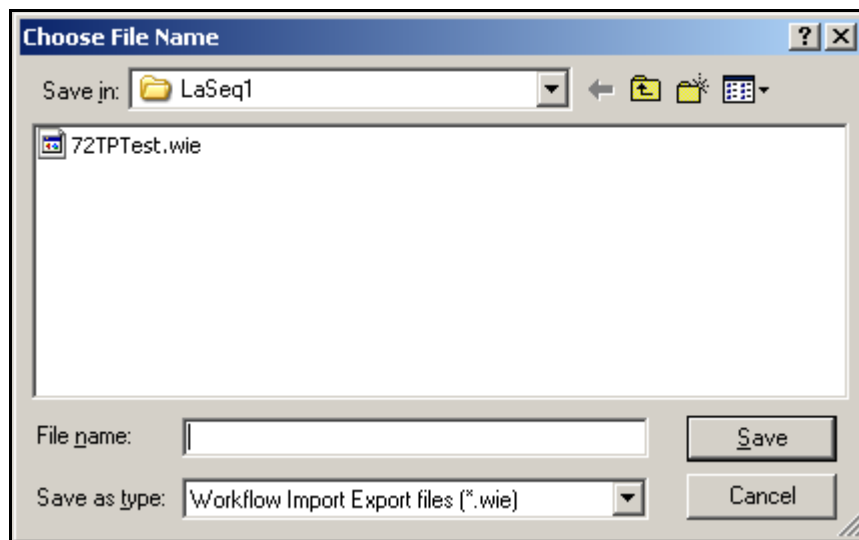


Figure 262: Choose File Name Dialog Box

9. If not already selected, browse to/create the folder to hold the exported business process.
10. Enter the file name for the exported business process.
11. Click Save in the Choose File Name dialog box. The Export dialog box reflects your entries. [Figure 263](#) shows an example completed dialog box.

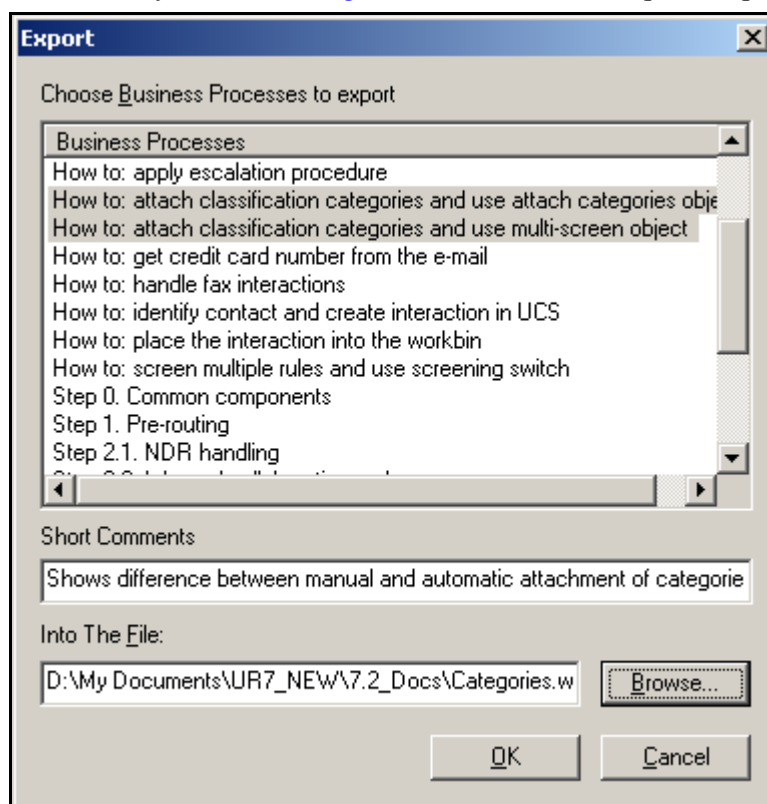


Figure 263: Export Dialog Box

Note: IRD uses a .wie file name extension when importing/exporting business processes.

12. Click OK in the Export dialog box. Configuration Exporting appears. After a successful export, Done appears.

End of procedure

Procedure: Importing a business process

Start of procedure

1. Log in as described in “Opening IRD” on [page 57](#).
2. Click the Interaction Design shortcut bar on the left.
3. Click the Business Processes icon. Existing business processes are listed for selection as shown in [Figure 35](#) on [page 60](#).
4. Double-click a business process to open the Interaction Design window.
5. Click the File menu and select Import. The Configuration Import Wizard Choose File screen opens (see [Figure 264](#)).

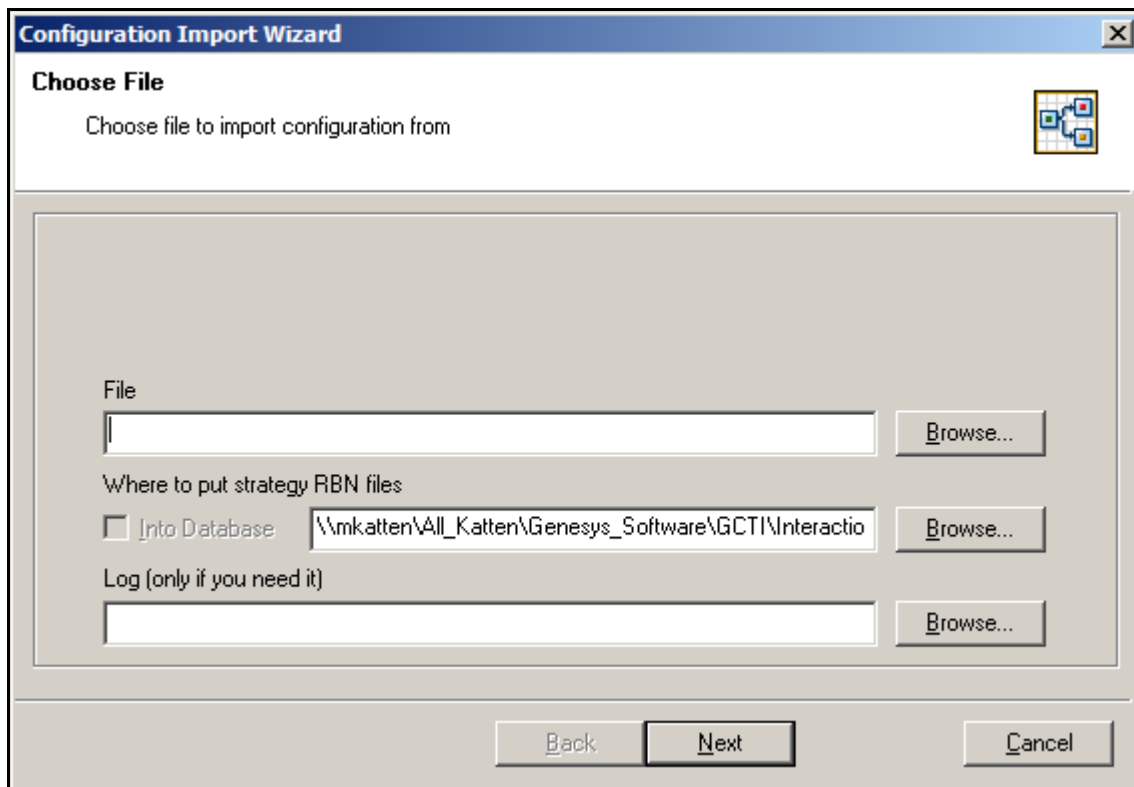


Figure 264: Configuration Import Wizard, Choose File

6. Under **File**, click the **Browse** button. The **Open** dialog box opens.

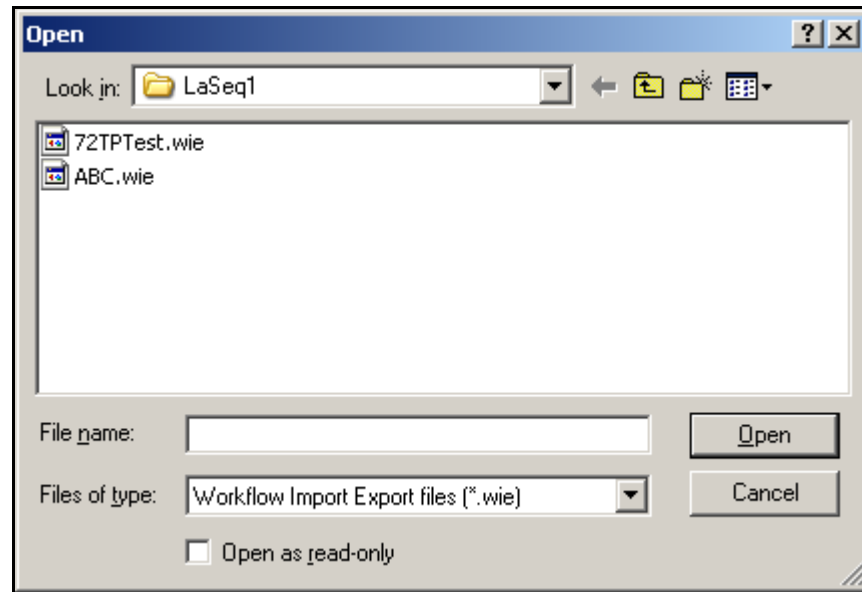


Figure 265: Open Dialog Box

7. Locate the *.wie file you wish to import and double-click it. The **Open** dialog box closes. IRD inserts the selected directory path and file name under **File** in the **Configuration Import Wizard** (see [Figure 264 on page 310](#)).
8. In the **Configuration Import Wizard**, under **Where to put strategy RBN files**, there are two options.
- Click the **Browse** button and locate the folder to contain the graphical portion of strategies contained in the business process. See “**Graphical Portion of a Strategy**” on [page 172](#) if you need to review strategy .rbn files (which consume more space than the script portion of strategies).
 - Click the **Into Database** checkbox (if enabled) to save .rbn files in a database.

Note: In order for the **Into Database** checkbox to be enabled, a **Database Access Point** must appear in the **Connections** tab of the **IRD Application in Configuration Manager**. The database used is the **Configuration Server** database. The table name is **ird_strategies**. If security is a consideration, you might want to store to a database. For example, if you are a **Service Provider**, you might not want your subscribers to have access to your corporate drives. In this case, saving to the database is the preferred method.

9. Under **Log** (only if you need it), you have the option of saving business process import details in a log file. If you wish to do this, click the **Browse** button and locate/name the log file.

10. Click Next. The Configuration Wizard Confirm Importing screen opens (see Figure 266 on [page 312](#)).

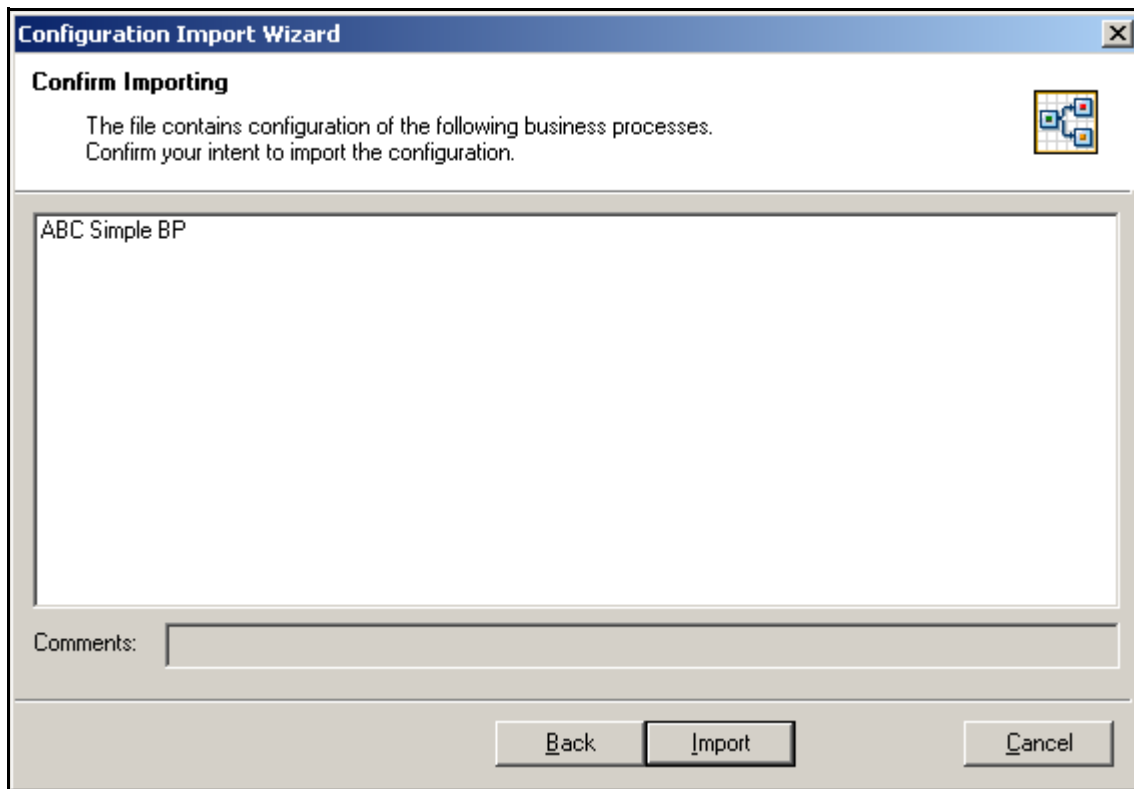


Figure 266: Configuration Import Wizard, Confirm Importing

11. If satisfied with your entries, click **Import**; otherwise click **Back** to return to the Configuration Import Wizard Choose File screen.
12. Respond to any messages that might appear.

End of procedure

Problems During Importing

If an import request encounters problems, IRD lists the problems and possible workarounds. You can:

- Choose the workaround for each problem.
- Cancel the import operation.

[Figure 267](#) shows an example dialog box when objects to be imported already exist in the Configuration Database.

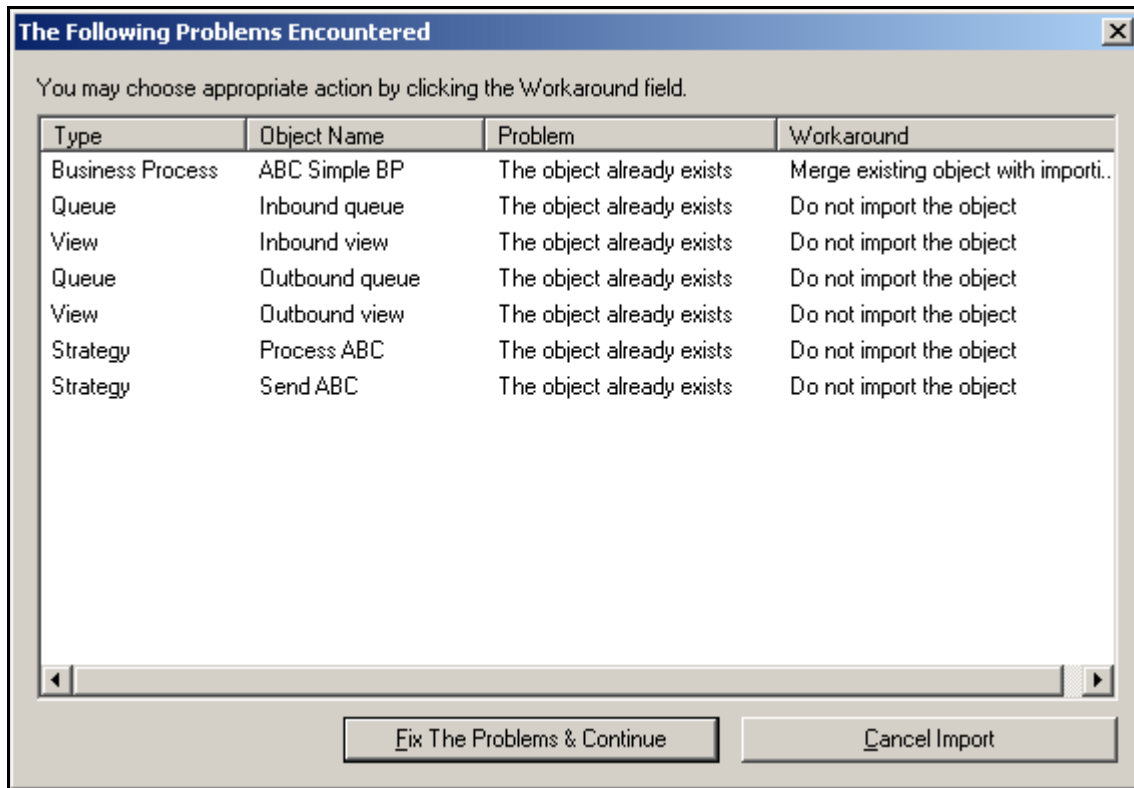


Figure 267: The Following Problems Encountered Dialog Box

Note: Choosing particular workaround might trigger another problem. For example, if a strategy already exists, choosing to overwrite the strategy might cause a problem if the .rbn file that is associated with the strategy already exists in the specified location. In such cases, IRD displays another dialog box.

If you click **Cancel Import**, the dialog box appears as shown in [Figure 268](#).

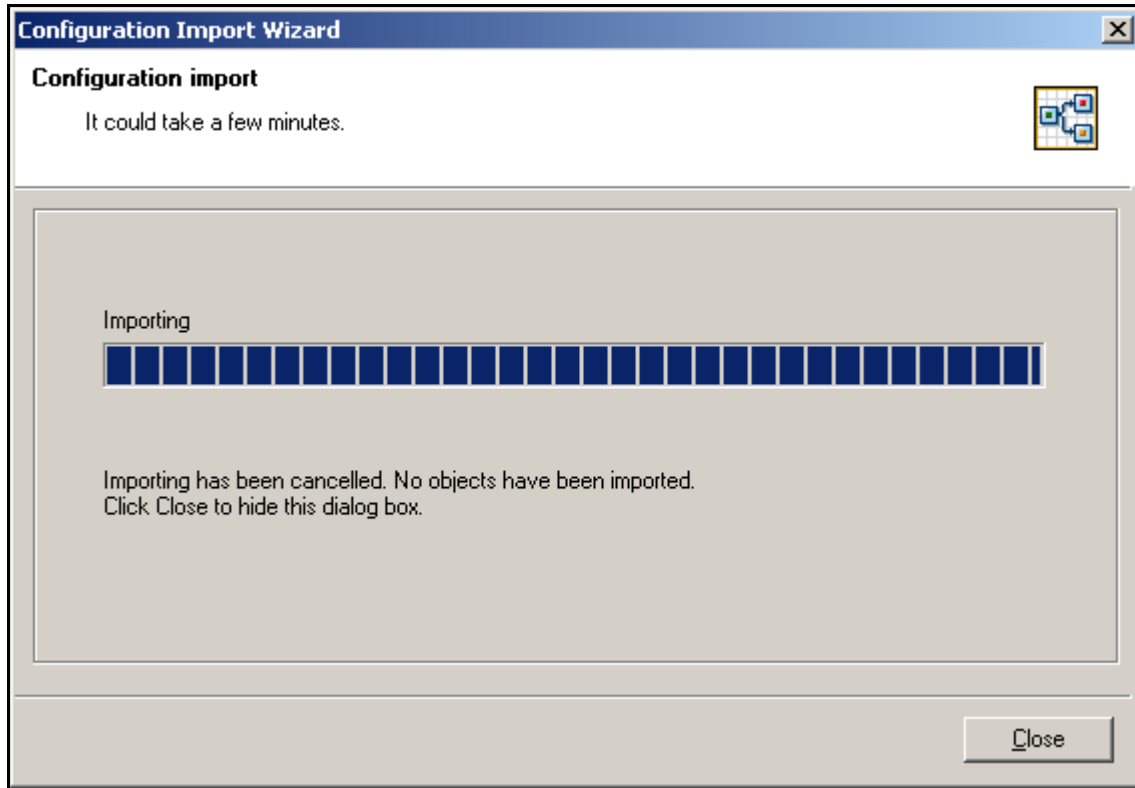


Figure 268: Canceling an Import Operation

Problem types and workarounds are listed here.

Problem: Object that is to be imported already exists in the Configuration Database.

Applicable to objects of the same type (queues, views, strategies, and so on). IRD offers the following workarounds:

- Do not import the object
- Overwrite existing object

Exceptions: For business processes, the only allowed workaround is merging. Since a business process object keeps a list of the objects that belong to it, merging combines that list of objects with the objects belonging to the business process being imported.

Problem: The name of the object being imported conflicts with an existing object.

Applicable to objects of different types (business process, queue, view, strategy, workbin) that are of the same Configuration Manager object type (Script). For example, a conflict is created when you attempt to import a

queue Script object having the same name as an existing strategy Script object. IRD offers the following workaround:

- Do not import the object.

Exceptions: If importing business process conflicts with an existing object (Script object of different type), IRD considers the problem to be severe and the import operation always aborts.

Problem: The .rbn file of the imported strategy already exists in the specified location.

Applicable to strategies. IRD offers the following workarounds:

- Put the file into alternative location. The alternative location is an automatically created subfolder in the location you specified on import startup.
- Overwrite existing file.

Exceptions: None.

Automatic Decisions

IRD's import utility automatically makes/logs the following decisions:

- When the attempt to import a submitter (see [page 39](#)) conflicts with either an existing submitter or a Script object of a different type, the imported submitter takes a new name.
- When an association between a view (see [page 28](#)) and strategy (see [page 30](#)) already exists (i.e., there is a submitter that connects the view and the strategy), IRD does not import the submitter.
- When a parent object is not imported (such as a queue with a view child object or a view with a submitter child object) according to the chosen workaround), the child object is also not imported.

Distribution of Load Between Multiple Interactions Servers

Overview

Starting with release 8.1.3, a Business Processes can be assigned to different Accounts in order to distribute the load between multiple Interactions Servers within one tenant. By default, a single Interaction Server within a tenant will run all Business Processes that belong to this tenant. For large customers with high interaction volume requirements, the ability of multiple Inter-

action Servers to process interactions within specific tenants can be used to achieve much better performance.

Creating an Account

An Account is a set of Business Processes (with all related sub-objects: queues, views, workbins, submitters, strategies) that a single Interaction Server works with.

The Business Process main menu of the Interaction Design window has a dedicated selection that can be used to create a new Account. See [Figure 269](#). There is also a corresponding icon on the tool bar of the Interaction Design window that can be used. An existing Accounts can be deleted using the regular Delete menu selection.

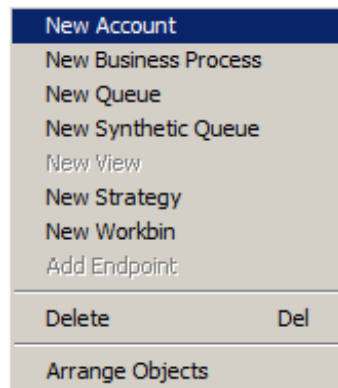


Figure 269: New Account

In the Browser part of the Interaction Design window, each Account is presented as a folder. See [Figure 270](#).

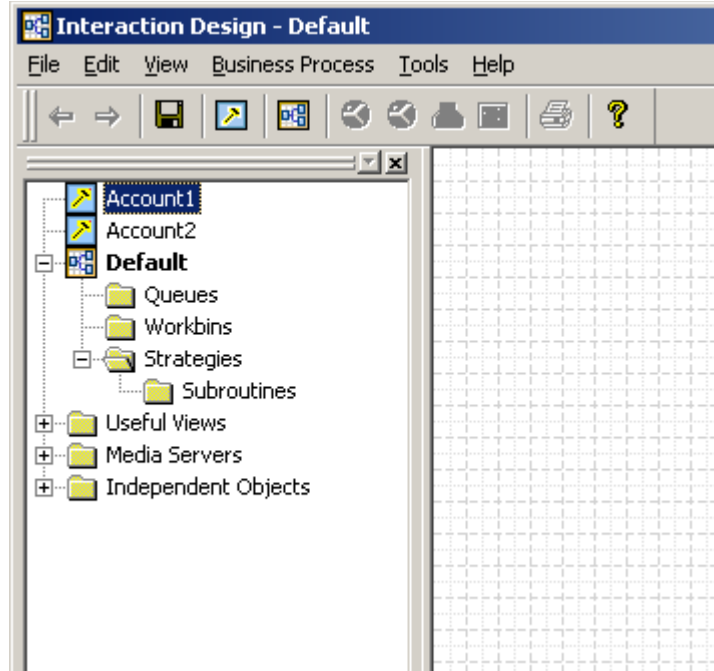


Figure 270: Account Folder

The Account object properties dialog box may be viewed by right-clicking the Account folder, and selecting Properties. See [Figure 271](#).

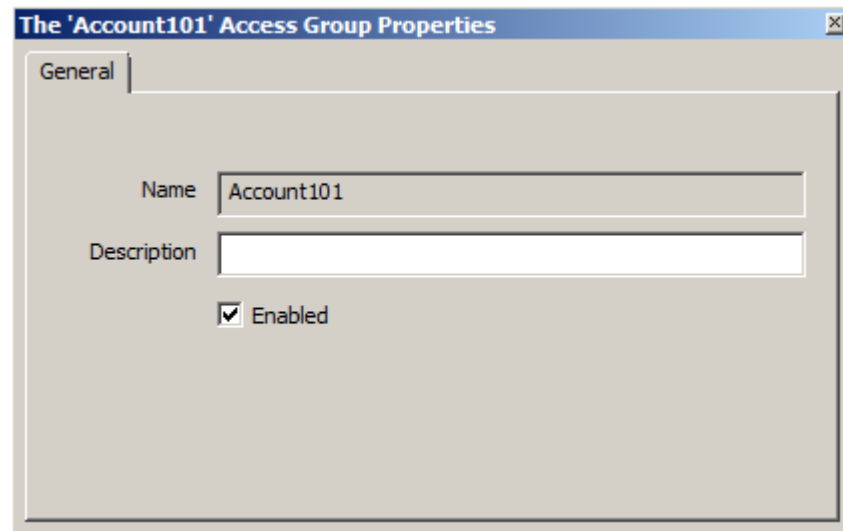


Figure 271: Account Properties

Every new Account created in the Interaction Design window is presented in the configuration by special Access Group object. These Access Group objects are created on the Environment level in the Multitenant configuration environment or on the Resources level when working in a Single-Ten-

ant enterprise solution. This is marked in the Annex tab by two sections, the BusinessProcessAccount, and Namespace as Access Group presenting an Account. See [Figure 272](#).

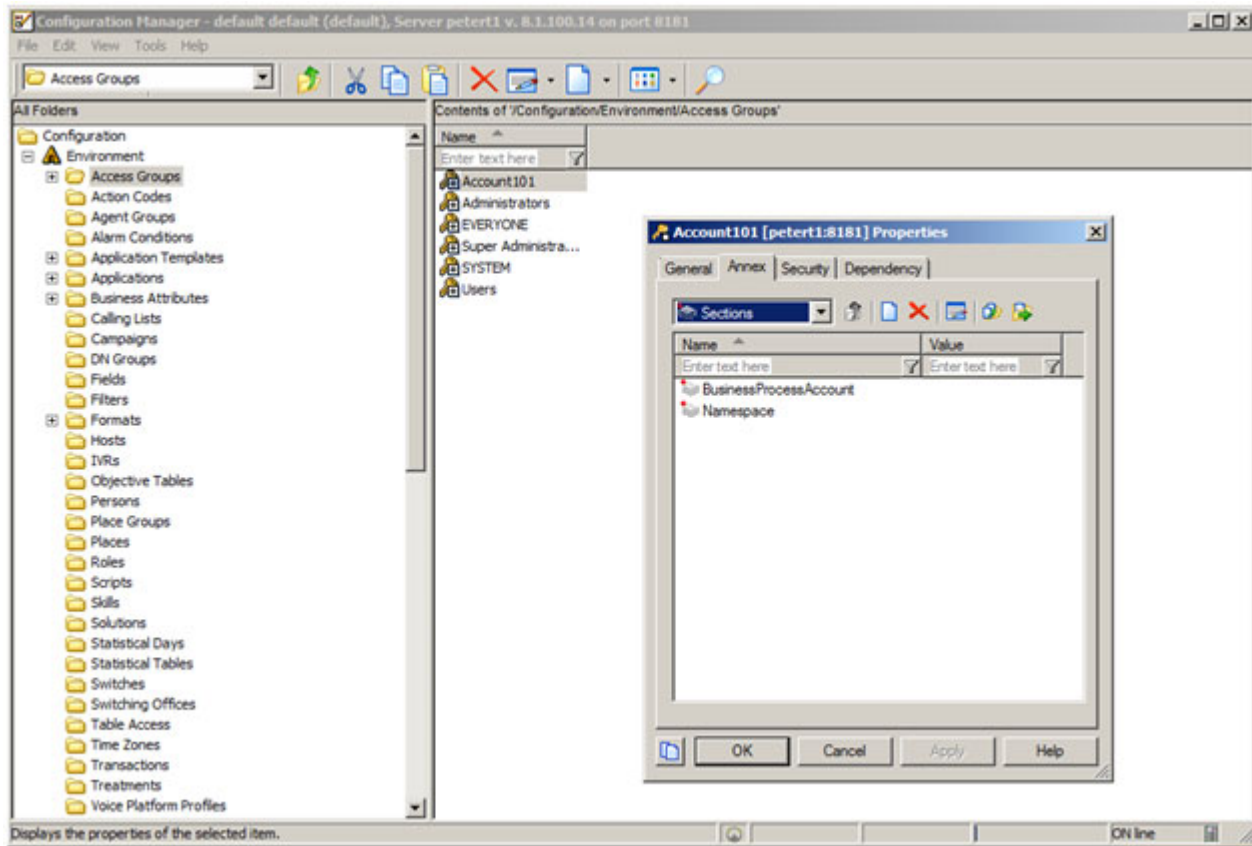


Figure 272: Access Group Object

The Namespace section refers to the name of that particular Account.
See [Figure 273](#).

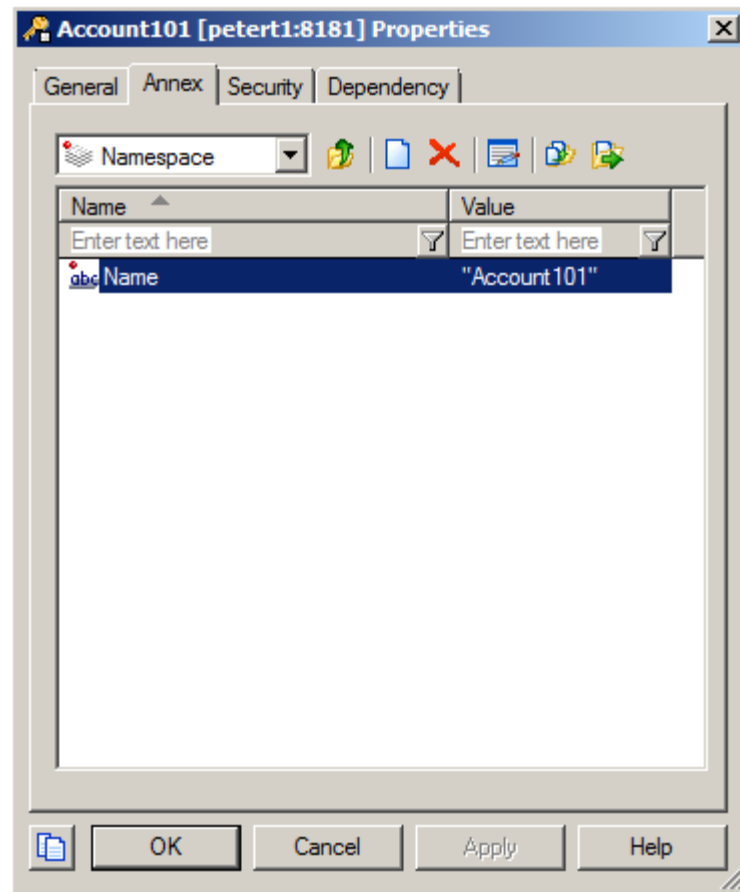


Figure 273: Namespace Section

Each Business Process that is assigned a particular Account is marked on the Annex tab of its configuration object by the section Account, which also refers to its name. See [Figure 274](#).

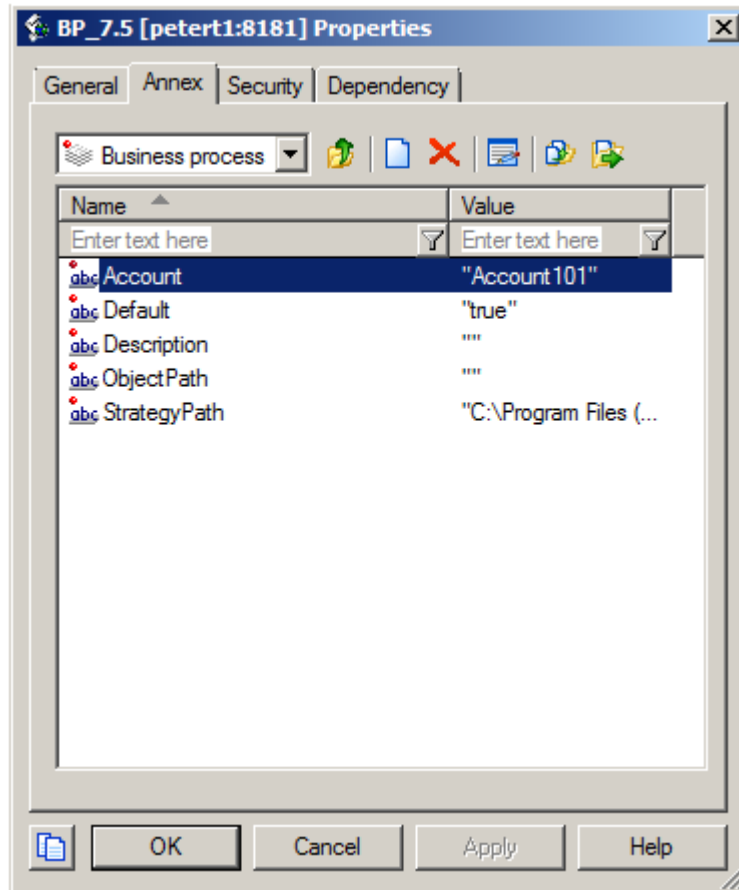


Figure 274: Business Process Account Section

The Business Processes view pane in IRD continues to reflect the regular folder structure of Business Processes script objects—no Accounts will be displayed here. See [Figure 275](#).

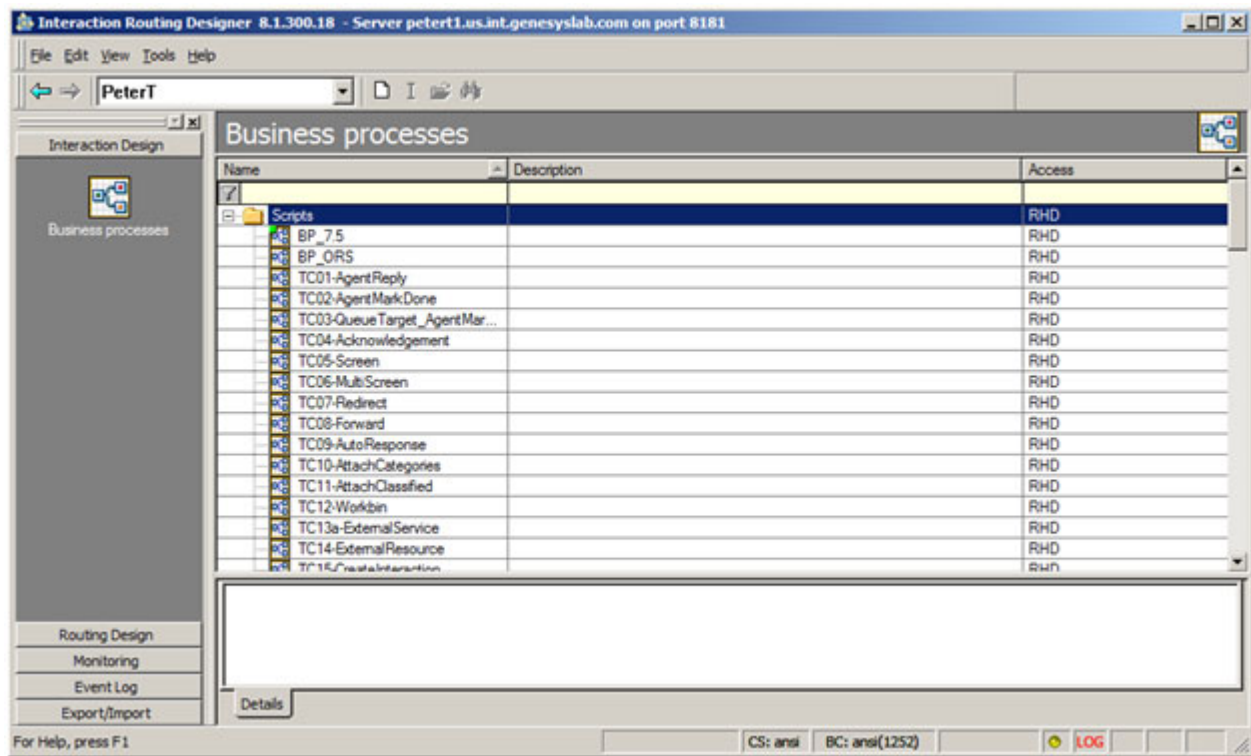


Figure 275: Business Process View Pane

Additional Information

- The Root level in the Browser part of the Interaction Design window shows all Business Processes in the configuration, along with all Accounts.
- The Business Process can be dragged-and-dropped between different Accounts, as well as from the root level to the Account folder and vice versa.

Note: The Business Process cannot be assigned to an Account during the Business Processes import procedure. It can be added to a particular Account in a separate step after their import is completed.

- The same list of Accounts is available for every tenant in the configuration no matter what tenant is currently selected. But the content (list of Business Processes) of each Account can be different for different tenants.
- In IRD's Interaction Design window, you can only create Account/Access Group objects, and correctly set up permissions of Business Process (including its all related sub-objects) that are assigned to these Account.

Any other functionality (association of specific Interaction Server with a particular Account, creation of Person objects for Interaction Server to work on behalf of, and so on) will need to be done outside of IRD. For detailed information please refer to the related eServices documentation.

11

Creating Strategies

This chapter provides step-by-step instructions for creating a routing strategy. It covers the following topics:

- Preparation, page 323
- Sample Strategy, page 324
- Summary of Strategy-Creation Process, page 324
- Creating a New Strategy, page 326
- Segmenting Interactions, page 328
- Writing Interaction Data to Variables, page 340
- Determining Interaction Status, page 347
- Sending interactions to Queues, page 350
- Compiling, page 353
- Checking Database Integrity, page 354
- Adding a Strategy to a Business Process, page 356
- Editing/Viewing Strategies, page 357
- Deleting Strategies, page 359

Preparation

At this point, this guide assumes you have already:

- Started the business process with its queues and views (see “Creating Business Process Objects” on [page 247](#)).
- Created Knowledge Manager objects so that Categories, Standard Responses, and Field Codes will be selectable in the associated IRD object properties dialog boxes (see “Creating Knowledge Manager Objects” on [page 223](#)).

- Created Configuration Manager objects so that Persons, Agents, Agent Groups, Place, Place Groups, and Business Attributes will be selectable in IRD object properties dialog boxes (see “Creating Configuration Manager Objects” on [page 237](#)).

If this preparation is complete, the process of creating routing strategies will not be interrupted by the need to create additional configuration objects.

Sample Strategy

This chapter demonstrates how to create the strategy shown in [Figure 276](#).

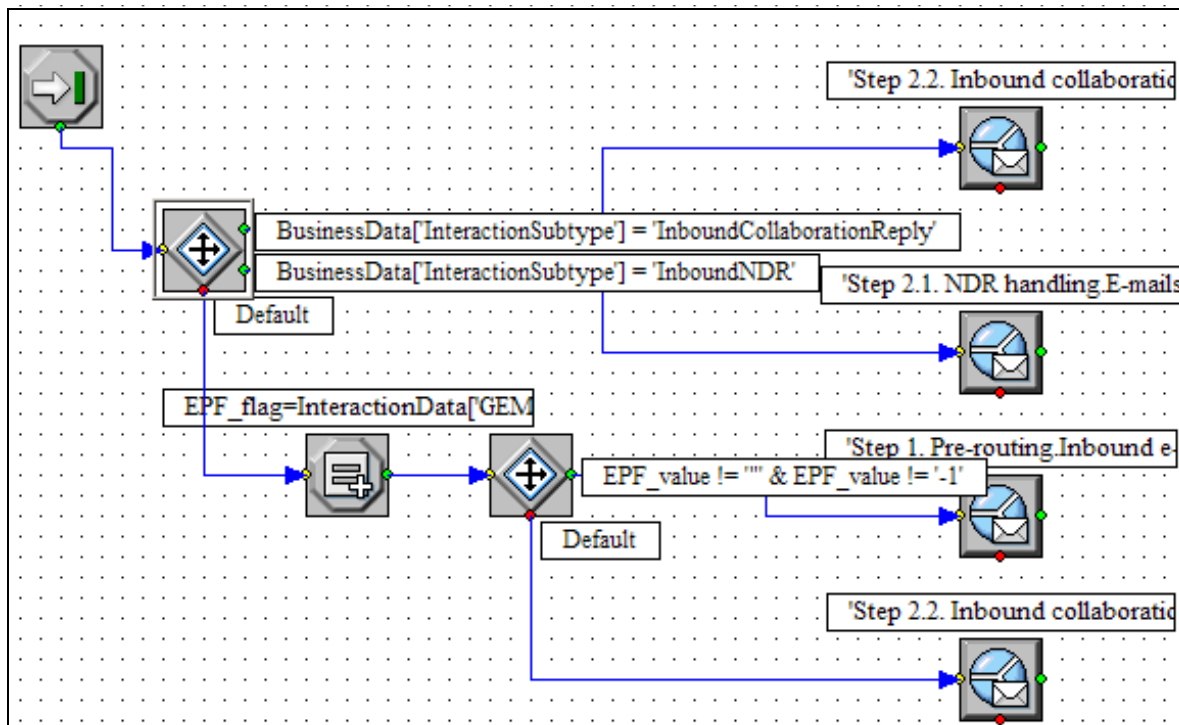


Figure 276: Inbound E-mail Preprocessing Strategy

This same strategy is contained in the business process “Step 1. Pre-Routing” on [page 391](#) as part of the Genesys-supplied Interaction Workflow Samples component as described in “About the Samples” on [page 370](#).

Summary of Strategy-Creation Process

[Table 29](#) summarizes the process of creating the routing strategy shown in [Figure 276](#). For complete, step-by-step instructions on creating routing strategies in general, see the *Universal Routing 8.1 Interaction Routing Designer Help*.

Table 29: Steps for Creating the Inbound Preprocessing Strategy

Objective	Related Procedures
1. To open the Routing Design window where you create a new strategy.	<ul style="list-style-type: none"> • “Creating a new strategy from the IRD main window” on page 326.
2. To cause incoming interactions to take difference paths in the strategy based on media type, processing status, and so on.	<ul style="list-style-type: none"> • “Placing the Generic Segmentation object and opening Expression Builder” on page 328. • “Segmenting Based on an Expression” on page 331. • “Sending Segmented Interactions to Queues” on page 337.
3. Writing interaction data to variables for later use in a business process.	<ul style="list-style-type: none"> • “Defining Variables” on page 341. • “Assigning a value to a variable from Interaction Data” on page 342. • “Assigning a value to a variable using a function” on page 345.
4. Determining interaction status (new inbound, already processed by Genesys, and so on)	<ul style="list-style-type: none"> • “Using the Generic Segmentation object to determine interaction status” on page 347.
5. Sending interactions to queues.	<ul style="list-style-type: none"> • “Sending interactions to queues from the Generic Segmentation object” on page 350.
6. Compiling a routing strategy.	<ul style="list-style-type: none"> • “Compiling a routing strategy” on page 353.
7. Checking that objects contained in a strategy are found in the Configuration Database.	<ul style="list-style-type: none"> • “Using Check Integrity” on page 354.
8. Adding a strategy to a folder in the Interaction Design window prior to using the strategy in a business process.	<ul style="list-style-type: none"> • “Adding a strategy in the Independent Objects folder to a business process” on page 356.
9. Re-using a strategy.	<ul style="list-style-type: none"> • “Re-using a strategy already contained in a business process” on page 356.
10. Viewing and editing strategies.	<ul style="list-style-type: none"> • “Editing/viewing a strategy from the Interaction Design window” on page 357. • “Viewing a strategy from the IRD main window” on page 359. • “Deleting strategies from the Interaction Design window” on page 359. • “Deleting strategies from the Strategies List pane” on page 360.

Creating a New Strategy

The very first steps in creating a new strategy depends on your starting location within IRD and whether a strategy placeholder exists in the business process (see [page 299](#)).

Methods

After logging into IRD (see [page 58](#)), one of the options below will apply:

- If you are in the IRD main window (see Figure 34 on [page 59](#)), continue with step 1 below.
- If the business process is already open in the Interaction Design window, right-click the Strategies folder in the object browser and select New Strategy.
- If the business process is already open in the Interaction Design window, and you previously created a strategy placeholder, right-click the strategy and select Edit/View Strategy from the menu (see Figure 260 on [page 305](#)). The strategy appears in the Routing Design window as shown in Figure 278. To create the sample strategy shown in Figure 276 on [page 324](#), continue with “Segmenting Interactions” on [page 328](#).

Procedure:

Creating a new strategy from the IRD main window

While this procedure describes how to create an inbound interaction preprocessing strategy shown in Figure 114 on [page 132](#), the steps apply to creating a routing strategy in general.

Start of procedure

1. In the IRD main window (see Figure 34 on [page 59](#)), click the Strategies button.

Note: To enable New from the File menu, a folder or subfolder in the list pane must already be selected.

2. If a folder is already selected, from the File menu, click New. You can also right-click any folder on the list pane and select New. The New dialog box opens. Figure 277 on [page 327](#) shows an example completed dialog box.

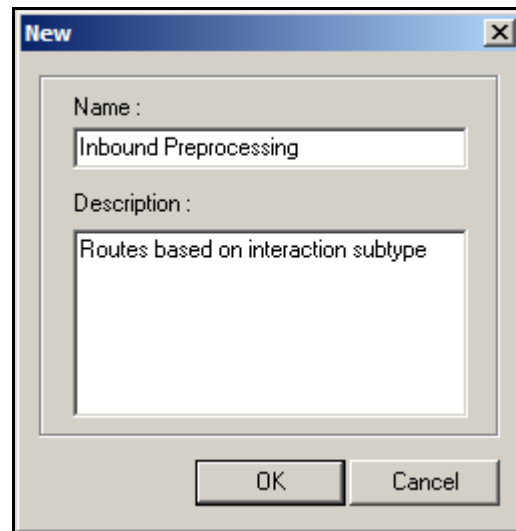


Figure 277: New Dialog Box After Naming and Describing Strategy

3. After clicking OK, the Routing Design window opens with an Entry object (see [Figure 278](#)).

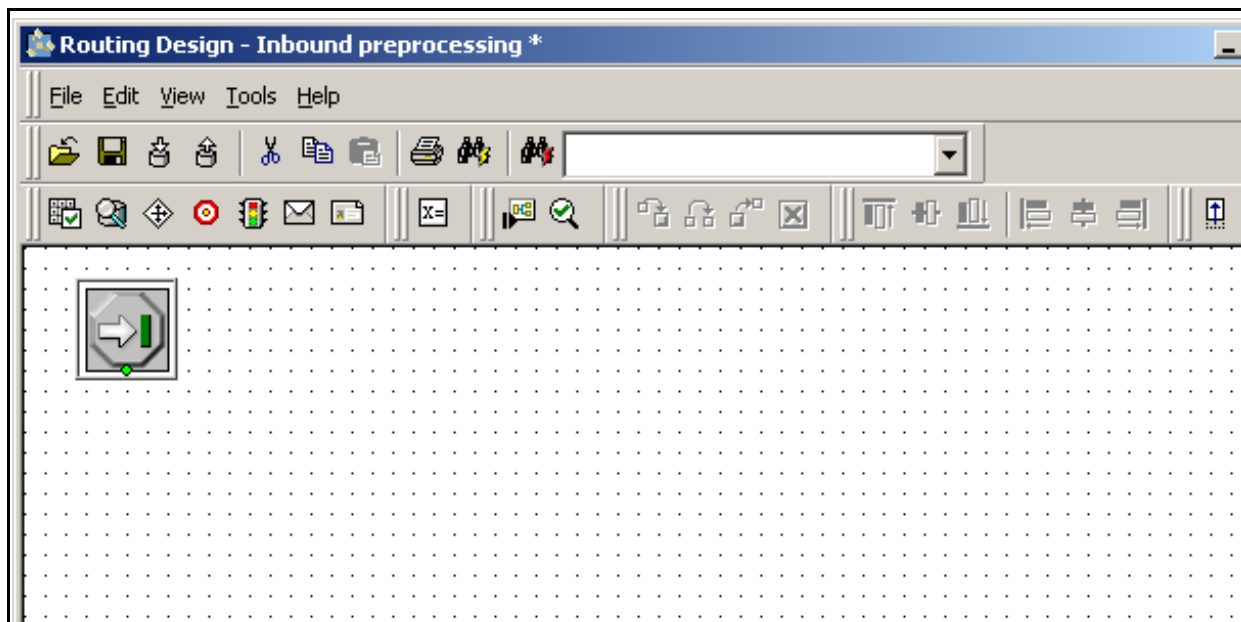


Figure 278: Routing Design Window Before Strategy Configuration

End of procedure

Next Steps

- Placing, configuring, and connecting IRD objects to define strategy processing.

Segmenting Interactions

After the Entry object in Figure 276 on [page 324](#), the next object is a Generic Segmentation object.

Procedure: Placing the Generic Segmentation object and opening Expression Builder

Purpose: To open the dialog box where you create an expression to causes interactions to take different paths in the strategy.

Start of procedure

1. In the Routing Design window, click the icon for Segmentation objects (see [Figure 279](#)).

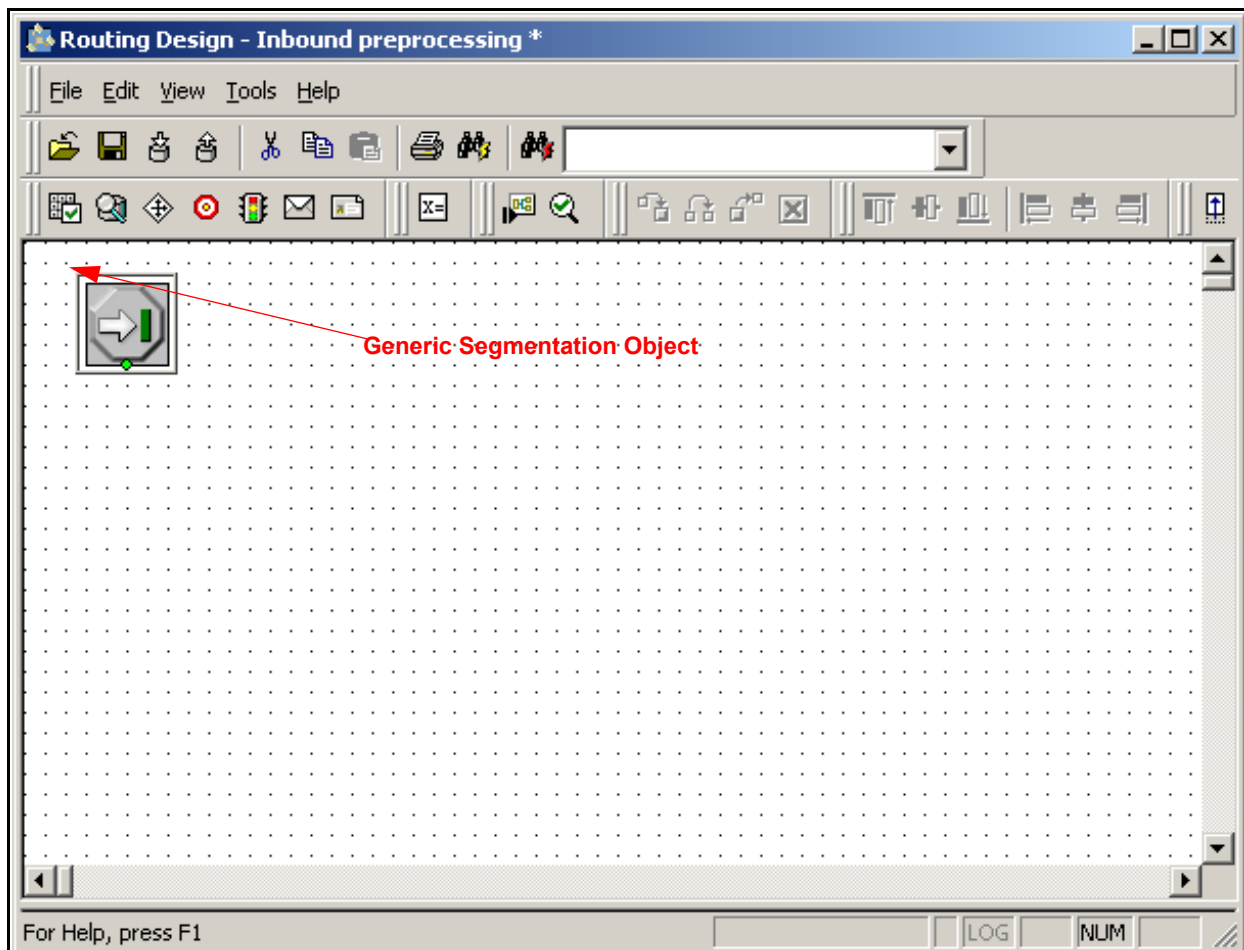


Figure 279: Segmentation Objects Icon

Note: See “Segmentation Objects” on [page 208](#). For detailed information about all Segmentation objects, see the section on IRD objects in *Universal Routing 8.1 Reference Manual*.

- Click the button for the Generic Segmentation object. Then click inside the Routing Design window at the location where you want to place the object. The Routing Design window now appears as shown in [Figure 280](#).

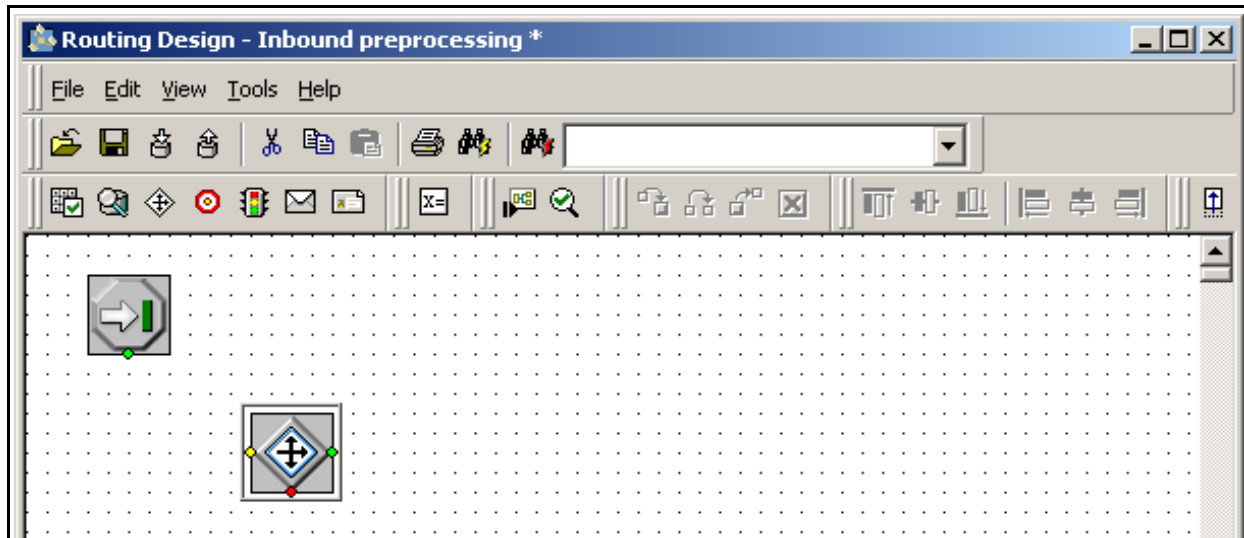


Figure 280: Segmentation Object After Entry Object

- Double-click the Segmentation object to opens its properties dialog box.
- Click the button for creating a new entry. The properties dialog now appears as shown in [Figure 281](#).

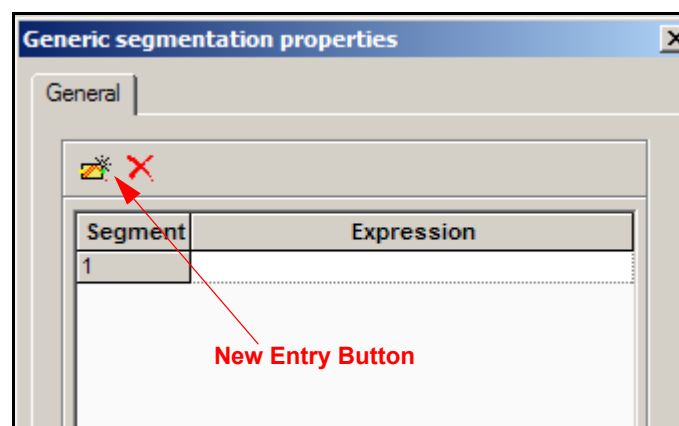


Figure 281: Generic Segmentation Properties Dialog Box: Starting

- Click under Expression. A down arrow appears (see [Figure 282](#)).

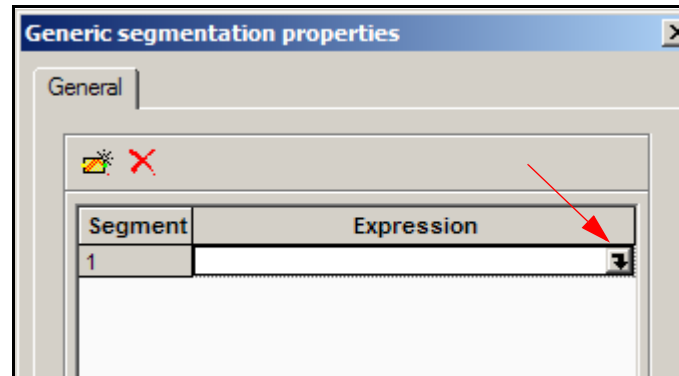


Figure 282: Down Arrow Under for Specifying Expression

6. Click the down arrow. Expression Builder opens (see [Figure 283](#)).

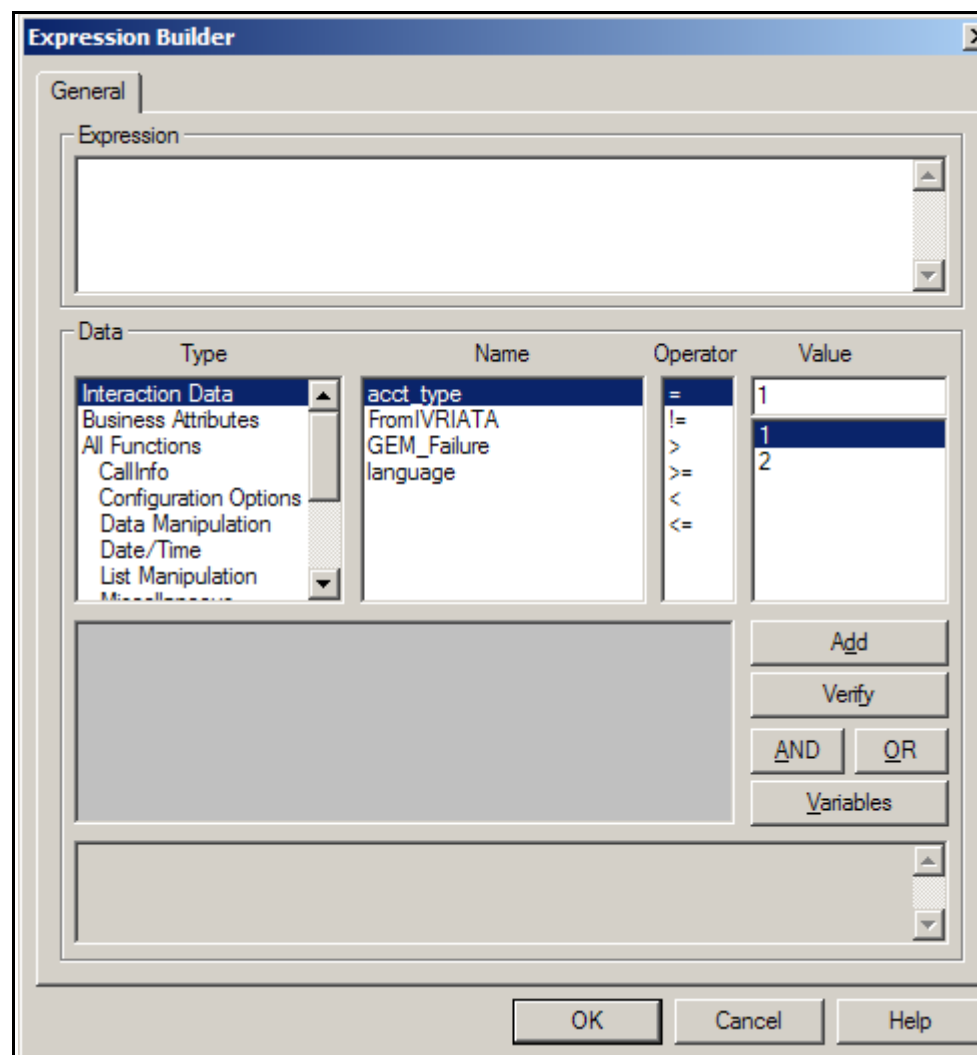


Figure 283: Expression Builder, Starting

End of procedure

Procedure: Segmenting Based on an Expression

Purpose: To define an expression in the Expression Builder dialog box where the true/false value of the expression will determine each segment (each path) in the routing strategy.

The first expression will determine whether the interaction has contains the InboundCollaborationReply Interaction Subtype (see Figure 148 on [page 164](#)). Use the instructions below to create this expression.

Start of procedure

1. In Expression Builder (see Figure 283 on [page 330](#)), under Type, click All Functions.
2. Under Name, scroll down and click Business Data. Expression Builder adds a new panel where you enter parameters and values (see [Figure 284](#)).

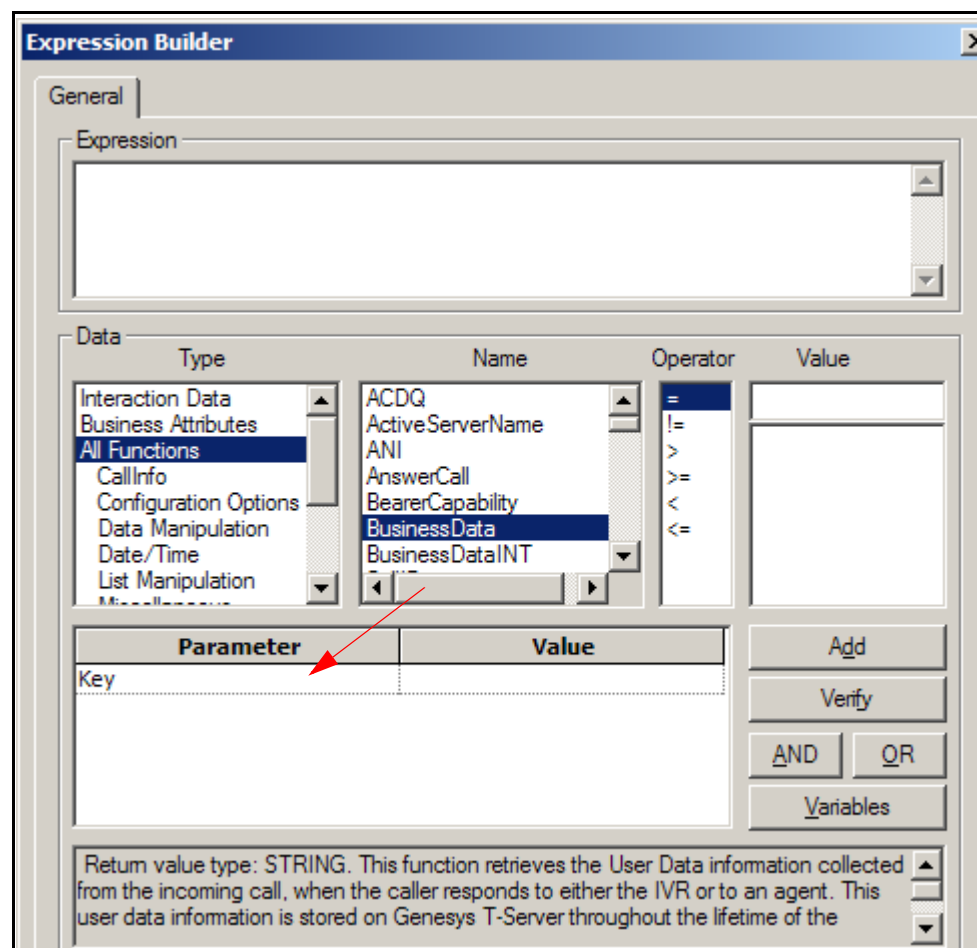


Figure 284: Expression Builder, Parameter and Value Fields

3. Leave the equal sign selected.
4. Click in the row under Value to display a down arrow.
5. Click the down arrow to bring up the Key dialog box (see [Figure 285](#)).

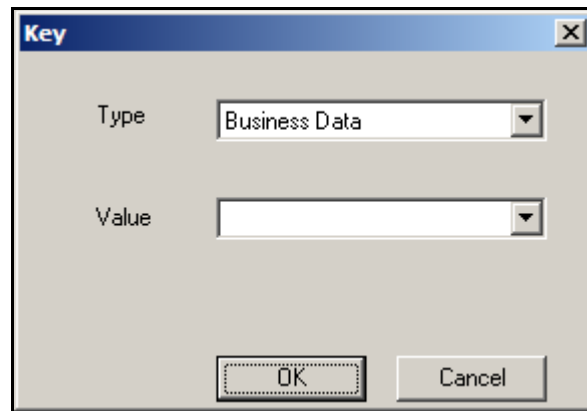


Figure 285: Key Dialog Box, Business Data Type

6. Click the Value down arrow in [Figure 285](#) and select InteractionSubtype (see [Figure 286](#)).

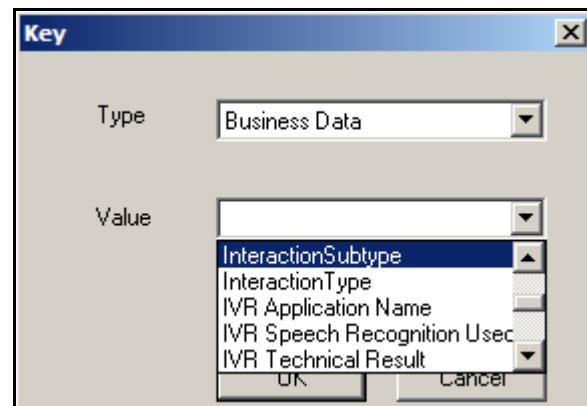


Figure 286: Key Dialog Box, Interaction Subtype Value

7. Close the Key dialog box. The row under the Value area in Expression Builder now appears as shown in [Figure 287](#).

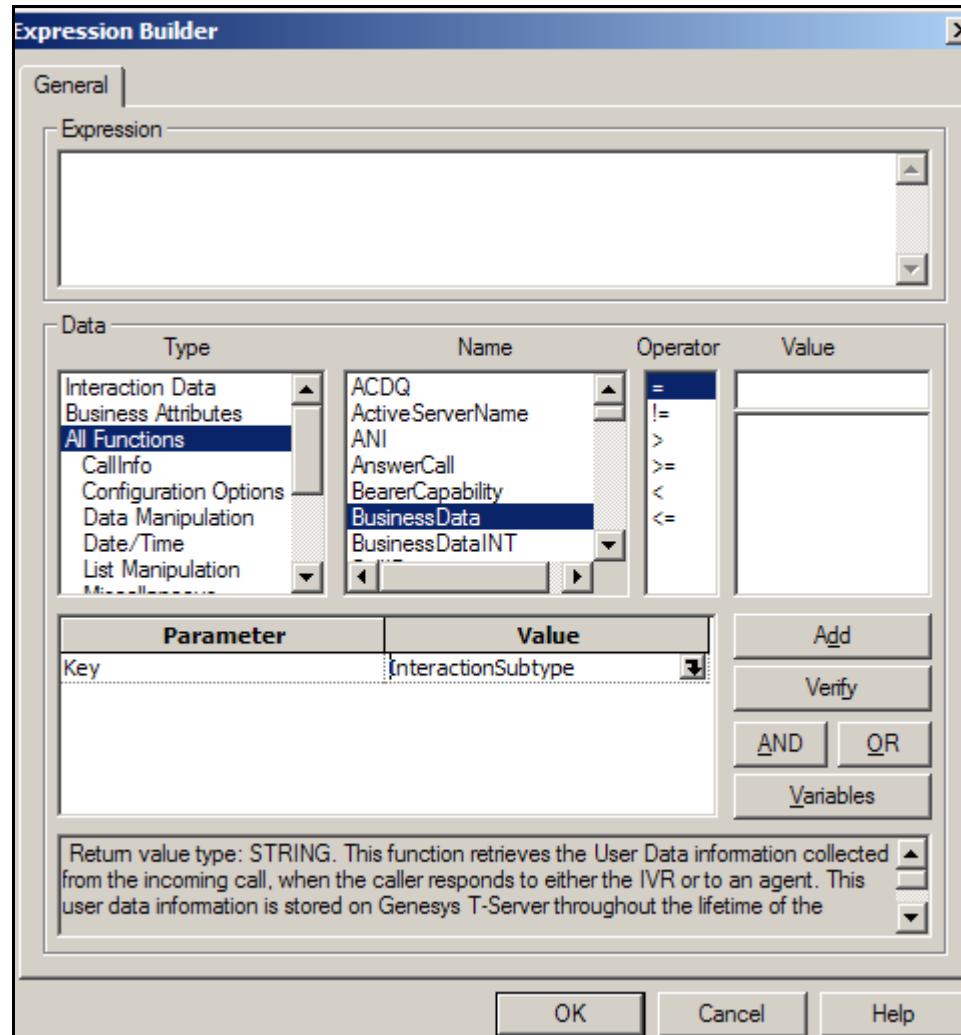


Figure 287: Expression Builder Parameter Value Area

8. Under Operator in Expression Builder, select the equal sign (=).
9. Click under Value and enter: CollaborationReply (see Figure 148 on page 164).

Note: Collaboration Reply is the display name; the internal name in the Configuration Database is CollaborationReply. You can see this in Configuration Manager when you right-click an Interaction Subtype and select Properties.

10. Click the Add button. Expression Builder now appears as shown in Figure 288.

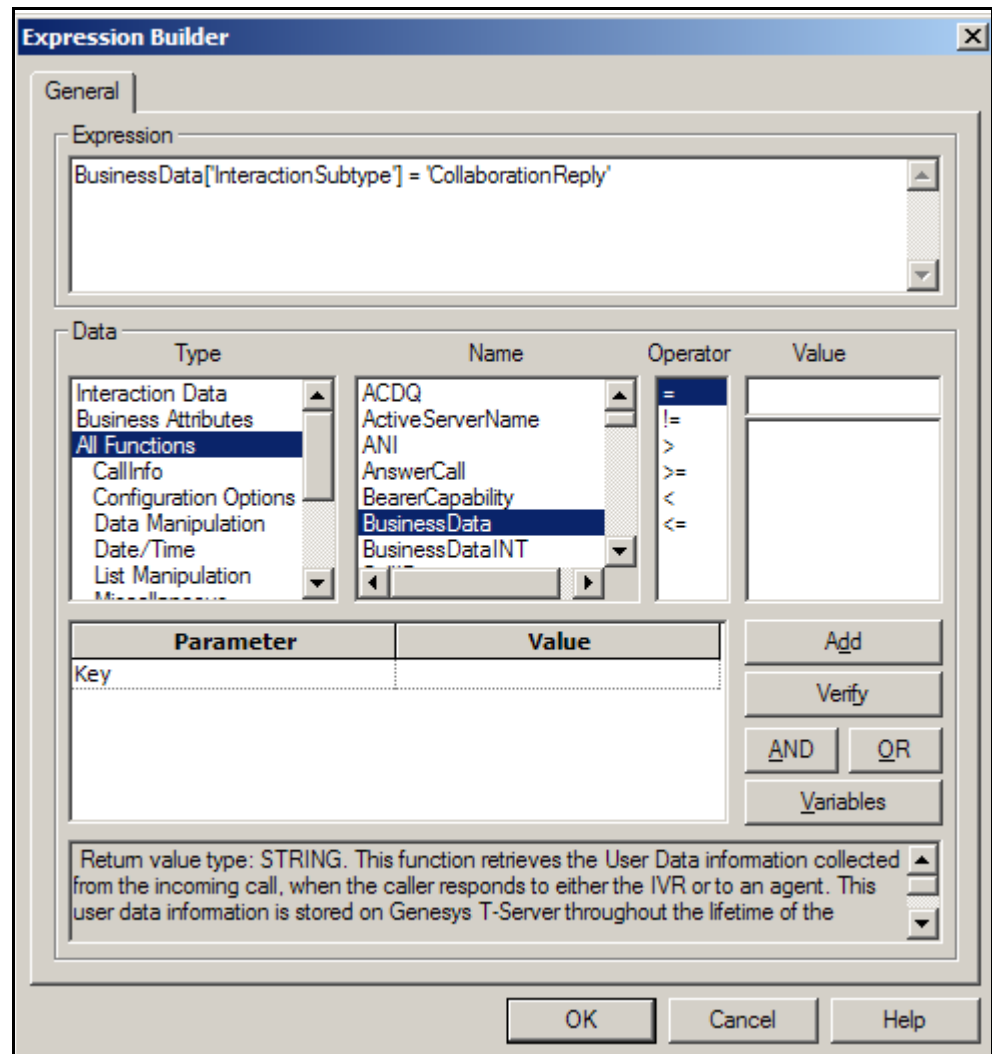


Figure 288: Expression Builder With Expression Created

11. Click the **Verify** button.
The expression turns green indicating it is successfully verified. The following message appears in the lower pane: The expression is successfully verified.
12. Click **OK** to close Expression Builder. The Generic Segmentation Properties dialog box appears as shown in [Figure 289](#) (entire expression not shown).

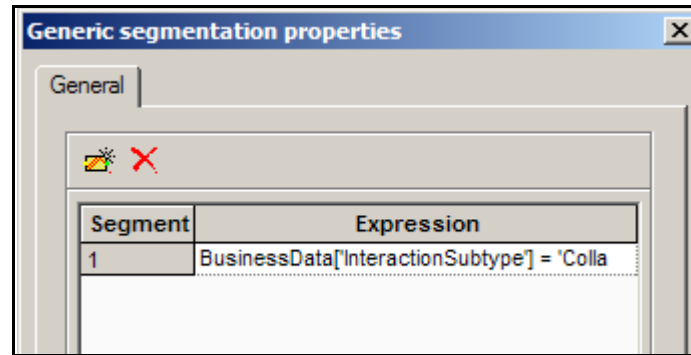


Figure 289: Expression in Generic Segmentation Properties Dialog Box

In Segment 1 in [Figure 289](#), the entire expression reads:

`BusinessData['InteractionSubtype'] = 'CollaborationReply'`

The expression instructs URS to use the BusinessData function (documented in the *Universal Routing 8.1 Reference Manual*) with a Business Data parameter of type InteractionSubtype with a value of CollaborationReply.

13. Construct the next row in the Generic Segmentation Properties dialog box ([Figure 289](#)) as follows:
 - Click the button to add an item (see [Figure 281](#) on [page 329](#)).
 - Repeat the above steps, but substitute NDR for the Value in Step 14.
 - When through in the Generic Segmentation Properties dialog box, you will have created two expressions (see [Figure 290](#)).

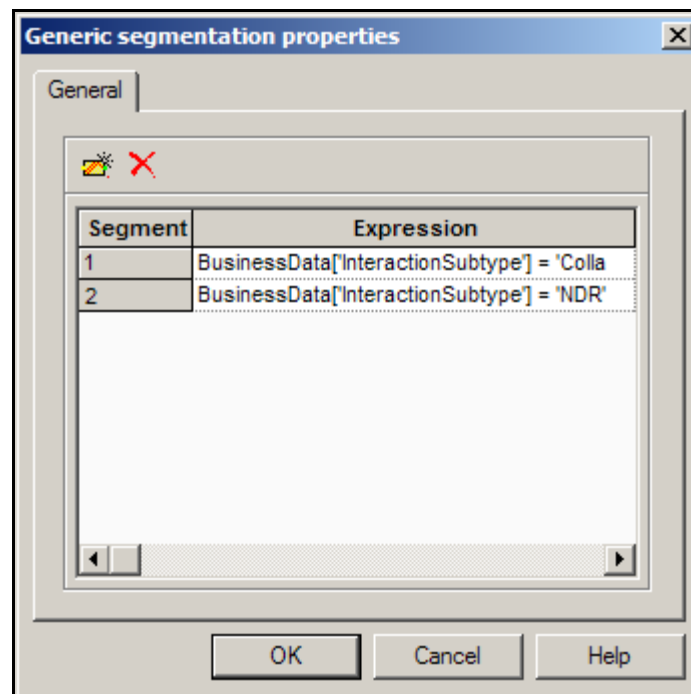


Figure 290: Expressions in Generic Segmentation Properties Dialog Box

- URS will use the first expression to determine whether an interaction has already been processed by Genesys and now contains the CollaborationReply Interaction Subtype. If true, it is an interaction resulting from two agents collaborating. The interaction contains the draft reply being sent back to the original agent from the collaborating agent.
 - URS will use the second expression to determine whether an interaction has already been processed by Genesys and now contains an NDR Interaction Subtype. If true, it is an interaction where no destination can be reached (NDR). It needs to take a different path in the strategy than a CollaborationReply interaction.
14. Close the Generic Segmentation Properties dialog box,. The Routing Design window still appears as shown in Figure 280 on [page 329](#).
 15. Connect the Entry object to the Generic Segmentation object as follows:
 - Click and hold on the bottom port of the Entry object.
 - Drag the cursor to the green input port of the Generic Segmentation object and release. The objects now appear as shown in [Figure 291](#).

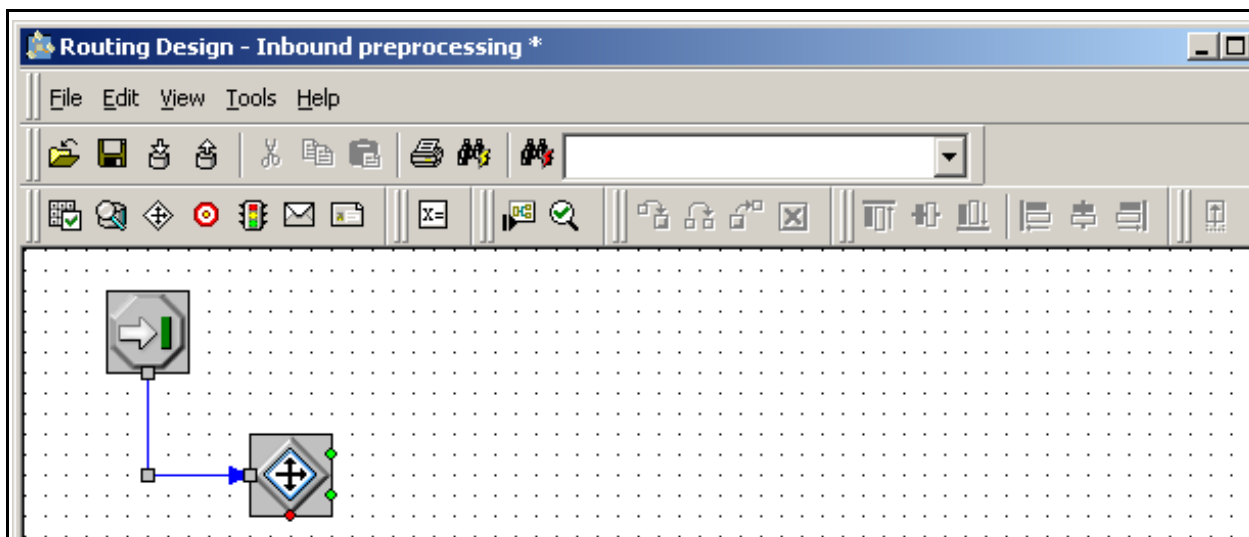


Figure 291: Entry Object Connected to Generic Segmentation Object

In [Figure 291](#), note that the Generic Segmentation object has two green side ports.

- The first port corresponds to the first expression in [Figure 290](#) on [page 335](#).
- The second port corresponds to the second expression in [Figure 290](#) on [page 335](#).

Each port will have different processing associated with it. This means:

- If an interaction meets the first condition, it goes out the first port for inbound collaboration replies.

- If an interaction meets the second condition, it goes out the second port for interactions where no destination can be reached.

16. Click the File menu and select Save.

End of procedure

Next Steps

- Sending segmented interactions to queues.

The next stage in constructing the routing strategy shown in Figure 276 on [page 324](#) consists of connecting each of the two side ports (see [Figure 291](#)) in the Generic Segmentation object to different Queue Interaction objects (each specifying a different queue).

Procedure: Sending Segmented Interactions to Queues

Purpose: Once segmented interactions are placed in queues, you can send them to different objects within the strategy for additional processing.

Start of procedure

1. In the Routing Design window, click the icon for Routing objects (see [Figure 292](#)).

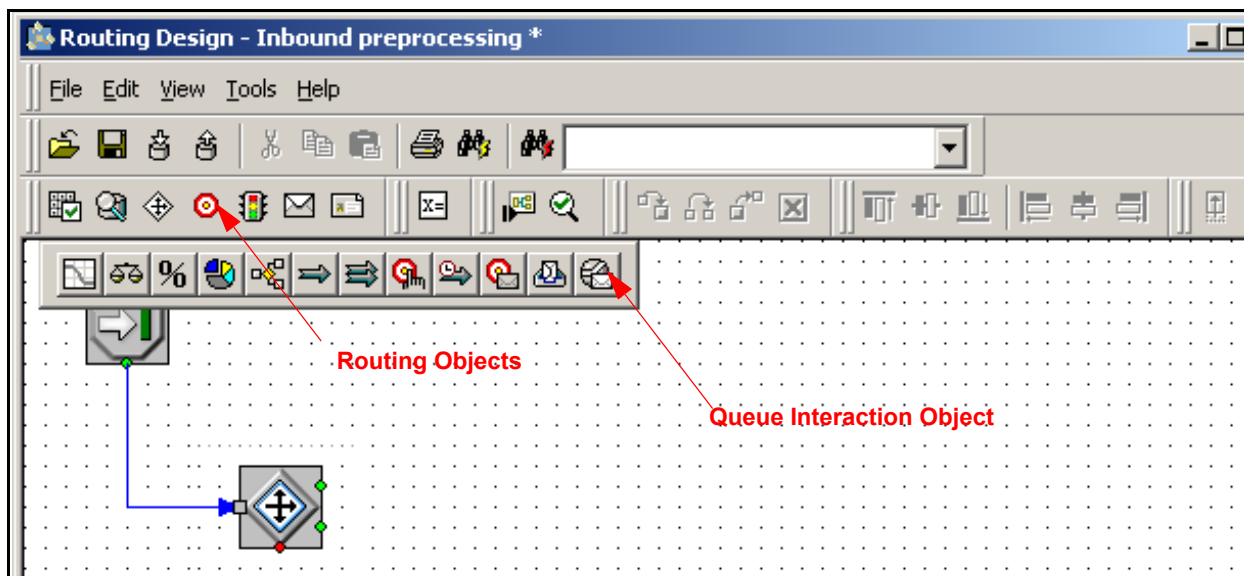


Figure 292: Icon For Multimedia Objects

2. Click the button for the Queue Interaction object (see [Figure 292](#)). Then click inside the Routing Design window at the location where you want to place the object. The Routing Design window now appears as shown in [Figure 293](#).

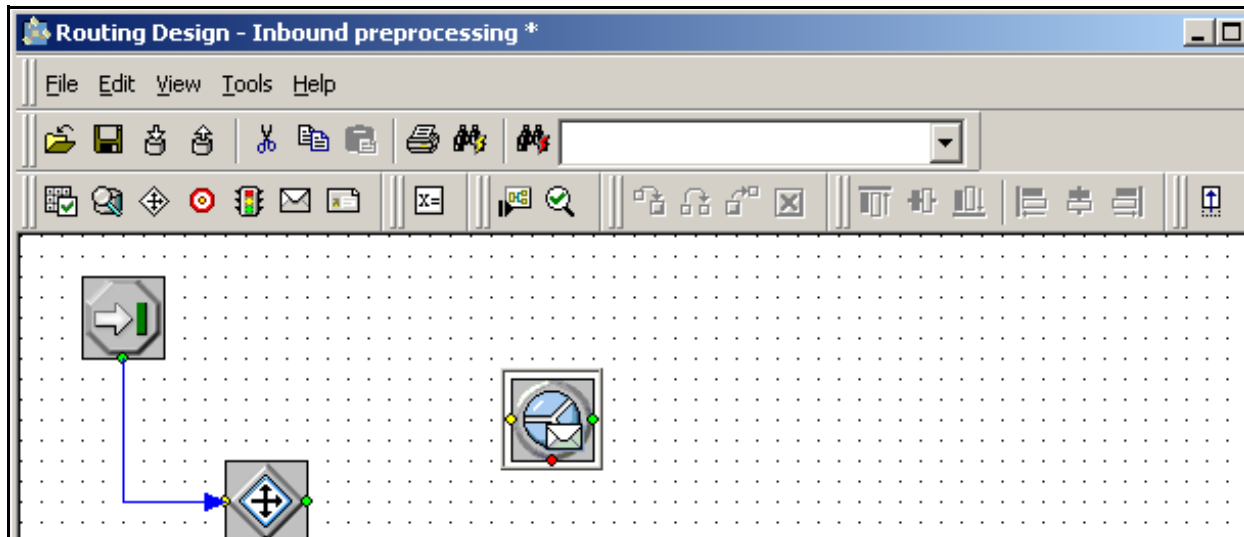


Figure 293: Routing Design window, Queue Interaction Object Placed

3. Double-click the Queue Interaction object to open its properties dialog box (see [Figure 293](#)).
4. Click the down arrow to drop down a menu where you can select an interaction queue by expanding existing business processes (see [Figure 294](#)).

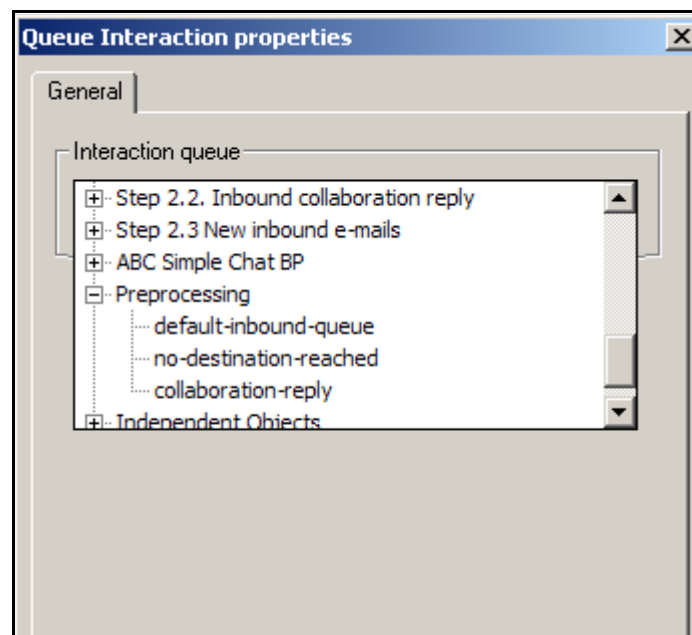


Figure 294: Queue Interaction Properties Dialog Box

Note: If you followed the “Order of Configuration” on [page 217](#), the required queue will be available for selection.

5. Double-click a queue and click OK. The Queue Interaction Properties dialog box appears as shown in [Figure 295](#).

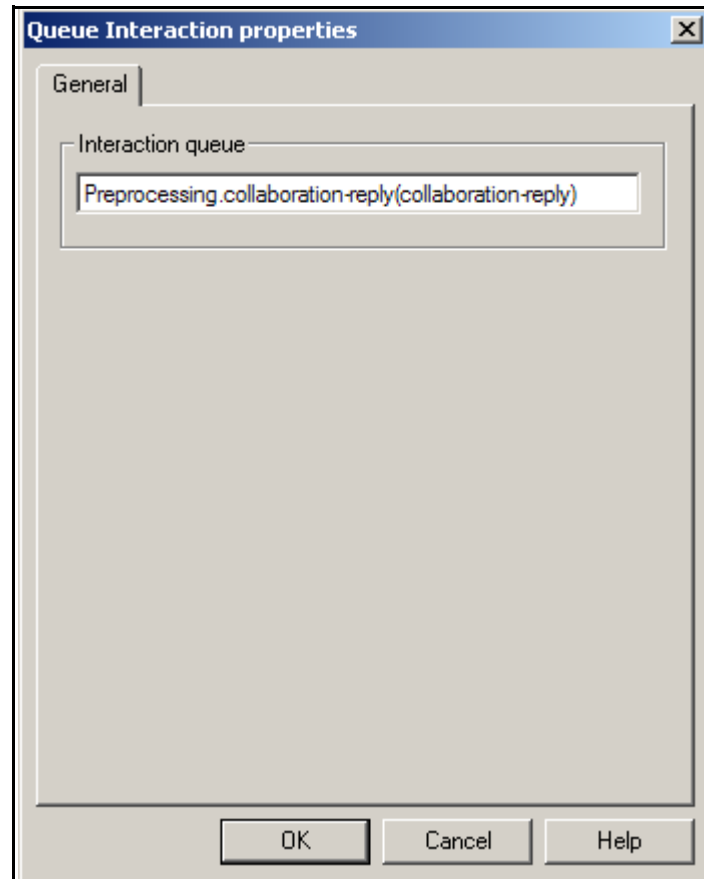


Figure 295: Queue Interaction Object, Queue Selected

Note: The queue could be one used by another business process if creating a number of smaller, less complex business processes (see [page 200](#)). Or the queue could be one in a different functional area of this business process if creating a larger, more complex business process.

6. Click OK in the Queue Interaction Properties dialog box.
7. Draw a connector line from the first side port of the Generic Segmentation object in [Figure 293](#) on [page 338](#) to the yellow input port of the Queue Interaction object. This indicates that inbound collaboration reply interactions should be sent to this queue.

8. Follow steps 1~6 to create a second Queue Interaction object to handle No Destination Reached (NDR) interactions, but this time select a different queue in Figure 294 on [page 338](#).
9. Draw a connector line from the second side port of the Generic Segmentation object in Figure 293 on [page 338](#) to the yellow input port of the Queue Interaction object for inbound NDR interactions.

The routing strategy now appears as shown in [Figure 296](#).

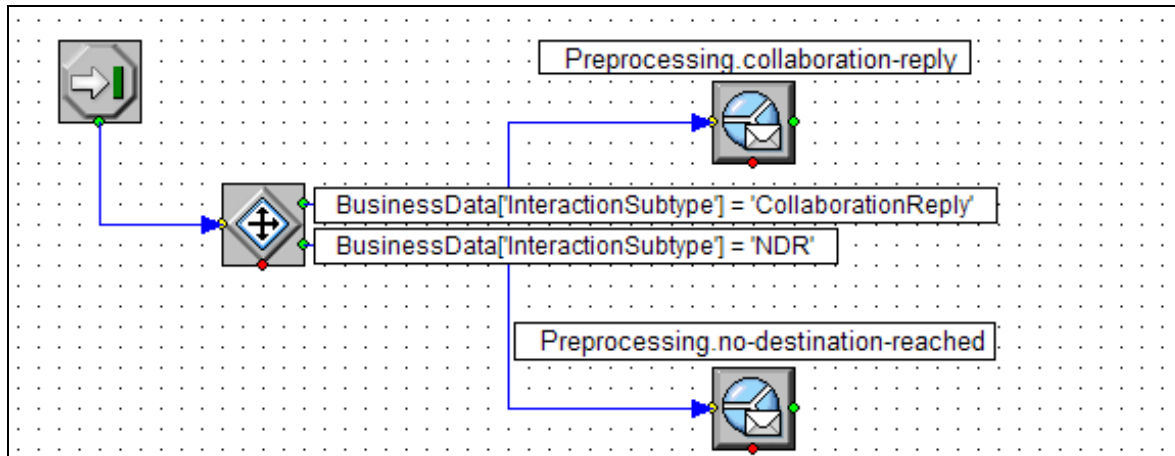


Figure 296: Routing Design Window, Segmenting to Different Queues

Note: If the strategy isn't commented as shown above, click the **Tools** menu in the IRD main window and select **Routing Design Options**. The **Routing Options** dialog box opens (see [Figure 127](#) on [page 142](#)). Put an X in the checkboxes opposite **Show Conditions On Graph** and **Show Description of Objects On Graph**.

10. Save the strategy.

End of procedure

Note: In addition to showing conditions and descriptions, you can also insert comments. Right-click inside the strategy and select **Insert Comment** from the context menu. In the resulting text box, enter your comments.

Writing Interaction Data to Variables

So far we have configured the sample strategy shown in [Figure 276](#) on [page 324](#) to handle collaboration reply and NDR interactions. The next objects to be configured determine whether an incoming interaction has an inbound processing failed status. To do this, the strategy will:

Write the contents of custom interaction keys (GEM_Failure and GEM_FailureMsg) to variables. The assumption is that these keys were previously added to the interaction attributes via the custom* fields in the interactions table as described in the chapter on interaction properties in the *eServices (Multimedia) 8.0 User's Guide*.

The strategy then checks those variables and routes based on the true/false value of an expression.

- If the interaction does have inbound processing failed status, it will be sent to a queue for these types of interactions.
- If the interaction does not have inbound processing failed status, the interaction will be sent to a different queue for new inbound interaction processing.

Procedure: Defining Variables

Purpose: To define variables to hold the content of the GEM_Failure and GEM_FailureMsg attached data keys.

Start of procedure

1. In the Routing Design window, click the button for defining variables (see [Figure 297](#)).

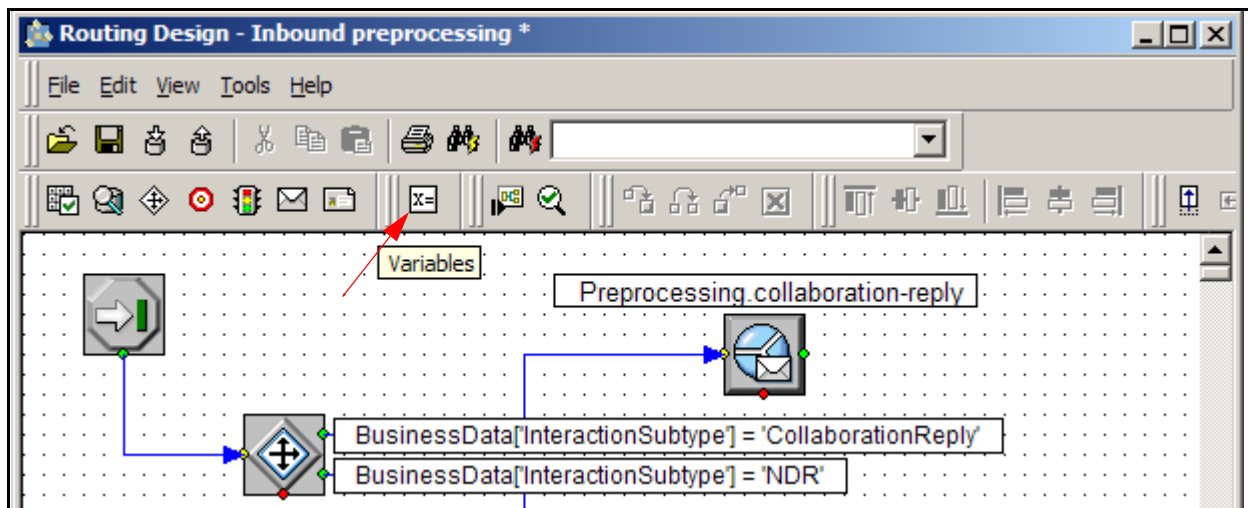


Figure 297: Variables Button

2. In the resulting Variable List Properties dialog box, define EPF_flag and EPF_value string variables. The dialog box appears as shown in [Figure 298](#).

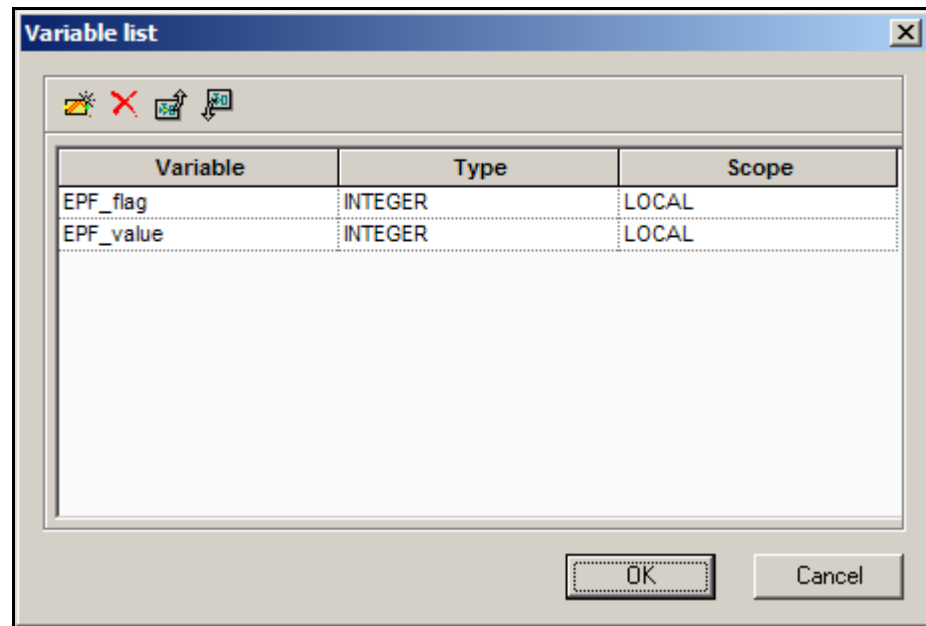


Figure 298: Variable List Properties Dialog Box

3. Click OK in the Variable List Properties dialog box.

End of procedure

Next Steps

- Assigning values to variables.

Now that the variables exist, use the Multi-Assign object to assign values.

Procedure: **Assigning a value to a variable from Interaction Data**

Start of procedure

1. In the Routing Design window, click the button for Miscellaneous objects (see [Figure 299](#)).

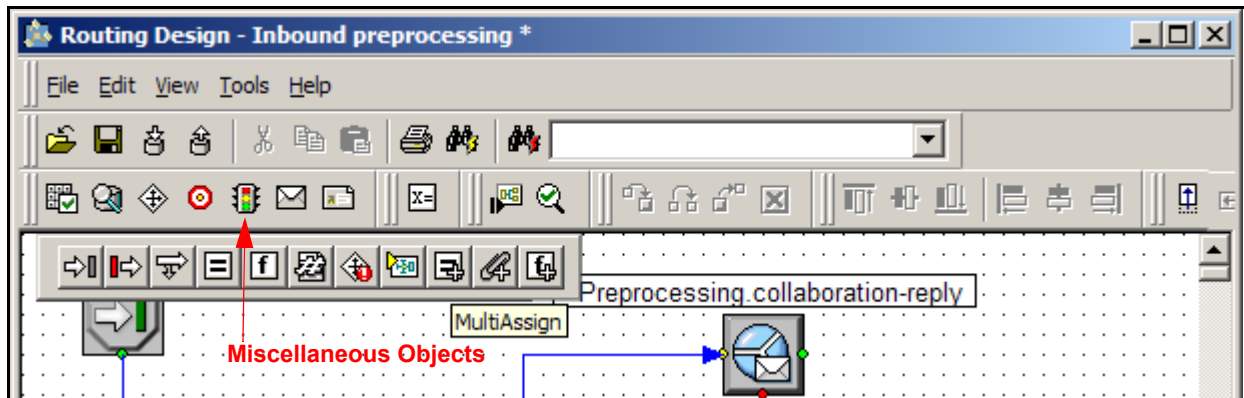


Figure 299: Miscellaneous Objects

2. Click the button for the Multi-Assign object (see Figure 106 on [page 126](#)). Then click inside the empty Routing Design window at the location where you want to place the object.
3. Double-click the Multi-Assign object to open its properties dialog box.
4. Click the button to add an item in the Multi-Assign Properties dialog box (see [Figure 300](#)).

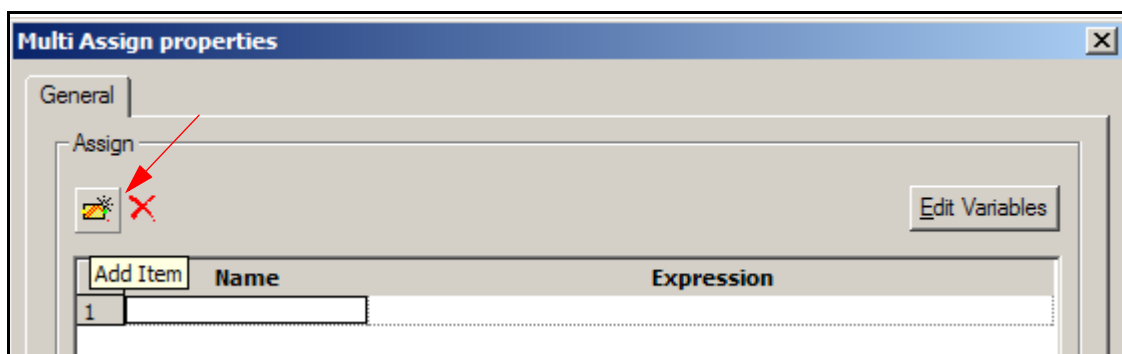


Figure 300: Multi-Assign Properties Dialog Box

5. Click in the Name field and select the EPF_flag variable.
6. Click under Expression. A down arrow appears (see [Figure 301](#)).

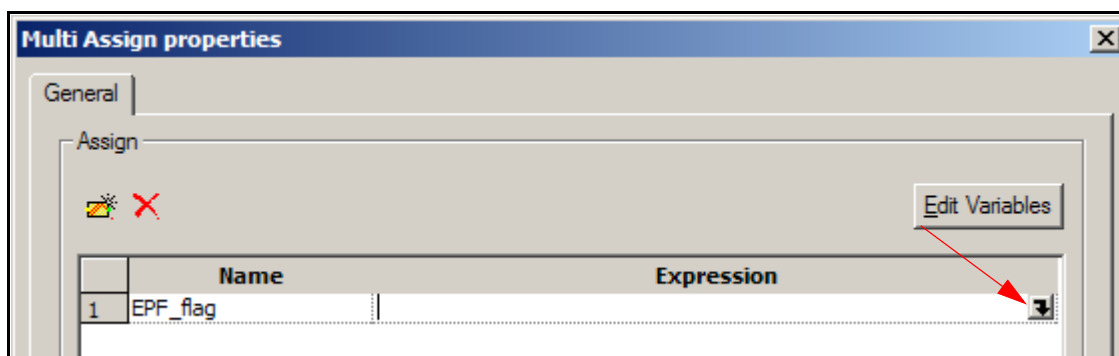


Figure 301: Expression Down Arrow

7. Click the down arrow to open the Assign Properties dialog box (see [Figure 301](#)) where you can assign a value to the variable.
8. Under Type, select Interaction Data.
9. Under Name, select GEM_Failure.

Note: The assumption is that this key is contained in the interaction and was previously defined in IRD as Interaction Data (see [page 119](#)).

10. Click Add followed by Verify. The Assign Properties dialog box appears as shown in [Figure 302](#).

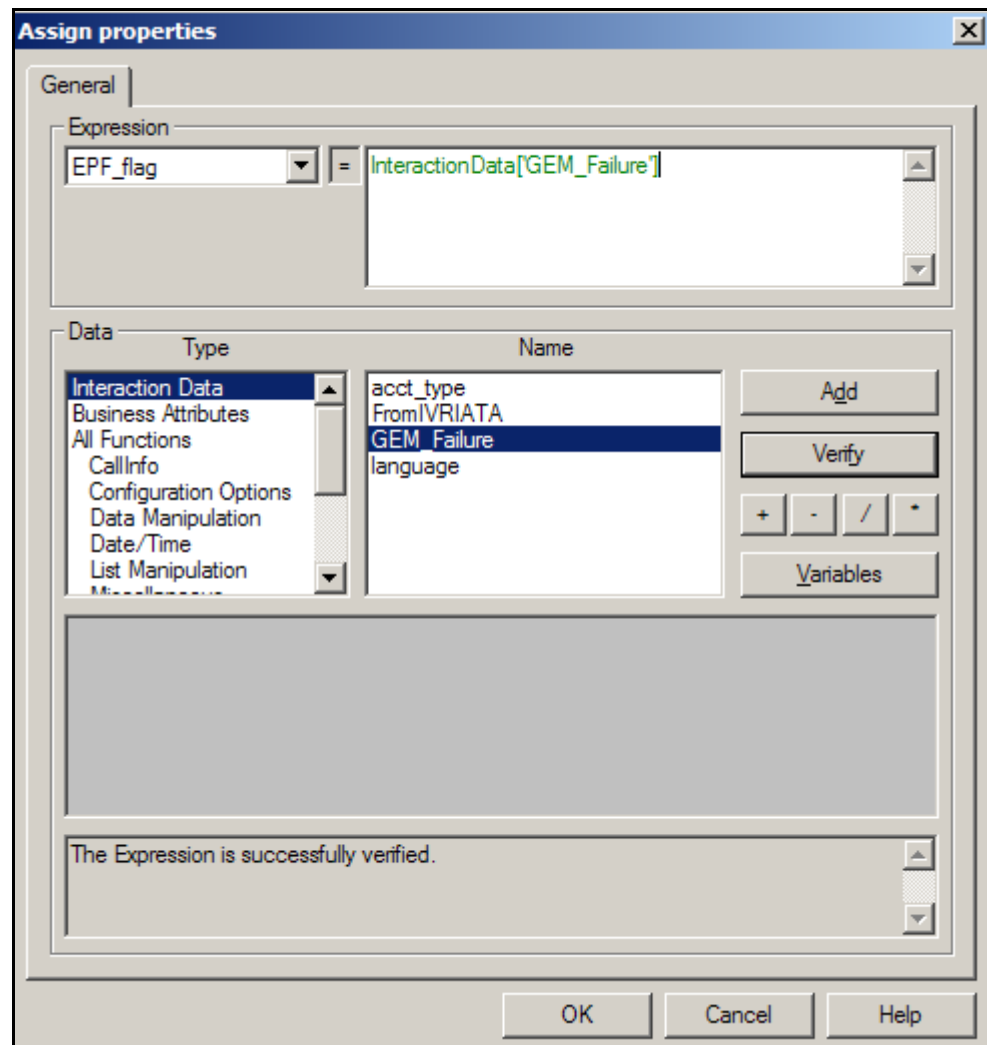


Figure 302: Assign Properties Dialog Box, Expression Verified

The content of the GEM_Failure key in the interaction will be written to the EPF_flag variable.

11. Click OK in the Assign Properties dialog box.

End of procedure

Procedure: **Assigning a value to a variable using a function**

Start of procedure

1. Click the button to add an item in the Multi Assign Properties dialog box (see Figure 300 on [page 343](#)).
2. Click in the Name field and select the EPF_value variable.
3. Click under Expression in the Multi-Assign Properties dialog box. A down arrow appears similar to Figure 301 on [page 343](#).
4. Click the down arrow to open the Assign Properties dialog box (see Figure 302 on [page 344](#)).
5. Under Type, select All Functions.
6. Under Name, select the Update function.
7. Click the down arrow under Value in the Assign Properties dialog box. The Key dialog box opens.
8. Click the Type arrow and select the EPF_f tag variable (see [Figure 303](#))

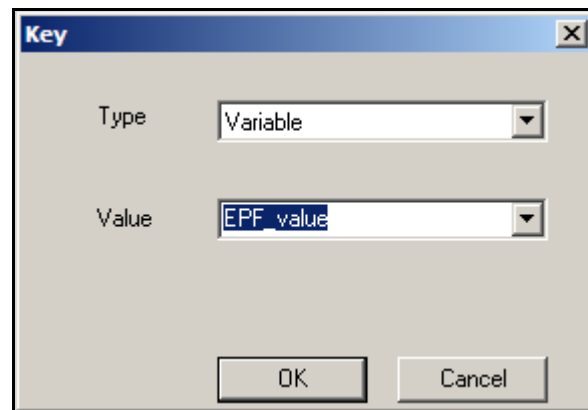


Figure 303: Key Dialog Box

9. Click OK.
10. Back in the Assign Properties dialog box, click Add followed by Verify. The Assign Properties dialog box appears as shown in [Figure 304](#).

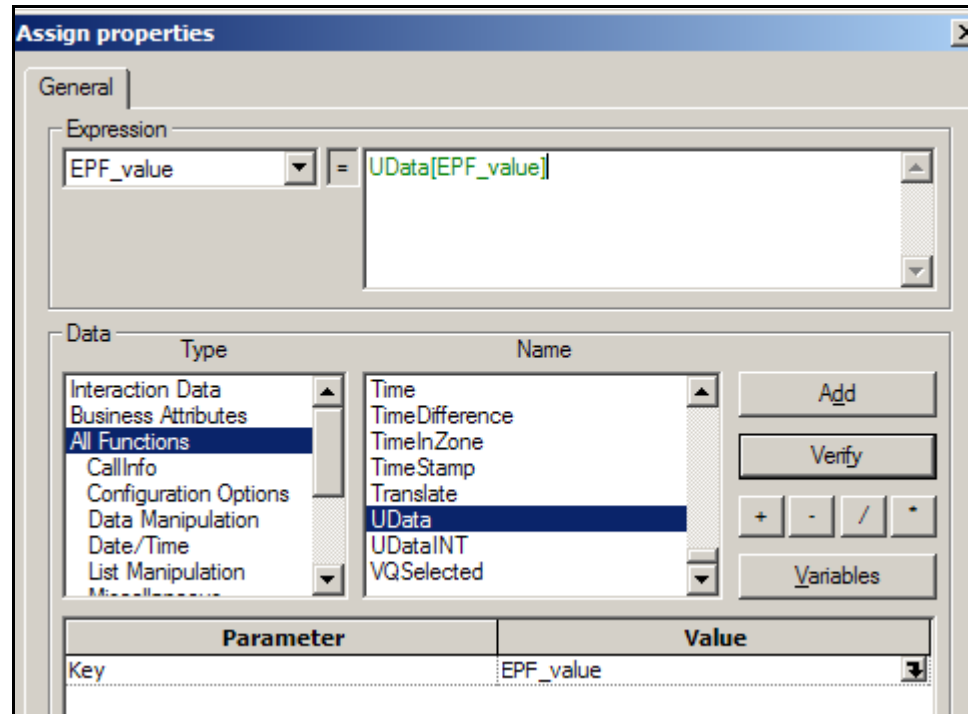


Figure 304: Assign Properties Dialog Box, Assigning to EPF_Flag Variable

11. Click OK in the Assign Properties dialog box. The Multi-Assign Properties dialog box now appears as shown in [Figure 305](#).

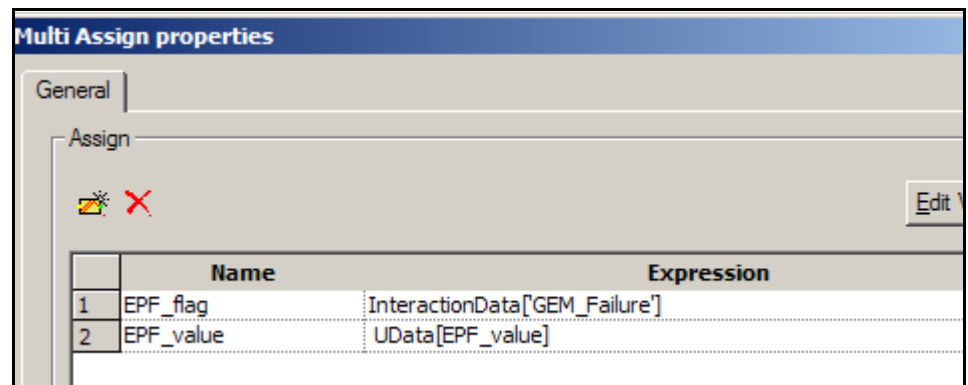


Figure 305: Assign Properties Dialog Box

12. Click OK in the Multi-Assign Properties dialog box.

End of procedure

To continue the strategy:

- Draw a connector line from the bottom red port of the Generic Segmentation object to the yellow input port of the Multi Assign object. The routing strategy now appears as shown in [Figure 306](#).

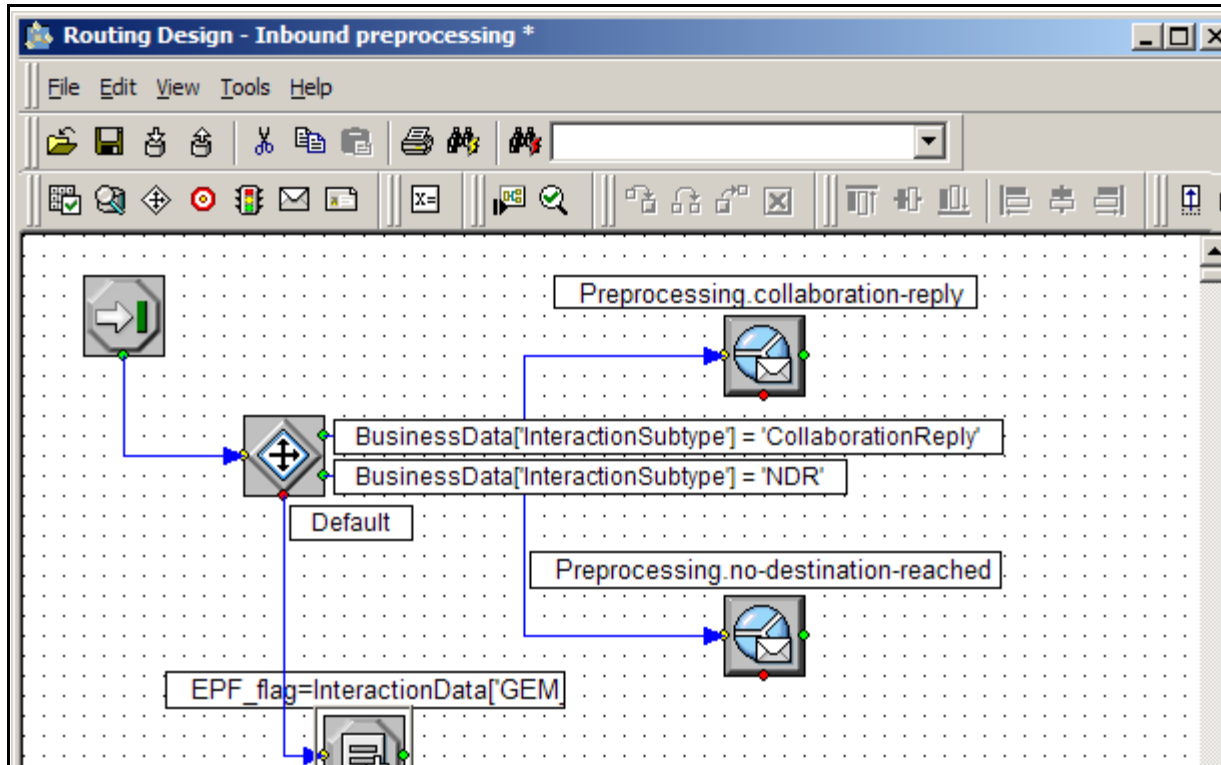


Figure 306: Routing Design Window, Multi Assign Object Added

If an incoming interaction does not contain an Interaction Subtype of CollaborationReply or NDR, the interaction goes out the red error port to a Multi-Assign object.

- Save the strategy as it exists so far.

Determining Interaction Status

Next the strategy will determine whether the interaction has inbound processing failed status or whether it is a new interaction that has never been processed by Genesys.

Procedure:

Using the Generic Segmentation object to determine interaction status

Start of procedure

1. In the Routing Design window, click the icon for Segmentation objects (same as Figure 279 on [page 328](#)).

2. Click the Generic Segmentation object icon (see Figure 103 on [page 124](#)). Then click inside the empty design window at the location where you want to place the object.
3. Double-click the Generic Segmentation object to opens its properties dialog box (same as Figure 281 on [page 329](#)).
4. In the dialog box, click under Expression. A down arrow appears (same as Figure 282 on [page 330](#)).
5. Click the down arrow. The Expression Builder opens (same as Figure 283 on [page 330](#)).
6. In Expression Builder, construct the expression shown in [Figure 307](#);

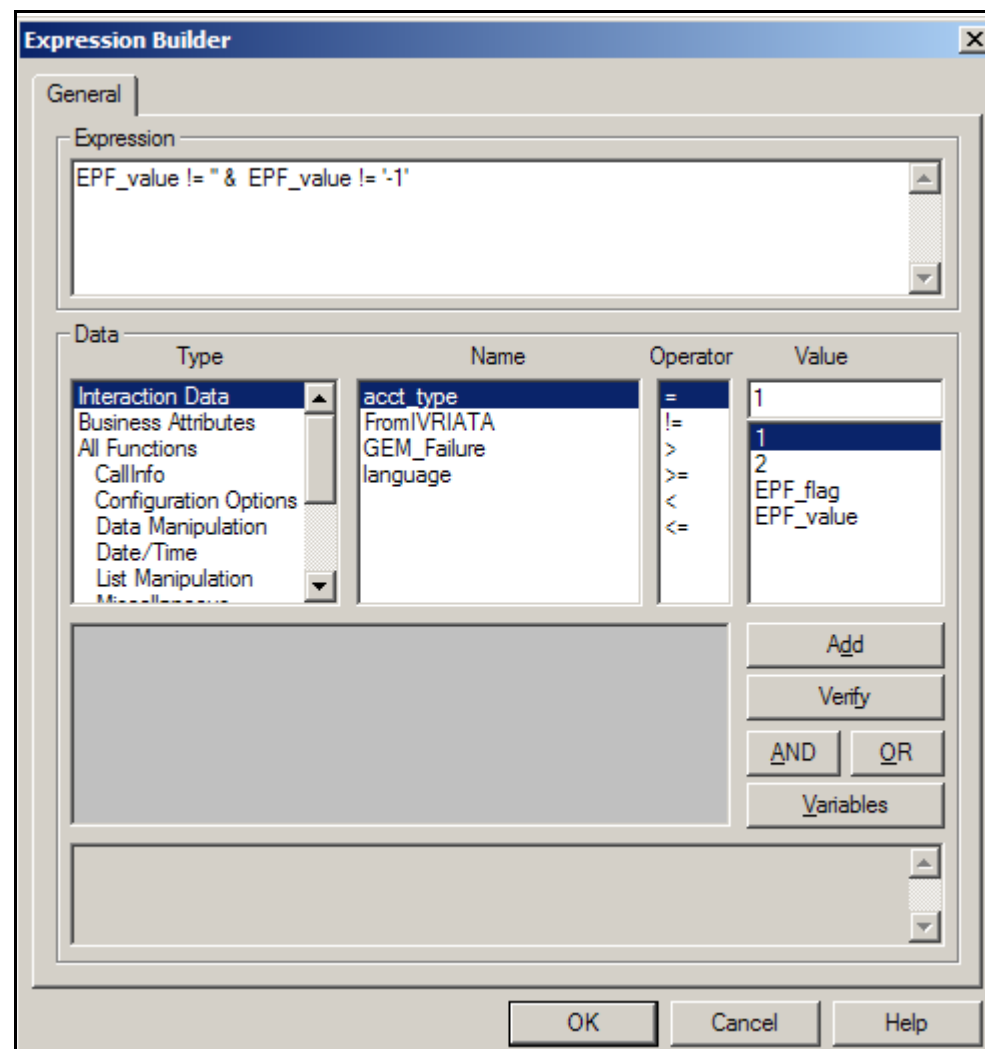


Figure 307: Expression Builder, Verified Expression

7. Click **Verify**. The lower pane indicates the expression was successfully verified.

8. Click OK in Expression Builder. The Generic Segmentation object appears as shown in [Figure 308](#).

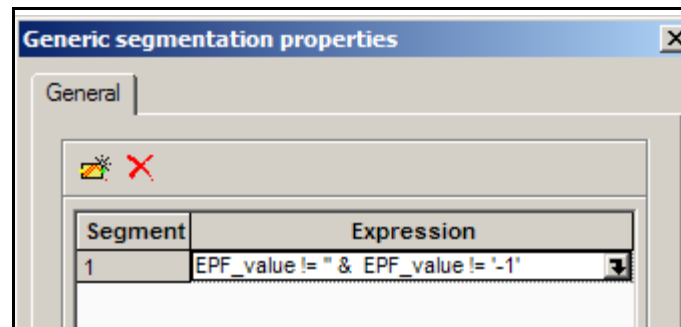


Figure 308: Generic Segmentation Object With One Expression

9. Click OK in the Generic Segmentation Properties dialog box.
10. Draw a connector line from the output port of the Multi Assign object to the input port of the Generic Segmentation object.

End of procedure

The strategy now appears as shown in [Figure 309](#).

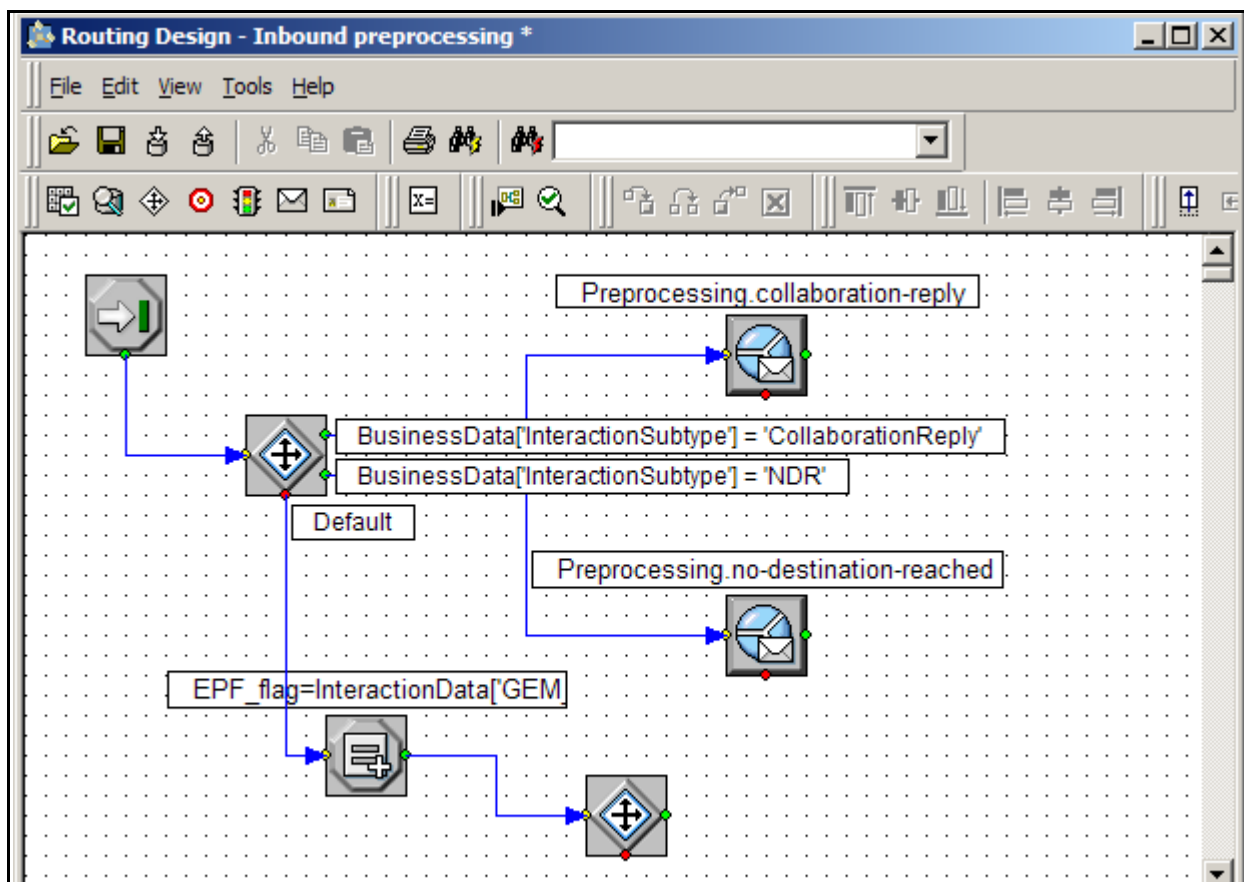


Figure 309: Multi Assign Connected to Generic Segmentation

Sending interactions to Queues

The expression in Figure 308 on [page 349](#) determines whether an interaction has inbound processing failed status:

- If the expression is true for the current interaction (if `GEM_Failure` contains a value due to previous processing by Genesys), the interaction has inbound processing failed status, and goes out the green port.
- If the expression is false for the current interaction (if `GEM_Failure` is empty), the interaction does not have inbound processing failed status. It is a new interaction, and goes out the red port.

The next step configures the queue associated with new interactions that have never been processed by Genesys.

Procedure:

Sending interactions to queues from the Generic Segmentation object

Purpose: To send interactions to two different queues; one for further inbound processing and another queue for inbound processing failures.

Start of procedure

1. Click the Queue Interaction object icon (see Figure 292 on [page 337](#)). Then click inside the Routing Design window at the location where you want to place the object.
2. Double-click the Queue Interaction object to open its properties dialog box (same as Figure 294 on [page 338](#)).
3. Click the down arrow to drop down a menu where you can select an interaction queue. This example assumes you have followed the “Order of Configuration” on [page 217](#) so the queue already exists in the Configuration Database.
4. Select the inbound postprocessing queue. (see [Figure 310](#)).

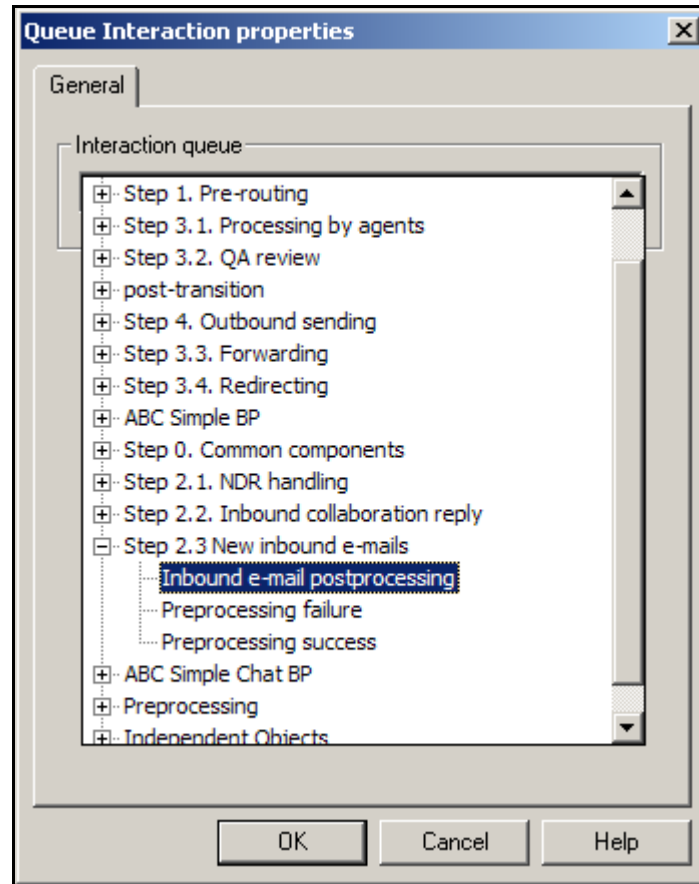


Figure 310: Queue Interaction Object, Queue Selected

5. Click OK in the Queue Interaction Properties dialog box.
6. Follow the above steps to create another Queue Interaction object, but this time select the queue, inbound preprocessing failures (see [Figure 310](#)).
7. Draw a connector line from the side port of the Generic Segmentation object in [Figure 309](#) on [page 349](#) to input port of the Queue Interaction object specifying the inbound postprocessing queue.
8. Draw a connector line from the side port of the Generic Segmentation object to the yellow input port of the Queue Interaction object for inbound interaction failures.
9. Draw a connector line from the bottom port of the Generic Segmentation object in [Figure 309](#) on [page 349](#) to the input port of the Queue Interaction object for inbound preprocessing failures.

The routing strategy now appears as shown in [Figure 311](#).

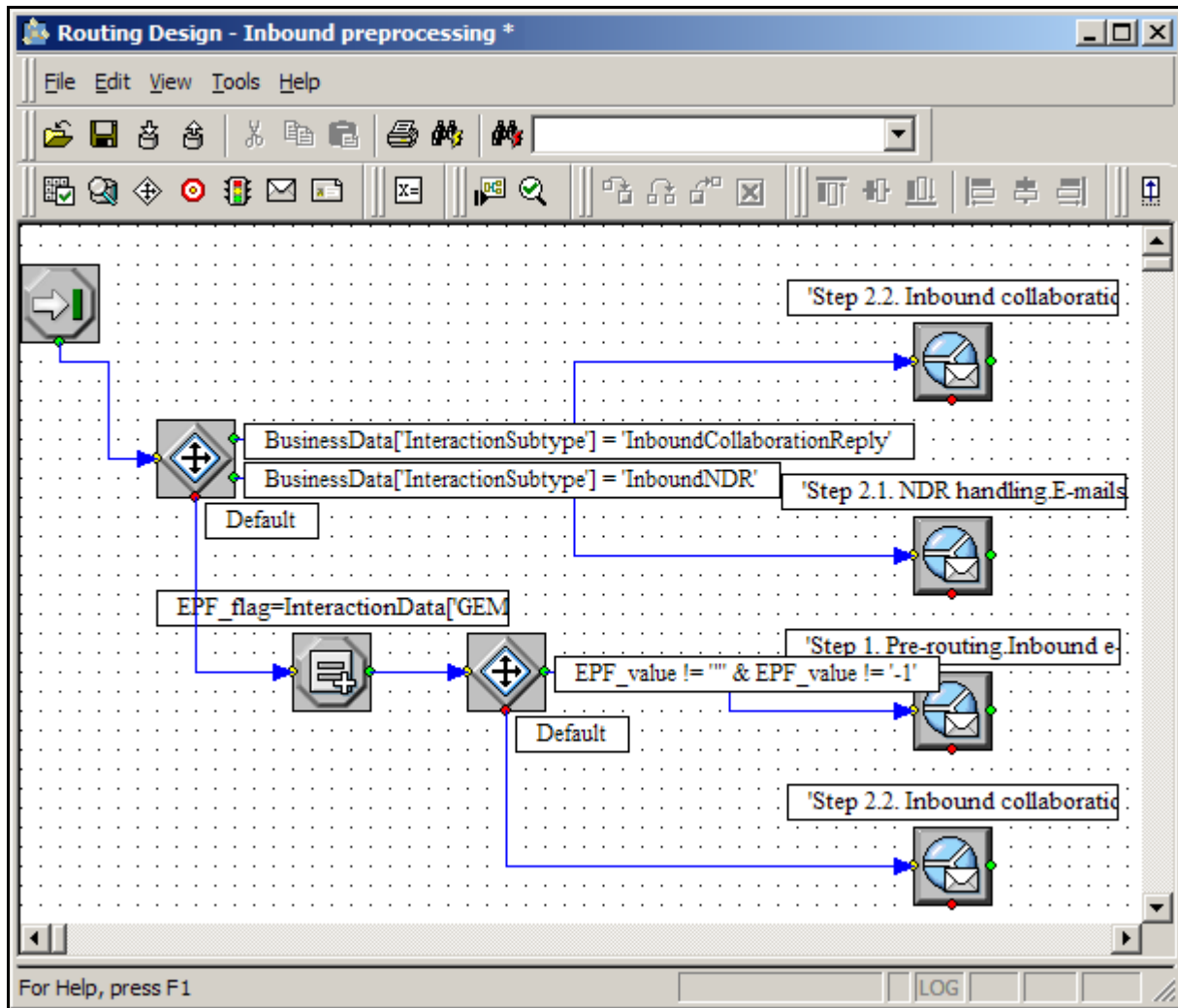


Figure 311: Queue Objects for Failures and New Inbound Interactions

10. Click the File menu and select Save.

End of procedure

Next Steps

Continuing with the above example, when this routing strategy is placed in a business process:

- The next step might be to extract interactions out of the queues and submit them to routing strategies in the same business process.
- Or the next step might be to use the same queues in different business processes and continue processing from there. The Interaction Workflow Samples component takes this latter approach (see “Step 2.1. NDR Handling” on [page 393](#)).

Compiling

This section describes how to compile a routing strategy in the Routing Design window:

Procedure: Compiling a routing strategy

Purpose: To check whether the strategy can be executed and does not contain errors.

Start of procedure

1. Click the button for compiling (see [Figure 312](#)).

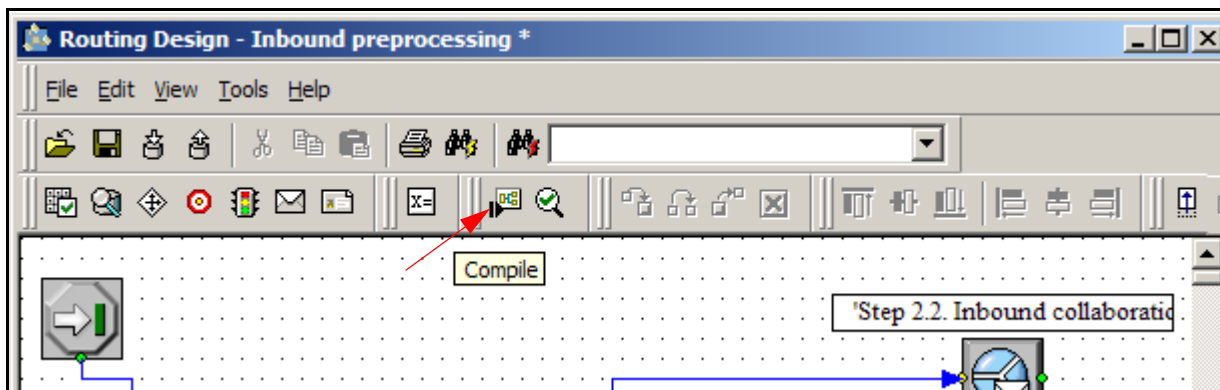


Figure 312: Compile Button

2. View the results of the compile. If the strategy compiles successfully, the following message appears (see [Figure 313](#)).

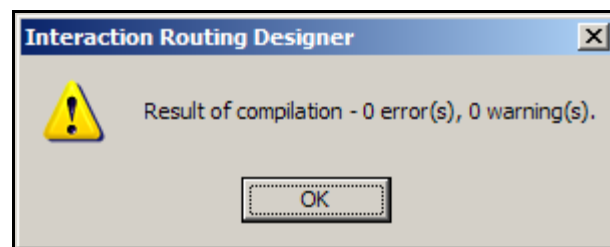


Figure 313: Message When Strategy Compiles Successfully

Note: This message also appears in the Errors in Strategy tab, which appears once you compile, at the bottom of the Routing Design window (see [Figure 314](#)).

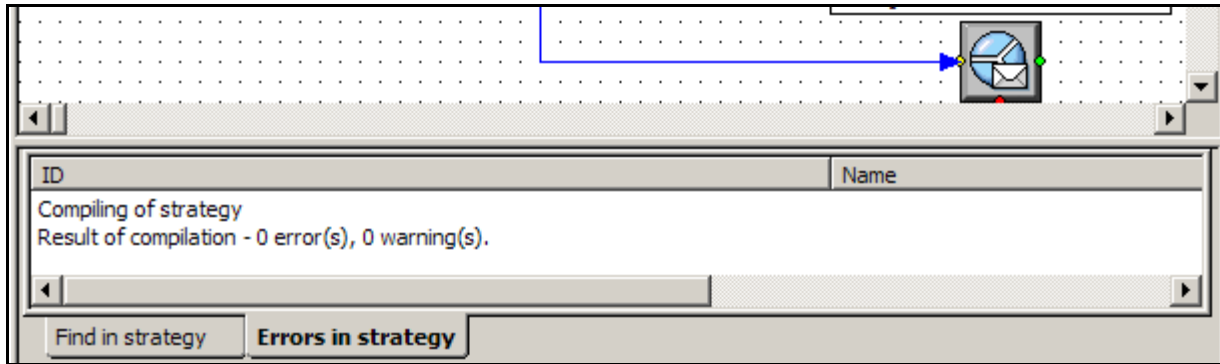


Figure 314: Errors in Strategy Tab

3. View the Errors in Strategy tab. If the strategy does not compile successfully, the Errors in Strategy tab details the error.
4. Correct the error and recompile until no more errors.

End of procedure

You may also wish to use the Check Integrity tool, which highlights invalid references in the Configuration Database. Using Check Integrity

Checking Database Integrity

You can locate invalid Configuration Database object references within a saved or compiled strategy using the Check Integrity tool. The tool is located on the toolbar in the Routing Design window (see [Figure 315](#)).

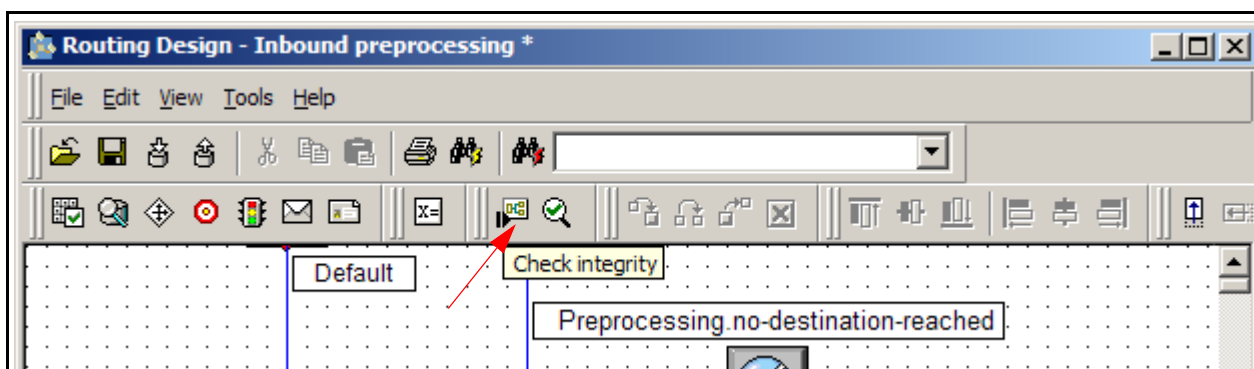


Figure 315: Check Integrity Tool

Procedure: Using Check Integrity

Purpose: To check for invalid database references.

Start of procedure

1. Open the strategy if not already open. You can open by selecting the strategy in the Strategies List pane (see Figure 34 on [page 59](#)) or by using Edit/View Strategy in the Interaction Design window (see Figure 260 on [page 305](#)).
2. If you made any changes to the strategy since it was last saved or compiled, save the strategy again.
3. Click the icon for checking integrity (see Figure 315 on [page 354](#)) in the toolbar. The objects containing the invalid references are highlighted with a red border in the Routing Design window, and the Errors in Strategy output window appears below the Routing Design window listing the invalid references.
4. Double-click a highlighted object to open its properties dialog box.
5. Make corrections to the object as required. The highlight disappears when you close the properties dialog box for the object.
6. Use the Search or the Search and replace capabilities (see [page 140](#)) to search for all occurrences of an invalid reference.

End of procedure

Important Information

Keep the following points in mind when using Check Integrity:

- When a call should be routed to a Resource under a different Tenant using the routing rule Switch-to-Strategy, the Check Integrity function will always return an error.
- When Check Integrity is off, IRD allows the opening and editing of a loaded strategy.
- Before checking strategy integrity, save your changes. If you do not save your changes before using the Check Integrity tool, this error message appears:
`Check Integrity Operation aborted`
- If the Check Integrity tool is not available select View > Check Integrity to activate the tool. When the Check Integrity command is activated, all strategies and objects are checked. While IRD performs the check, you cannot perform any other operation.
- The Progress Bar indicates the progress of the integrity checking.
- Use the Compile command to check for strategy syntax errors.
- Turn off Check Integrity when updating permissions apply to a large number of objects. If Check Integrity is turned on, it could take a long time to update permissions, for example from No Access to Full Control.

Adding a Strategy to a Business Process

Strategies unconnected to a business process can be found in the Independent Objects folder (see Figure 38 on [page 63](#)).

Procedure:

Adding a strategy in the Independent Objects folder to a business process

Start of procedure

1. In the Interaction Design window object browser, Independent Objects folder, select the strategy.
2. Drag/drop it into the Strategies folder for the applicable business process.
3. Select Save from the File menu.

End of procedure

Procedure:

Re-using a strategy already contained in a business process

If the strategy is already connected to a business process, you can still use it.

Start of procedure

1. Switch to the business process that contains the strategy by double-clicking it to make it active (highlighted). You can also select Open the Process from the shortcut menu.
2. Expand the Strategies folder where you will copy the strategy to.
3. Select the strategy that you wish to re-use so it is highlighted.
4. Drag only (don't drop yet) to the Strategies folder for the applicable business process.
5. Place the mouse pointer directly over the Strategies folder.
6. When the mouse pointer becomes a left-pointing arrow, drop the strategy into the folder.

End of procedure

Editing/Viewing Strategies

Note: You must deactivate a strategy before you can open it for editing or viewing. For more information, see [page 367](#).

You can edit or view a strategy that is not loaded on a virtual routing point from either the Interaction Design window or from the Routing Design window.

Procedure: Editing/viewing a strategy from the Interaction Design window

Start of procedure

1. Right-click the strategy name and select Edit/View Strategy from the menu (see [Figure 316](#)).

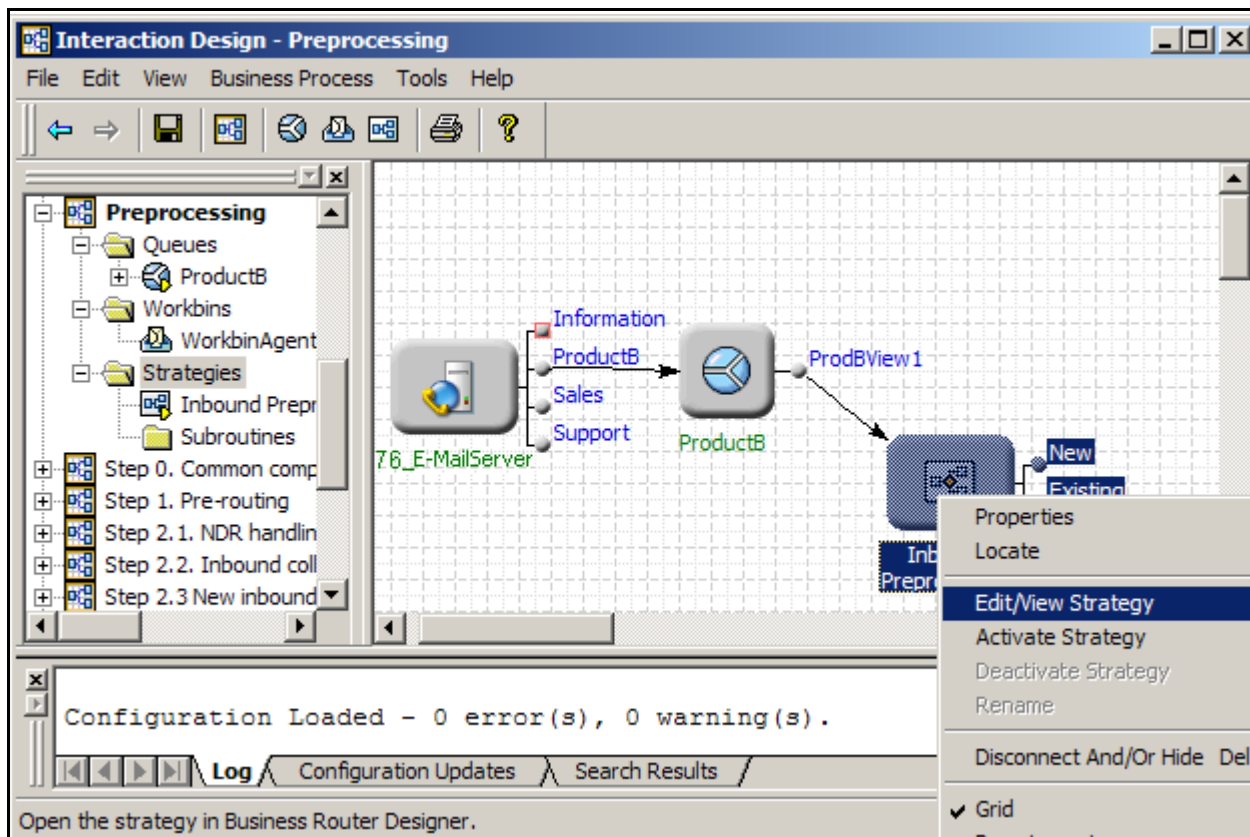


Figure 316: Edit/View Strategy From the Interaction Design Window

If you have access to the .rbn file (see “Graphical Portion of a Strategy” on [page 172](#)), the strategy opens for editing in the Routing Design window (see [Figure 317](#) on [page 358](#)).

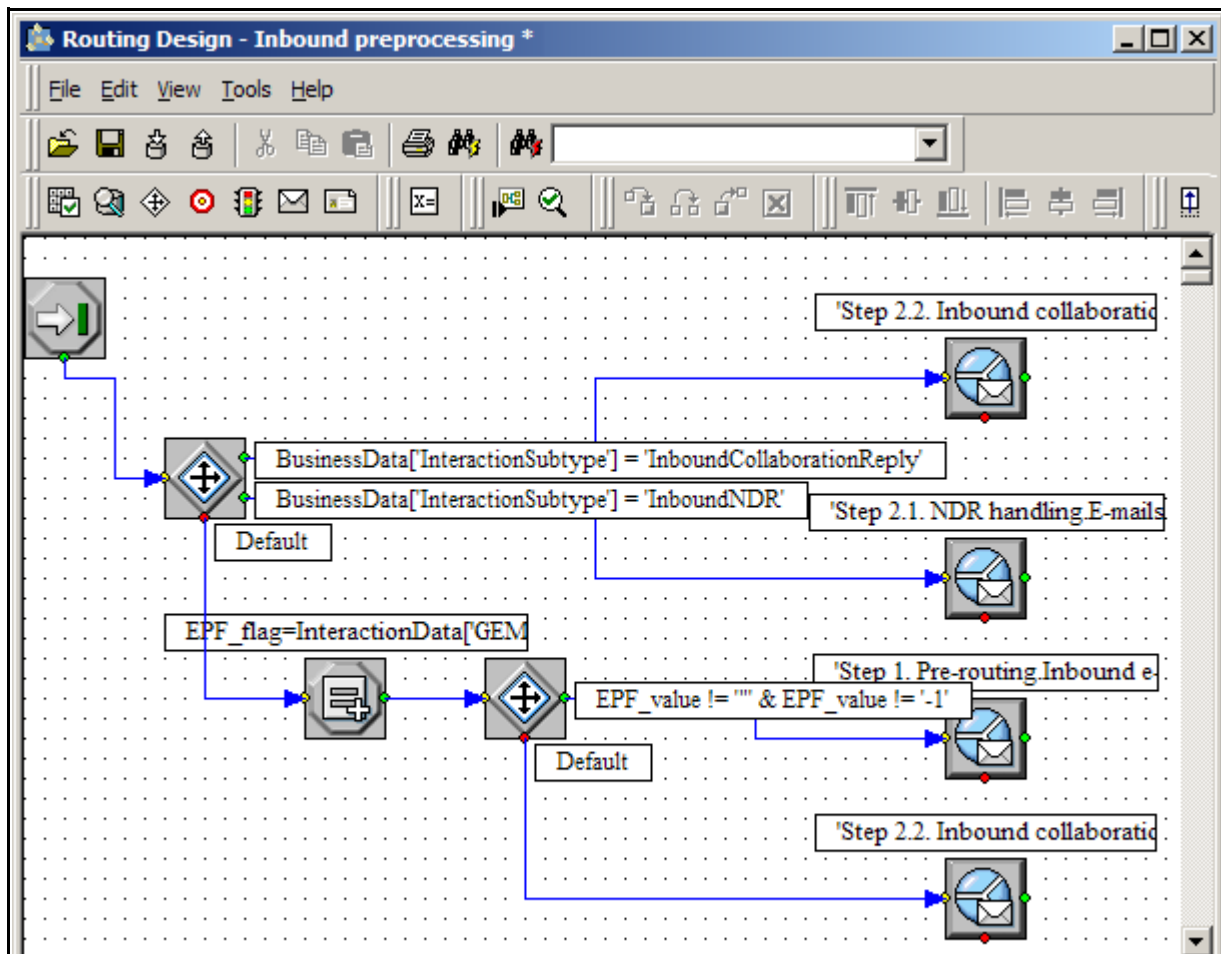


Figure 317: Strategy Available for Editing in Design View

2. If you have unsaved changes in the currently open business process, respond to the message that appears (see [Figure 318](#)).

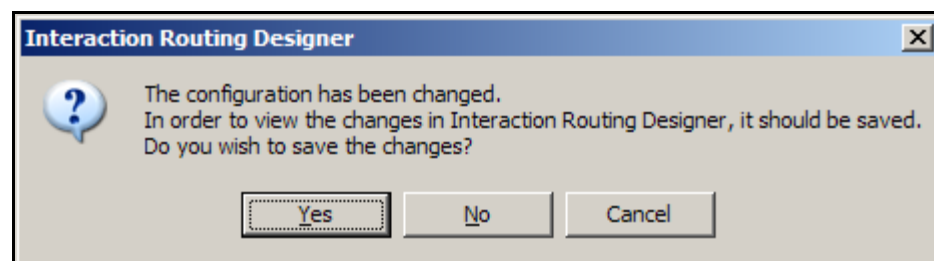


Figure 318: Configuration Changed Prompt

End of procedure

Procedure:**Viewing a strategy from the IRD main window**

To edit/view from the Strategies list pane in the IRD main window (see Figure 90 on [page 115](#)), use one of the methods below.

Start of procedure

1. If working in the Interaction Design window, minimize the window.
2. Open the window that contains the IRD main window.
3. Single-click the strategy to highlight and select **Open** from the **File** menu.
 - As an alternative, double-click the strategy to open.

End of procedure

With either method, if you have access to the .rbn file (see “Graphical Portion of a Strategy” on [page 172](#)), the strategy opens for viewing/editing in the Routing Design window (see Figure 317 on [page 358](#)).

Deleting Strategies

You can delete strategy that is not loaded on a virtual routing point in either the Interaction Design window or the Routing Design window.

Procedure:**Deleting strategies from the Interaction Design window****Start of procedure**

1. In the object browser (see Figure 37 on [page 62](#)), right-click the strategy.
2. Select **Delete** from the shortcut menu. The strategy is not deleted in the Configuration database, but only disappears from the business process that uses it. If you want to remove it from the Configuration Database, you must do so in the Routing Design window.

End of procedure

Procedure: Deleting strategies from the Strategies List pane

Start of procedure

1. In the Strategies List pane (see Figure 34 on [page 59](#)), single-click the strategy.
2. Press the Delete key. The following message appears (see [Figure 319](#)):

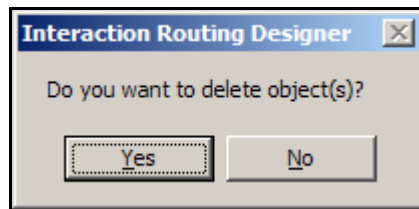


Figure 319: Delete Object Confirmation

3. Click Yes. The strategy is deleted. Any re-usable objects (see [page 115](#)) that the strategy uses are not deleted.

End of procedure



Chapter

12 Using a Business Process

This chapter provides step-by-step instructions for using business processes. It covers the following topics:

- [Activating Strategies, page 361](#)
- [Testing the Strategy, page 364](#)
- [Verifying the Workflow, page 365](#)
- [Deactivating/Unloading Strategies, page 366](#)

Activating Strategies

Before testing a routing strategy, you must load it on a virtual routing point in your Test environment (do not load it in your Production environment). Use the Strategy Activation Wizard for this purpose as described below.

Procedure:

Loading a multimedia strategy on a virtual routing point

Start of procedure

1. As described in the *eServices (Multimedia) 8.0 Deployment Guide*, make sure a Multimedia Switch object is configured and available in IRD's Monitoring view (see [Figure 320](#) for an example).

Routing Server	Strategy/Sche...	Entered	Routed	Aban...	In Pro...	Ac
UR_Server_75...		733752	733752	0	0	
75_G3_1(...)						
4441_...	Chat request tr...					
75_G3_2(...)						
6661_...	75Voice					
6662_...						
Multimedia...						
UR_Server_760						
75_G3_1(...)						
4441_...						
75_G3_2(...)						

Figure 320: Example Multimedia Switch

- Open the business process associated with the strategy by double-clicking it. Or use **Open the Process** from the shortcut menu.
- Use one of the following methods to open the Strategy Activation Wizard:
 - Highlight the business process name in the object browser and select **Deactivate Strategy(ies)** from the **Tools** menu. Using this method, you can activate multiple strategies at once
 - Right-click the Strategy object in the object browser or workflow viewer and select **Activate Strategy** from the shortcut menu (see [Figure 321](#)).

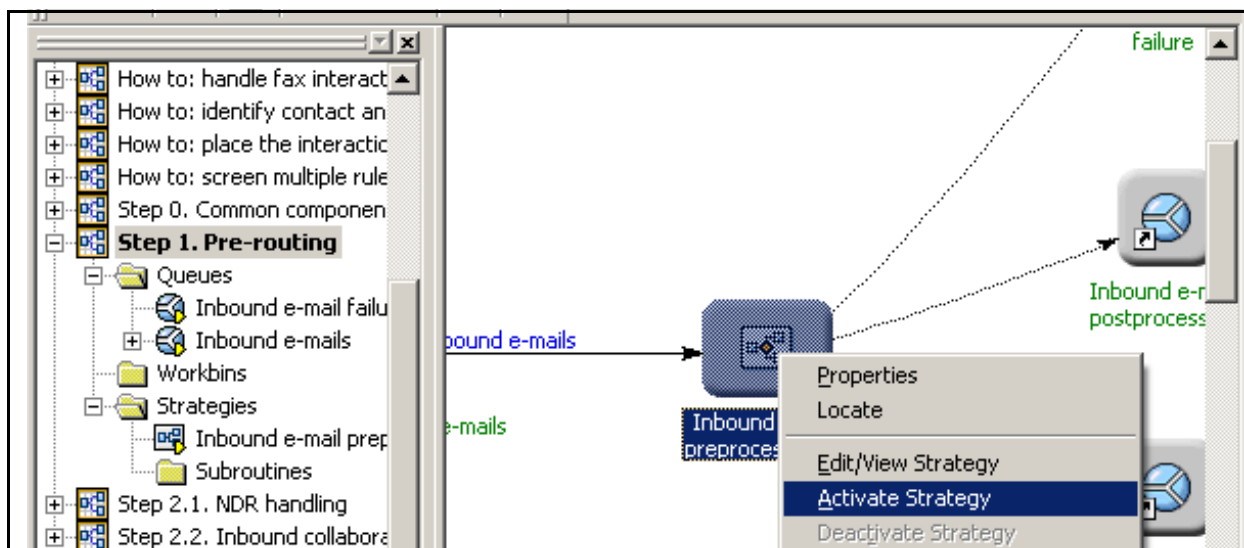


Figure 321: Activate Strategy from Context Menu

With either method, the Strategy Activation Wizard launches (see [Figure 322](#)).

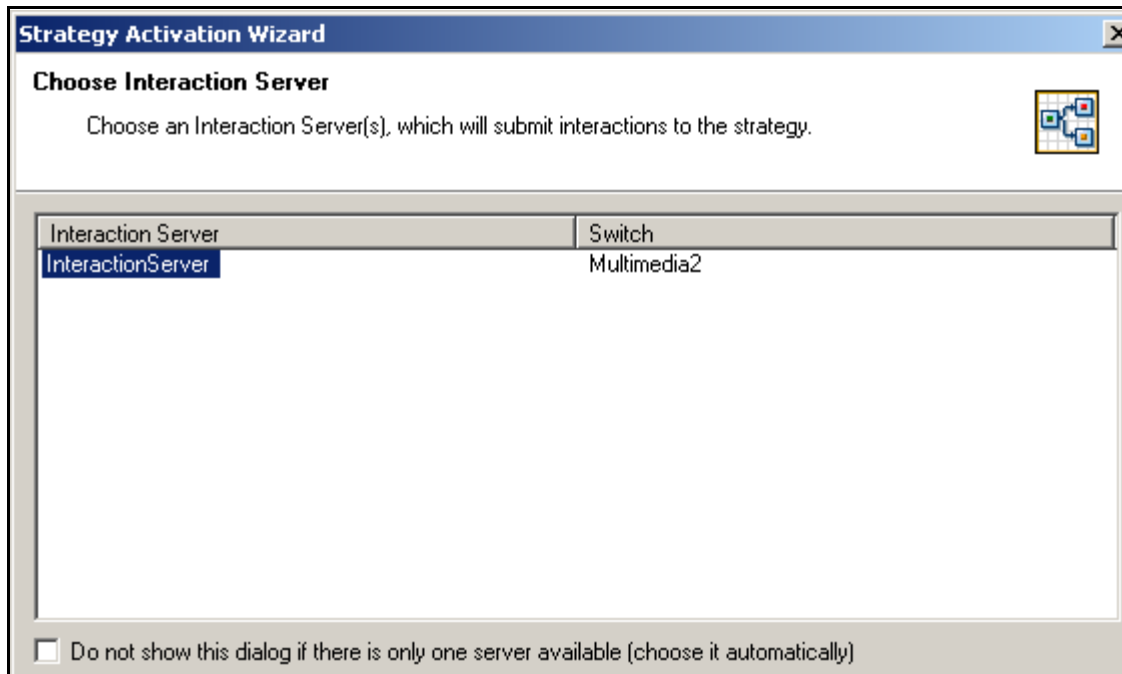


Figure 322: Strategy Activation Wizard, Start

4. Select an Interaction Server and click Next. Choose Universal Routing Server appears at the top of the wizard (see [Figure 323](#)).

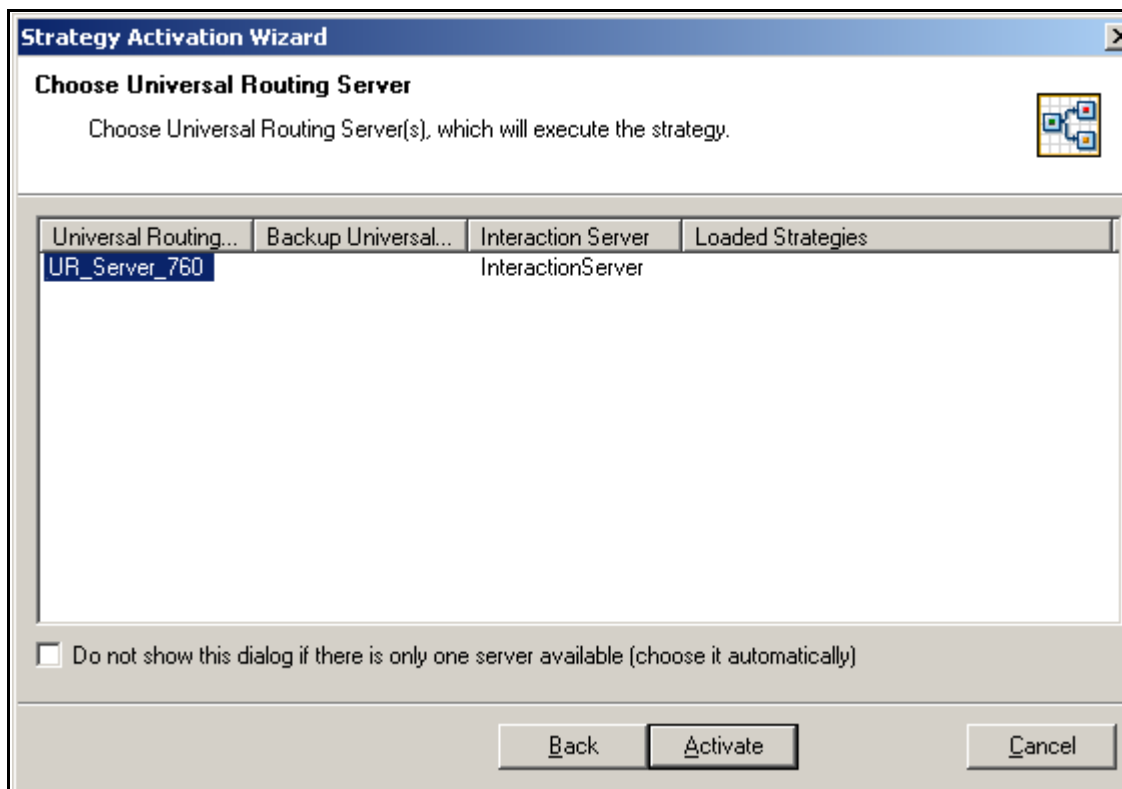


Figure 323: Strategy Activation Wizard, Choose Universal Routing Server

5. Select a Universal Routing Server and click **Activate**. The next dialog box indicates the activation is done (see [Figure 324](#)).

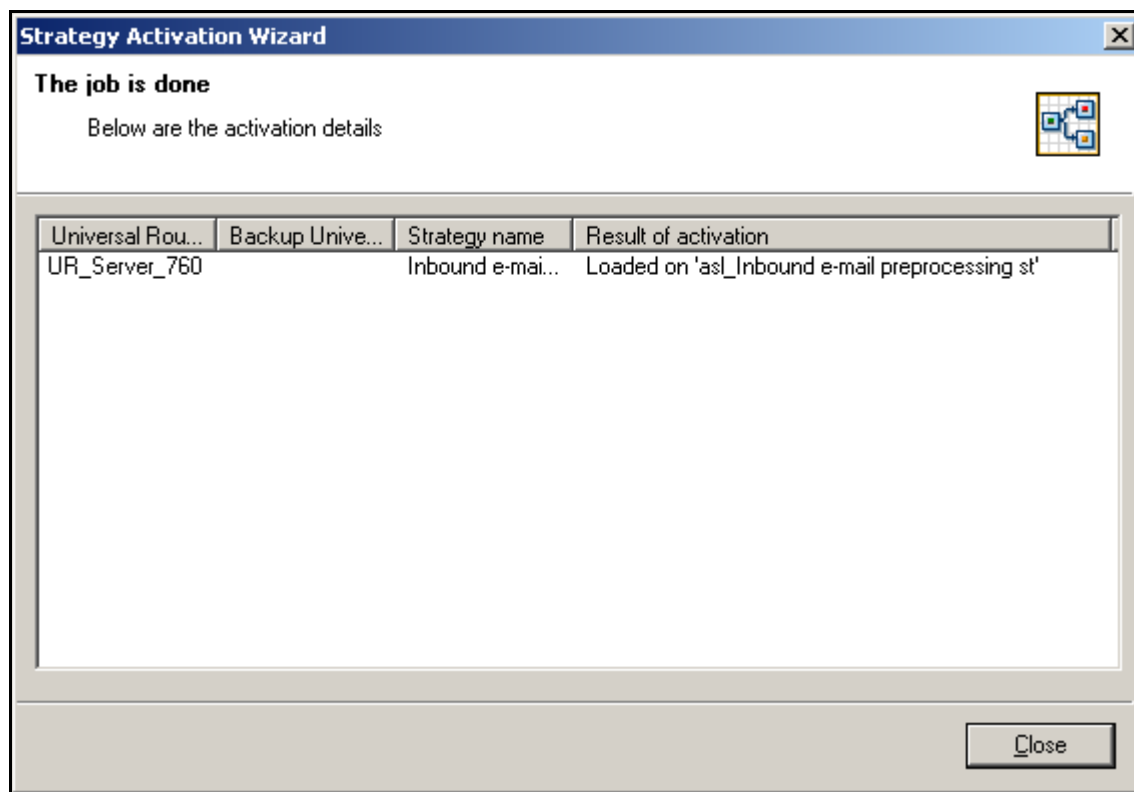


Figure 324: Strategy Activation Wizard, Choose Universal Routing Server

End of procedure

If you do not have a Switch connection to Interaction Server, when you select **Activate Strategy** from the menu shown in [Figure 321](#) on [page 362](#), the Strategy Activation Wizard explains what to do next.

Note: It is possible to manually load strategies in **Monitoring** view (see [Figure 67](#) on [page 84](#)). The Strategy Activation Wizard is the preferred method because it creates the virtual routing points for you. Similarly, when you use the Wizard to deactivate a strategy loaded on a virtual routing point (see [Figure 68](#) on [page 85](#)), the Wizard also deletes the virtual routing points.

Testing the Strategy

Testing the strategy is accomplished by using a combination of your e-mail client and Genesys Desktop, which flashes a yellow icon when an e-mail is received by a ready agent (see [Figure 325](#)).

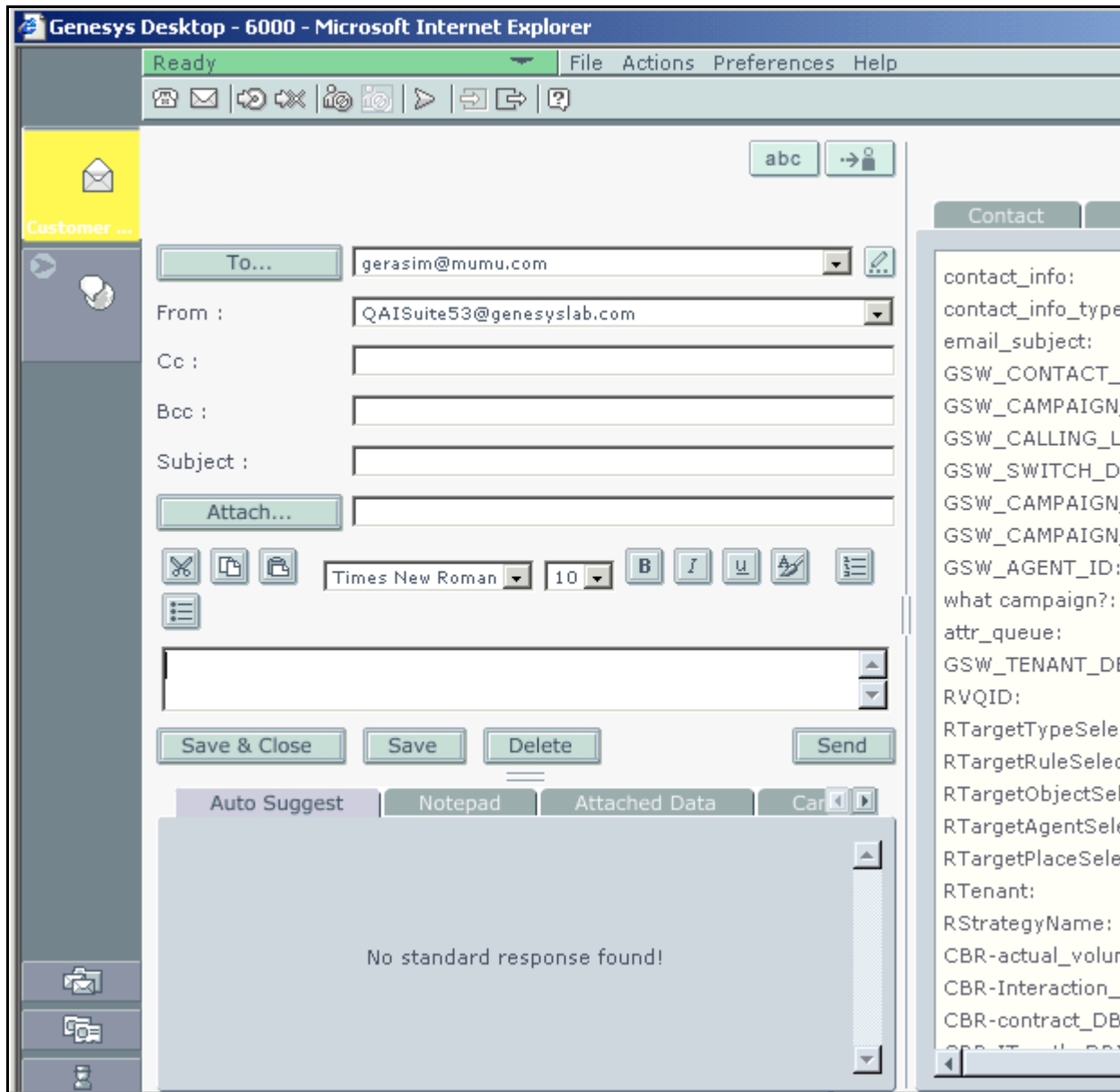


Figure 325: Genesys Agent Desktop

For information about testing business processes, consult the *eServices (Multimedia) 8.0 Deployment Guide*.

Verifying the Workflow

A business process must be consistent. This means that:

- All routing strategies are valid.
- All non-dynamic queues have at least one Submitter object.

- All agent targets and routing strategies must have the appropriate number of connections.
- All interaction processing must have an end. The end can be specified by the IRD Stop Processing object or a special target (different from an agent and/or queue).

To verify a business process:

1. Select Options from the Tools menu.
2. Make sure the following option is selected:
Fix Referential Integrity Errors Automatically (on Load).
3. Select OK.
4. Close and re-open the business process.
5. Respond to any messages that might appear.

Deactivating/Unloading Strategies

Note: It is possible to unload strategies manually in Monitoring view (see Figure 67 on [page 84](#)). Using Deactivate, as described below, is the preferred method because it gives you more options.

You must either deactivate or unload a strategy before you can open it for editing or viewing with Edit/View Strategy.

Procedure:

Deactivating or unloading a strategy in a business process

Start of procedure

1. Open the Strategy Activation Wizard using one of the following methods:
 - Right-click the Strategy object in the object browser or workflow viewer and select Deactivate Strategy from the shortcut menu.
 - Highlight the business process name in the object browser and select Deactivate Strategy(ies) from the Tools menu. Using this method, you can deactivate multiple strategies at once

Depending on which method you use, the Deactivate <name> Strategies dialog box opens listing either one or all of the strategies contained in the business process that could be deactivated.

In the figure below, the business process contains one strategy (see [Figure 326](#)).

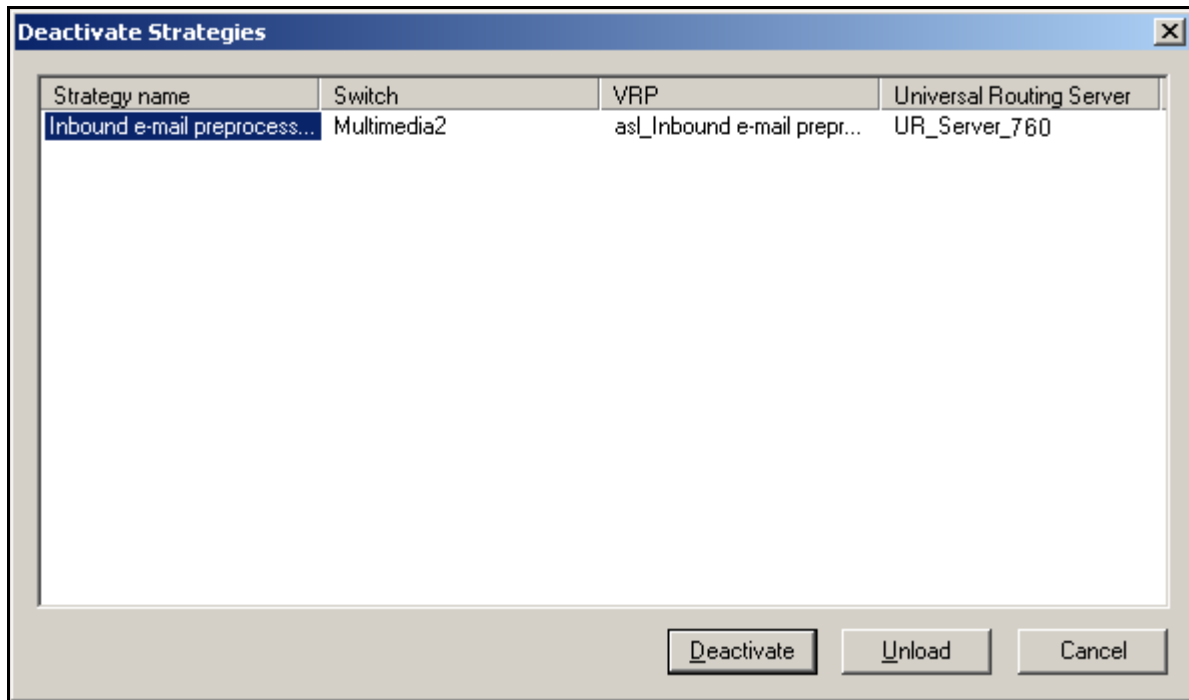


Figure 326: Deactivate Strategy Dialog Box

2. Select either Activate or Unload.
 - Deactivate deletes the virtual routing point as well as deactivating the strategy in the business process.
 - Unload does not delete the virtual routing point. You must unload a strategy before you can view or edit it. In a large environment, the Unload option could save time later when activating multiple strategies back to existing routing points.

If multiple strategies are listed, select only the strategies you wish to deactivate or unload.

3. When the strategies are highlighted, click the button for the desired action. IRD will not display confirmation prompts. After you click the desired button, the dialog box closes and IRD performs the action.

End of procedure



Appendix

Business Process Samples

This appendix discusses the Genesys-supplied business process samples. It builds on the information that is contained in “Using the Samples” on [page 197](#) and covers the following topics:

- [About the Samples, page 370](#)
- [Viewing the Samples, page 372](#)
- [ABC Simple BP, page 374](#)
- [ABC Simple Chat BP, page 379](#)
- [ABC Simple MMS, page 381](#)
- [ABC Simple SMS Paging, page 382](#)
- [Web Callback, page 382](#)
- [Default BP, page 387](#)
- [Step-Numbered Business Processes, page 389](#)
- [Step 1. Pre-Routing, page 391](#)
- [Step 2.1. NDR Handling, page 393](#)
- [Step 2.2. Inbound Collaboration Reply, page 394](#)
- [Step 2.3. New Inbound E-mails, page 396](#)
- [Step 3.1. Processing By Agents, page 399](#)
- [Step 3.2. QA Review, page 401](#)
- [Step 3.3. Forwarding, page 403](#)
- [Step 3.4. Redirecting, page 405](#)
- [Step 4. Outbound Sending, page 407](#)
- [How To: Business Processes, page 409](#)
- [How To: Apply Escalation Procedure, page 411](#)
- [How To: Attach Classification Categories and Use Attach Categories Object, page 413](#)
- [How To: Attach Classification Categories and Use Multi-Screen Object, page 419](#)
- [How To: Conduct a Survey by Using Email, page 425](#)
- [How To: Get Credit Card Number From the E-mail, page 430](#)
- [How To: Handle Fax Interactions, page 434](#)
- [How To: Identify Contact and Create Interaction in UCS, page 441](#)

- [How To: Place the Interaction Into the Workbin, page 445](#)
- [How To: Screen Multiple Rules and Use Screening Switch, page 449](#)

About the Samples

Because each company has its own environment and different requirements, supplying business process samples that accurately reflect all real-world business scenarios is not possible. Therefore, do not consider the Genesys-supplied Interaction Workflow Samples suitable for a Production environment, but instead as demonstrations of one way in which to implement various types of functionality. Use them as a starting point to develop your own customized business processes adjusted to your company's specific needs. Through its Interaction Workflow Samples component (shown in Figure 327 on [page 373](#)), Genesys provides the following business processes:

- ABC Simple BP ([page 374](#)), which is a basic business process useful to get a concept and check the samples installation.
- ABC Simple Chat BP ([page 379](#)), which offers minimal chat interaction processing.
- ABC Simple MMS ([page 381](#)), which offers minimal inbound MMS (Multimedia Messaging Service) processing.
- ABC Simple SMS Paging ([page 382](#)), which offers minimal SMS (Short Messaging Service) processing.
- Default BP ([page 387](#)), which is a complex business process that has a lot of functionality. See “Functionality Demonstrated in the Samples”.
- The step-numbered samples break down Default BP into functionally-themed components:
 - Step 0. Common Components (see Table 30 on [page 389](#))
 - Step 1. Pre-routing ([page 391](#))
 - Step 2.1. NDR Handling ([page 393](#))
 - Step 2.2. Inbound Collaboration Reply ([page 394](#))
 - Step 2.3. New Inbound E-mails ([page 396](#))
 - Step 3.1 Processing by Agents ([page 399](#))
 - Step 3.2. QA Review ([page 401](#))
 - Step 3.3. Forwarding ([page 403](#))
 - Step 3.4. Redirecting ([page 405](#))
 - Step 4. Outbound Sending ([page 407](#))
- The how-to business processes:
 - How to: apply escalation procedure ([page 411](#))
 - How to: attach classification categories & use attach categories object ([page 413](#))

How to: attach classification categories & use multi-screen object ([page 419](#))

How to: get credit card number from the e-mail ([page 430](#))

How to: handle fax interactions ([page 434](#))

How to: identify contact and create interaction in UCS ([page 441](#))

How to: place the interaction into the workbin ([page 445](#))

How to: screen with multiple rules and use multi-screen object ([page 449](#))

- Web Callback ([page 382](#)) offers web callback processing.

Samples Functionality

The Interaction Workflow Samples component supplies the following functionality:

- Pre-routing based on interaction sub-type (see [page 391](#))
- Routing interactions to the original agent (see [page 393](#))
- Screening of inbound interactions (see [page 396](#))
- Attaching classification Categories (see [page 419](#))
- Processing of attached data (see [page 393](#))
- Redirecting interactions (see [page 405](#))
- Forwarding interactions (see [page 403](#))
- Collaboration reply sending (see [page 394](#))
- Automatic treatment with an acknowledgement e-mail (see [page 451](#))
- Autoresponse e-mail when applicable (see [page 451](#))
- Placing interactions in workbins (see [page 445](#))
- Escalating overdue interactions to supervisor workbins (see [page 445](#))
- Routing to agents (see [page 399](#))
- Assigning failure codes to interactions (see [page 451](#))
- Promoting an interaction that failed pre-routing to the next process (see [page 391](#))
- Routing interactions for QA review (see [page 401](#))
- Skill-based review of agent response (see [page 401](#))
- Re-processing interactions that failed QA review (see [page 401](#))
- Quality control for outbound interactions based on screening (see [page 407](#))
- Re-processing interactions that failed quality control (see [page 401](#))
- Sending e-mail responses to customers (see [page 407](#))
- Re-processing interactions that failed sending (see [page 407](#))

- Stopping an interaction with a reason code (see [page 378](#))
- Handling fax interactions (see [page 434](#))
- Identify customer contacts and create interaction records (see [page 441](#))
- Get credit card information from an interaction (see [page 430](#))

Note: In order to understand fully a business process, you must understand its strategies. *Universal Routing 8.1 Strategy Samples* details many of the strategies that are found in the Genesys Multimedia Interaction Workflow Samples component.

Viewing the Samples

Once the samples are installed (as described in the *eServices (Multimedia) 8.0 Deployment Guide*) you can view them in the Interaction Design window (see [Figure 327](#)).

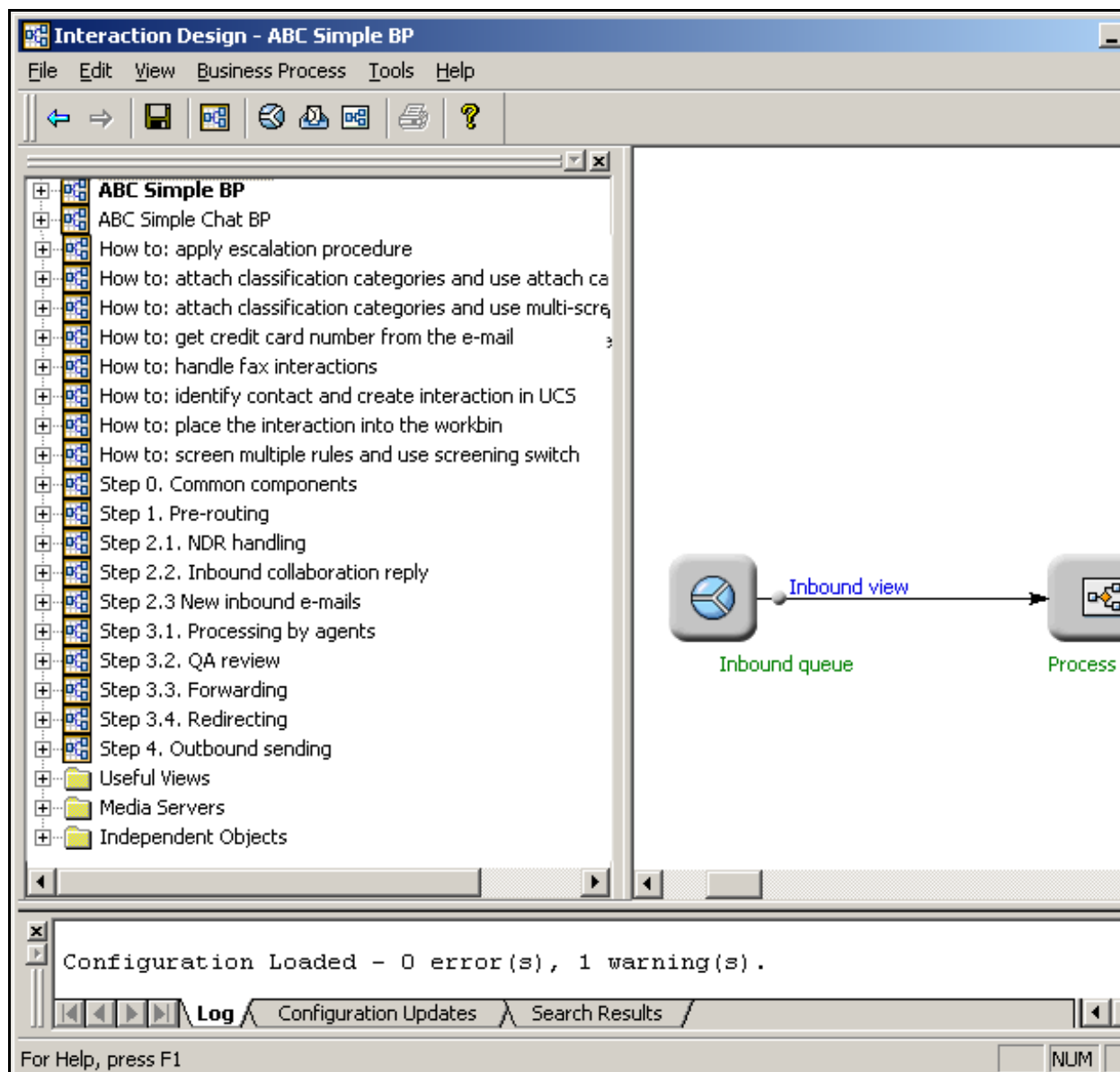


Figure 327: Interaction Workflow Samples

- For information about printing a business process, see [page 76](#).
- For information about printing the strategies contained in a business process, see [page 109](#).
- To change to a different business process, double-click the business process.

Properties Dialog Boxes for Strategy Objects

When you load the samples, as described in the *eServices (Multimedia) 8.0 Deployment Guide*, part of the installation process involves using Knowledge

Manager to import the file `UCS_impex.kme`. This file contains Screening Rules and other objects found in the Universal Contact Server Database, which must be synchronized with objects in the Configuration Database. If Screening Rules or other Knowledge Manager objects do not display in the object properties dialog boxes for the sample strategies, check whether this step was performed.

If the file was imported and the properties dialog boxes still do not display the proper objects, one possible reason may be that the database identifiers (IDs) of the default Screening Rules and/or other objects have changed. In this case, use Knowledge Manager to reimport the `ucs_impex.kme` file. In the Import dialog box, clear Preserve uniqueness of objects by creation of new UCS ids.

Warning! Normally, it is very risky to not preserve uniqueness (that is why the preceding check box is selected by default). However, when you are importing the `ucs_impex.kme` file related to the Interaction Workflow Samples, you do NOT want to change any of the database IDs that are associated with the default Screening Rules and other objects. Leaving this box unchecked will ensure that these rules are not assigned new UCS IDs.

ABC Simple BP

ABC Simple BP in Figure 327 on [page 373](#) is a basic version of a real-life business process. [Figure 328](#) shows the business process.

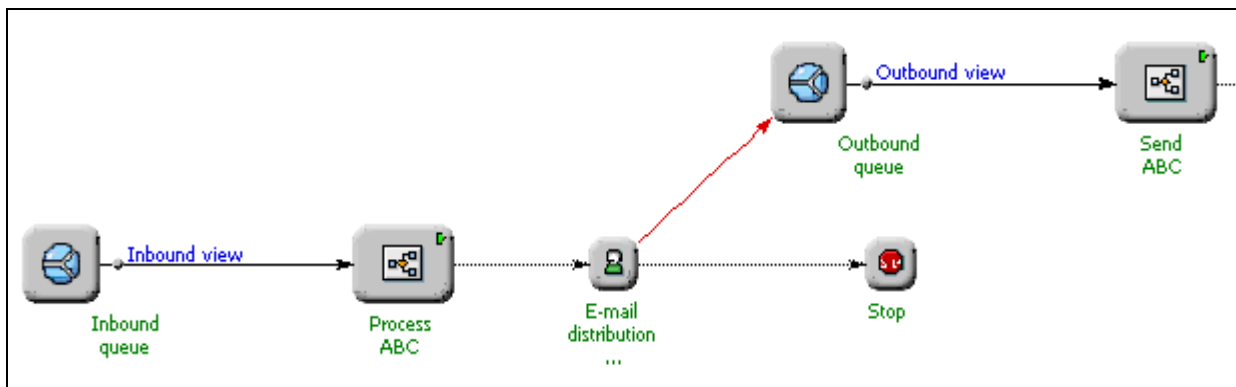


Figure 328: ABC Simple BP

The business scenario: Deliver inbound interactions to the appropriate agent and then send out the response created by that agent. The sample has no other functionality and can correctly process only new inbound customer interactions.

Processing Flow

Any e-mail that is received in the contact center is submitted by E-mail Server to the Inbound queue (see Figure 328 on [page 374](#)). Using Inbound view that has no Conditions or Order By information (see [page 273](#)), interactions are extracted from the queue and passed to the Process ABC routing strategy.

Process ABC Routing Strategy

This routing strategy contains only an Entry object, a Route Interaction object, and an Exit object (see [Figure 329](#)).

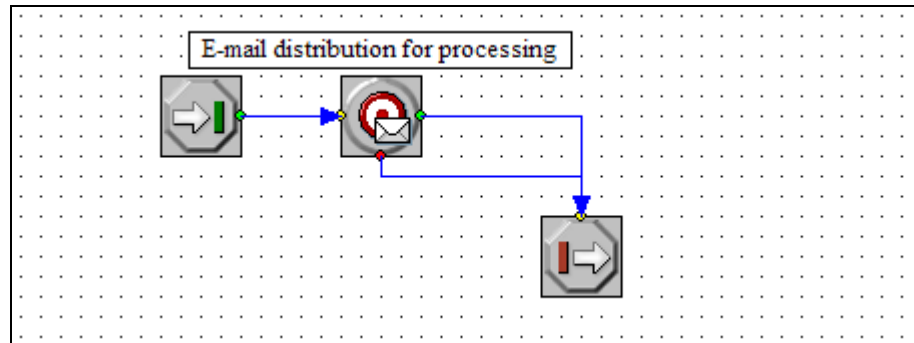


Figure 329: Process ABC Routing Strategy

Open the Route Interaction object Properties dialog box (see [Figure 330](#)).

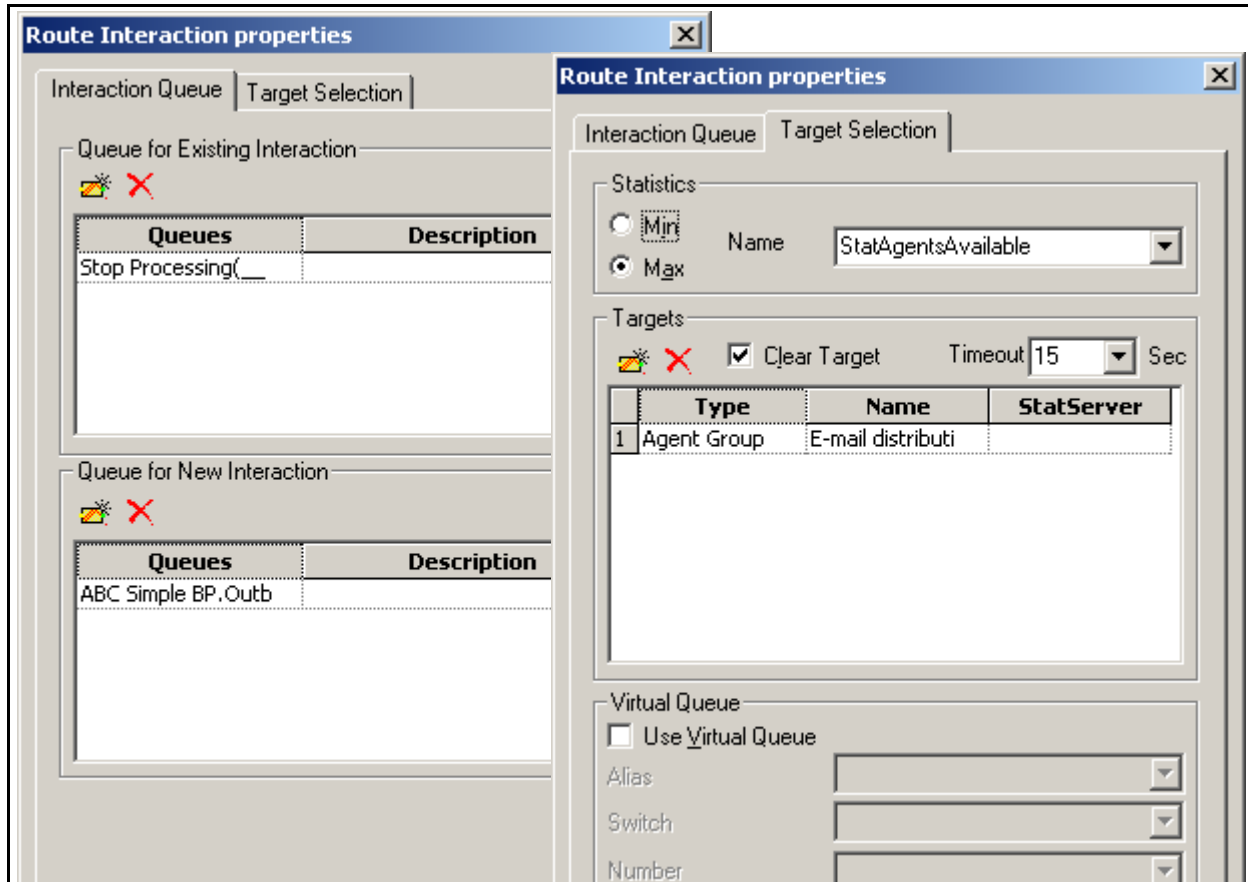


Figure 330: Process ABC Routing Strategy

You will see that the Interaction Queue tab specifies:

- The Genesys predefined queue Stop Processing(_STOP_) for the existing interaction (the customer's original e-mail for which processing is now ending). Stop Processing(_STOP_) is represented by the first Stop object in Figure 328 on [page 374](#), which is a strategy-linked node (see [page 34](#)).
- The queue Outbound queue for the new interaction that will be created, which will ultimately be sent to the customer. This queue is the Outbound queue strategy-linked node in Figure 328 on [page 374](#).

In the Target Selection tab in Figure 330 on [page 376](#), you will see that the interaction is routed to a member of the Agent Group called E-mail distribution. This target is represented as the E-mail distribution person strategy-linked node (see [page 34](#)) in Figure 328 on [page 374](#).

The agent generates a response and places it in the Outbound Queue. Interactions are extracted using the Outbound view (with no Condition or Order By information as shown in Figure 222 on [page 273](#)) and submitted to the routing strategy Send ABC.

Send ABC Routing Strategy

Figure 331 shows the Send ABC routing strategy.

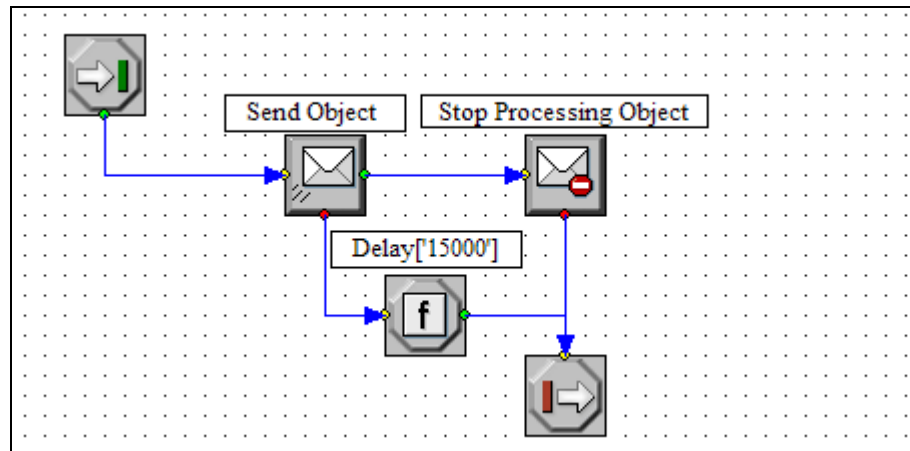


Figure 331: Send ABC Routing Strategy

Send Object

Open the properties dialog box for the Send E-mail object (see Figure 332).

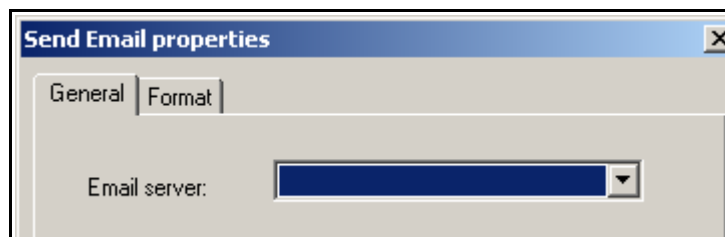


Figure 332: Send Object

- The Send object notifies E-mail Server through Interaction Server to send the e-mail to the customer. E-mail server is blank in Figure 332 because Interaction Server uses the E-mail Server that is named in its Connections list in Configuration Manager.
- The Format tab gives the option to edit the To, From, and Subject areas in the e-mail that will go to the customer (for details, see *Universal Routing 8.1 Reference Manual*).

Stop Interaction Object

Note the Stop Interaction object in the strategy in Figure 331. It tells Interaction Server that processing for this interaction has stopped. Open the properties dialog box for the Stop Interaction object (see Figure 333).

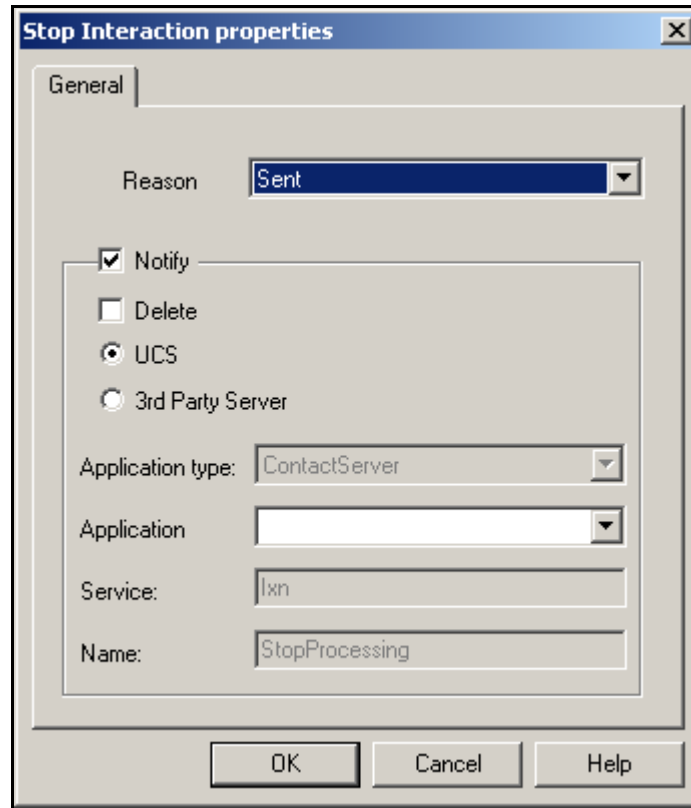


Figure 333: Stop Interaction Object

The Stop Interaction object specifies a Reason Code. Genesys predefines the Sent Reason Code in Configuration Manager. The Stop Interaction object also specifies that Universal Contact Server (UCS) should be notified that processing for this interaction (the new interaction) has stopped.

When a Stop Interaction object is used inside a strategy, it generates a Stop strategy linked node (see [page 34](#)). You can see this strategy-linked node as the second Stop node in Figure 328 on [page 374](#).

Function Object

The Send ABC routing strategy that is shown in Figure 331 on [page 377](#) also contains a Function object. If there is an error in sending, the interaction goes out the bottom port of the Send object to a Function object. Open the properties dialog box for the Function object (see [Figure 334](#)).

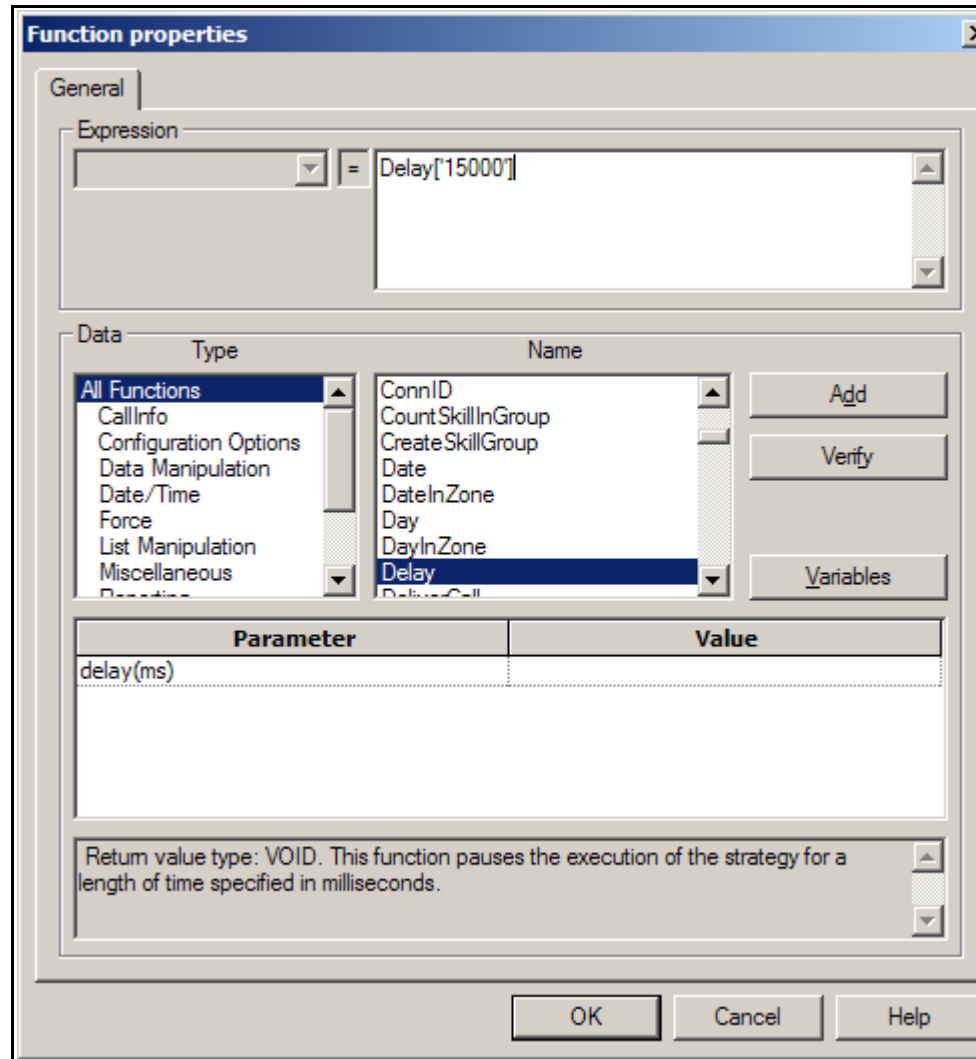


Figure 334: Function Object

Strategy execution is delayed for the specified number of milliseconds. After this number of milliseconds, the interaction is returned to the same queue for the next send attempt.

ABC Simple Chat BP

ABC Simple Chat BP is very similar to ABC Simple BP. The main difference is that ABC Simple Chat BP contains a strategy (Chat strategy - create transcript e-mail) that uses the Chat Transcript object to request E-mail Server to generate an e-mail that has the customer's chat transcript attached.

[Figure 335](#) shows the business process.

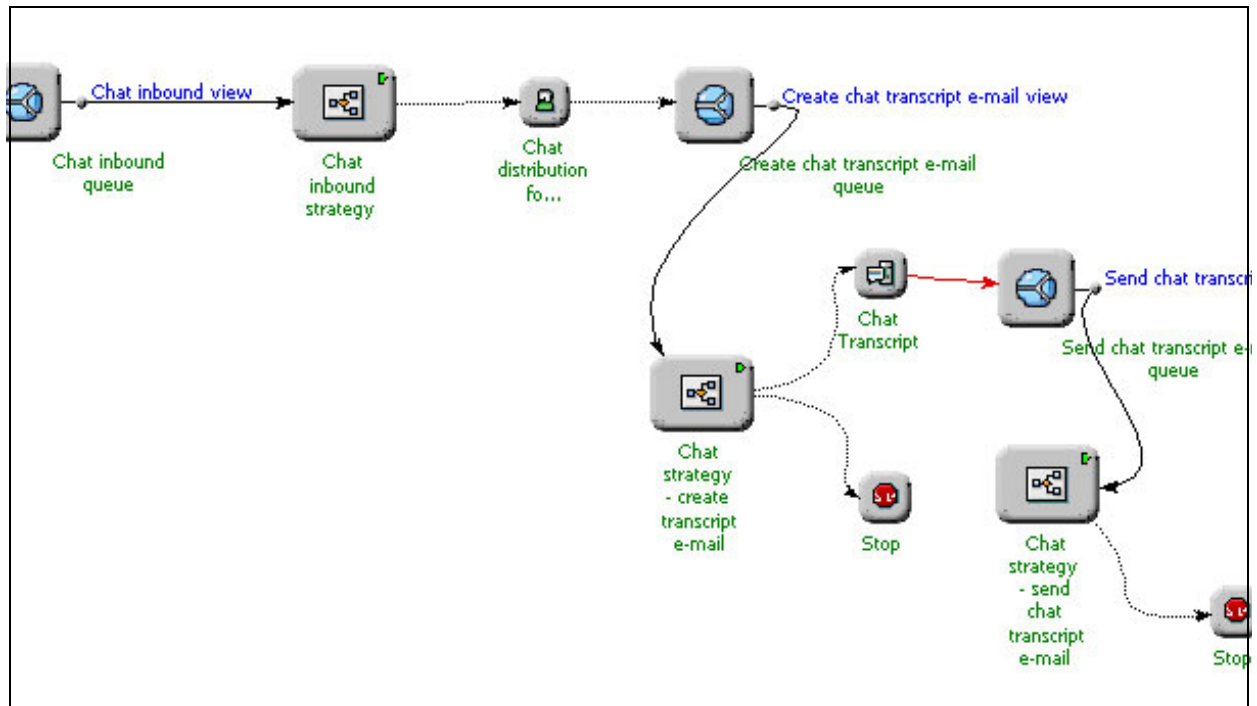


Figure 335: ABC Simple Chat BP

Note: The objects within this business process have been repositioned so that all are visible on a page.

The business scenario: Determine whether an interaction should be processed immediately (such as a chat) or at a later time. If the interaction is the result of a chat session, request E-mail Server to generate an e-mail that has the chat transcript attached and send it to the customer.

Note: For more information about this business process, including its queues, views and strategies, see *Universal Routing 8.1 Strategy Samples*.

ABC Simple MMS

ABC Simple MMS provides basic MMS processing functionality. The business process contains one strategy: MMS Inbound Processing. [Figure 336](#) shows the business process.

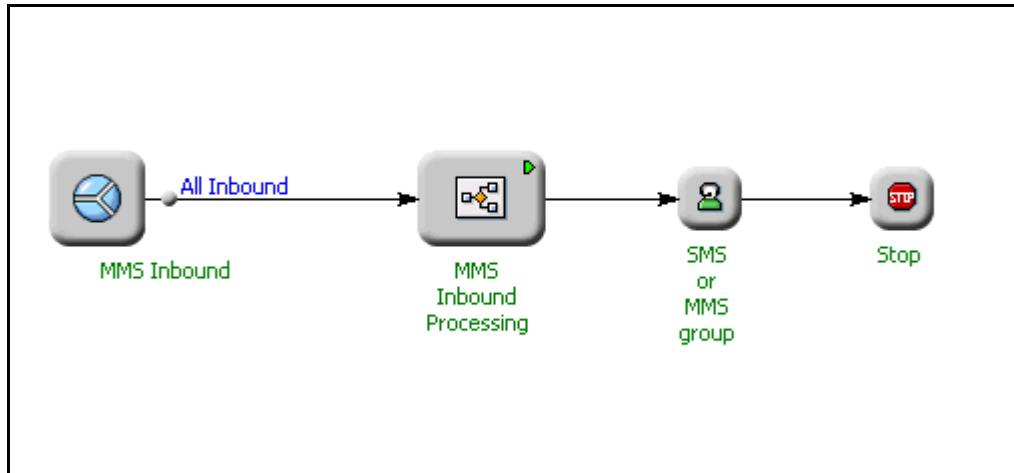


Figure 336: ABC Simple MMS BP

The business scenario: Deliver inbound MMS interactions to the appropriate agent. The agent can see the interaction's content (subject, text and multimedia elements) and the interaction's history of a contact (author of the MMS message). The sample has no other functionality and can correctly process **new** inbound customer interactions only.

Note: For more information about this business process, including its strategies, see the *Universal Routing 8.1 Strategy Samples*.

ABC Simple SMS Paging

ABC Simple SMS Paging provides basic SMS processing functionality. The business process contains two strategies: SMS Inbound and SMS Outbound.

Figure 337 shows the business process.

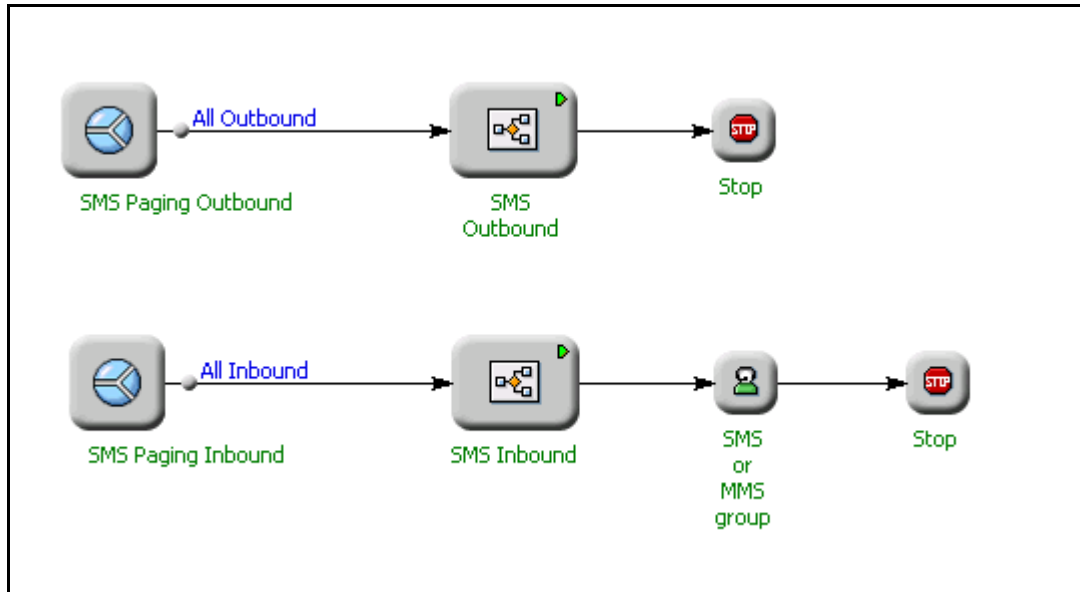


Figure 337: ABC Simple SMS Paging BP

The business scenario: Deliver inbound SMS interactions to the appropriate agent. The agent can see the interaction's content and the interaction's history of a contact (author of the SMS message). The agent can reply to the contact by using an outbound SMS message. The outbound interaction is placed into an outbound interaction queue. The SMS outbound routing strategy fetches the outbound interaction and sends it to the contact by using SMS Server. The sample has no other functionality and can correctly process new inbound customer interactions only.

Note: For more information about this business process, including its strategies, see *Universal Routing 8.1 Strategy Samples*.

Web Callback

WebCallback provides basic web callback processing. The business process contains the following strategies:

- Delivering strategy
- Expired Conference Callbacks strategy
- Expired Transfer Callbacks strategy

- Outbound notification email sending strategy
- Preprocessing strategy
- Rescheduled by Agent strategy
- Rescheduled by Customer strategy
- Stop By Agent strategy
- Stop By Customer strategy

The WebCallback business process contains the following subroutines:

- Check Customer Session State
- Check Interaction
- Check Maximum Attempts
- Check Maximum Waiting Time
- Increment Number of Attempts
- Schedule Web Callback
- Send Email Notification
- Stop Web Callback

[Figure 338](#) shows the business process.

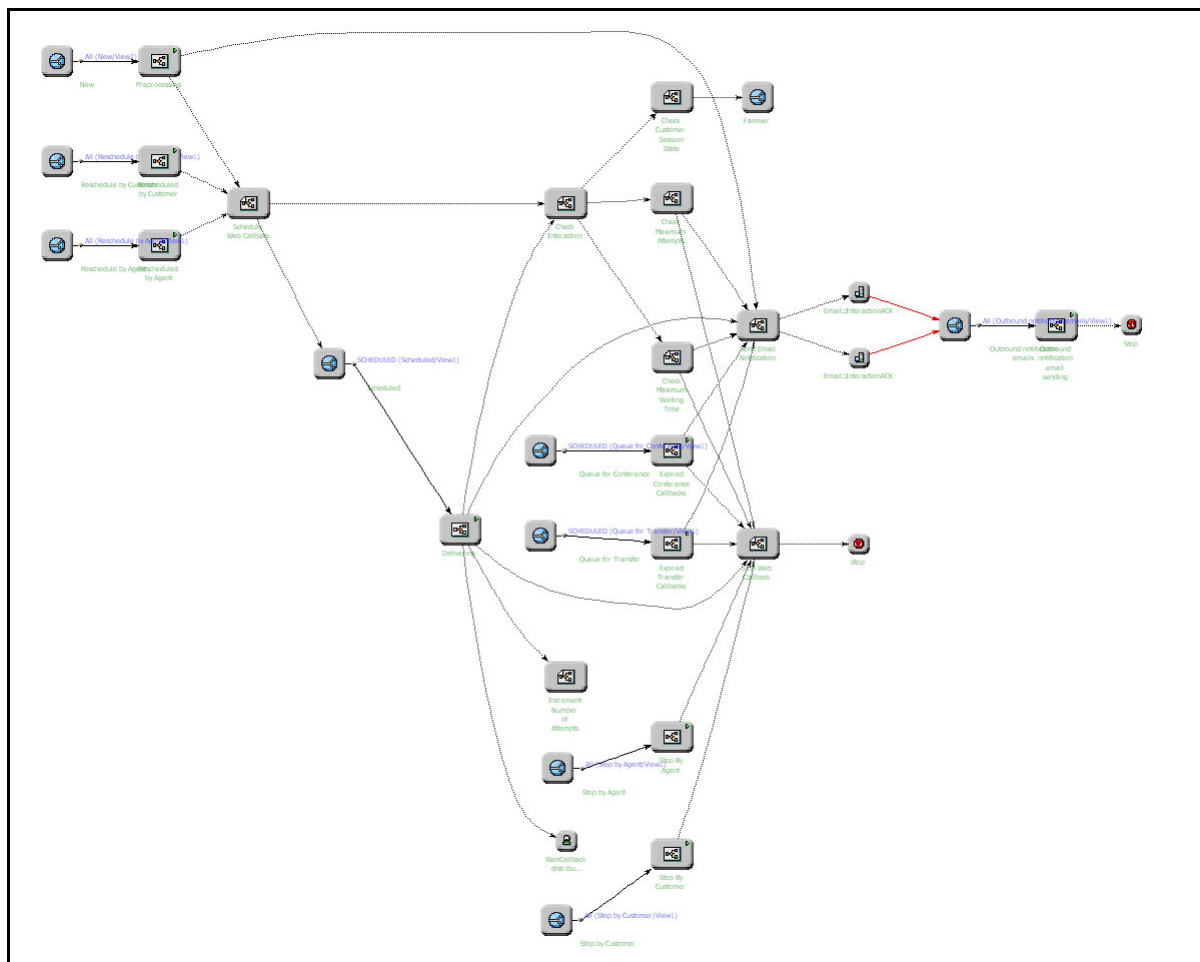


Figure 338: WebCallback Business Process

The business scenario: Process web callback interactions. This includes delivering web callback interactions to agents, rescheduling web callback interactions, and stopping web callback interactions.

Configuration

Configuration options used in the WebCallback business process are defined in URS as list objects (see “List Objects” on [page 121](#) for more information). [Figure 339](#) shows the WebCallback list object, the options item, and two keys: UseUCS and MaxAttempts.

UseUCS specifies whether a new web callback interaction will be created in UCS and updated when the interaction is stopped (true). The default value for UseUCS is false.

MaxAttempts specifies the maximum number of attempts that can be made to deliver the interaction to an agent. The default value is 5. MaxAttempts can be set to any valid integer.

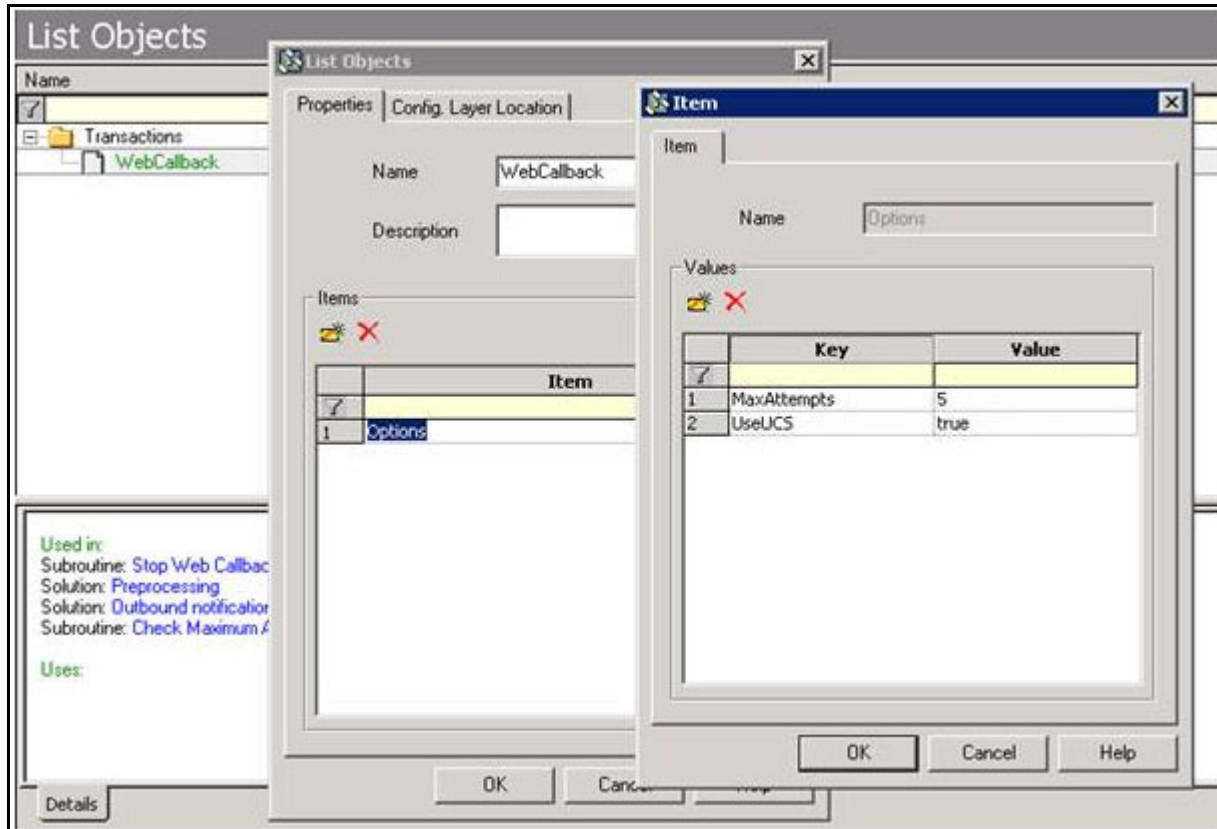


Figure 339: WebCallback List Object

Processing Flow

This section outlines the processing flow of the WebCallback business process. It is divided into the following topics:

- Preprocessing
- Delivering
- Rescheduling by Agent
- Rescheduling by Customer
- Stopping by Strategy
- Stopping by Agent
- Stopping by Customer

Note: For more information about this business process, including its strategies, see *Universal Routing 8.1 Strategy Samples*.

Preprocessing

The Preprocessing phase of the business process updates all necessary interaction business data parameters, sets the correct `ScheduledAt` key-value pair, and submits the interaction to the `Scheduled` queue.

Optional steps include the following:

- Create the contact and interaction in UCS.
- Send a confirmation e-mail to the customer.

Delivering

The Delivering phase of the business process finds a target and delivers the web callback to an agent.

The interaction is redirected to the `Stop` queue if:

- The end time for the callback has passed.
- A target is not found and the end time for the callback has passed.

The interaction is redirected to the `Failover` queue if the `WCB_CUSTOMER_SESSION_STATE` key-value pair value is set to `active`. This will prevent double calls to customers in case of system failover.

Rescheduling by Agent

All of the the necessary interaction business data parameters are updated, and the correct `ScheduledAt` key-value pair is set. The interaction is submitted to the `Scheduled` queue.

The number of attempts is updated.

The interaction is redirected to the `Stop` queue if:

- The number of attempts is too high.
- The end time for callback has passed.

Rescheduling by Customer

All of the the necessary interaction business data parameters are updated, and the correct `ScheduledAt` key-value pair is set. The interaction is submitted to the `Scheduled` queue.

The interaction is redirected to the `Stop` queue if:

- The number of attempts is too high.
- The end time for callback has passed.

Stopping by Strategy

All of the necessary interaction business data parameters are updated. The interaction is stopped.

The status is updated to `Completed`.

Optional steps include:

- Update the interaction in UCS.
- Send a notification e-mail about the unsuccessful web callback to the customer.

Stopping by Agent

All of the necessary interaction business data parameters are updated. The interaction is stopped.

The status is updated to `Completed`.

Optional steps include:

- Update the interaction in UCS.

Stopping by Customer

All of the necessary interaction business data parameters are updated. The interaction is stopped.

The status is updated to `Completed`.

Optional steps include:

- Update the interaction in UCS.

Default BP

`Default BP` is an example of a complex business process that encompasses the functional areas that are isolated in the step-numbered business processes (see Table 30 on [page 389](#)). It combines a large number of different tasks into a single business process. Contrast this with the “Step-Numbered Business Processes” on [page 389](#) in which the tasks are divided into smaller business processes that are connected via queues (see [page 199](#)).

[Figure 340](#) shows a high-level view of the start of `Default BP`.

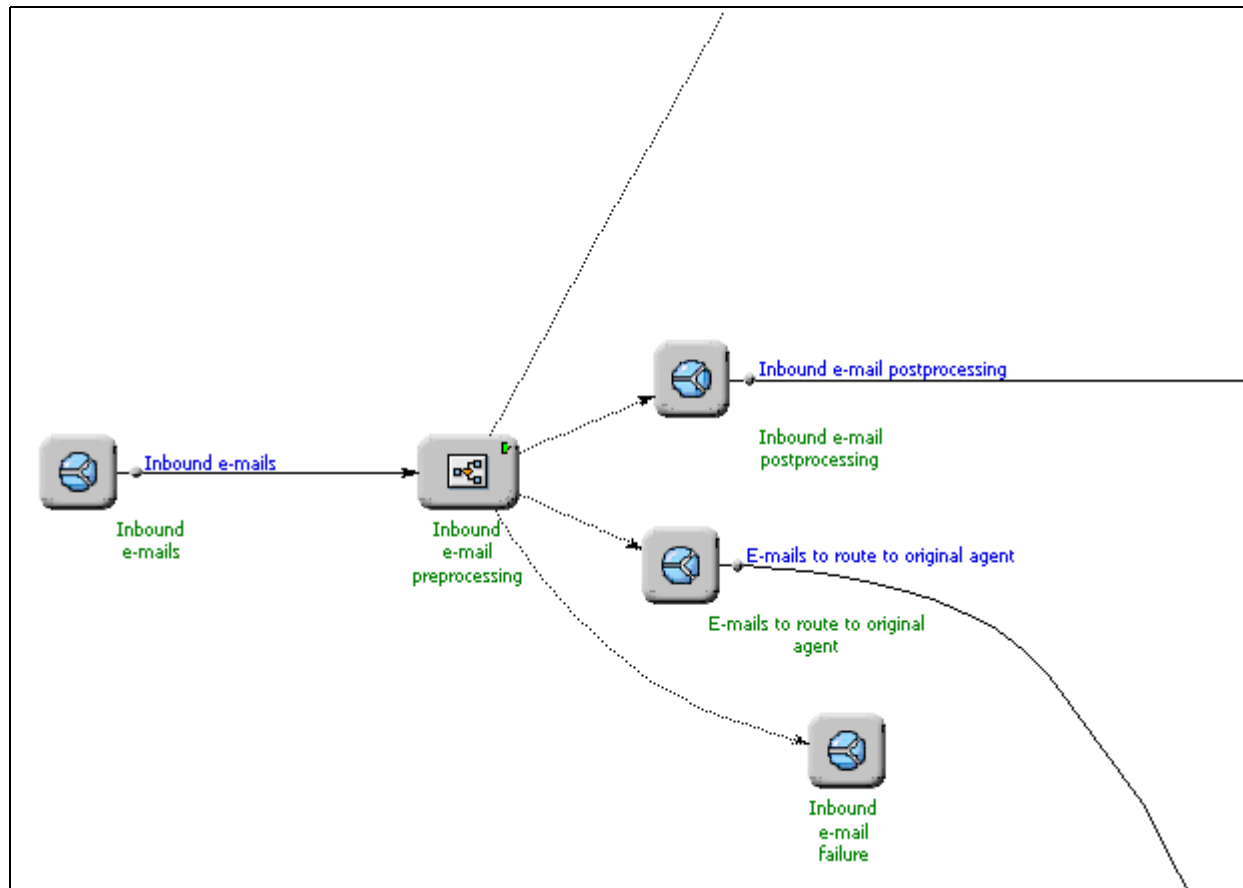


Figure 340: Default BP

Notes: Select **Zoom Out** from the context menu to view more of a large business process.

Figure 340 reflects the default arrangement of the icons in the viewer. You can always return to the default positioning at any time by selecting **Arrange Objects** from the business process menu.

Each functional area in **Default BP** is explained in the step-numbered business processes.

Step-Numbered Business Processes

The step-numbered business processes (connected via queues) isolate the various functionality found in Default BP (see [page 387](#)). [Table 30](#) summarizes the functionality of each step-numbered business process.

Table 30: Step-Numbered Business Processes

BP and functional area(s)	Strategies and objects used	Queue(s)
Step 0: Common Components These components are shared by the remaining step-numbered business processes	Terminate Interaction st uses IRD objects Call Subroutine, Stop Interaction, Generic Segmentation, and Queue Interaction E-mail service failure analysis uses IRD objects Multi-Assign, Assign, Multi-Attach, Function, Generic Segmentation, and If	Termination failure
Step 1: Pre-Routing Pre-routing based on interaction sub-type Promoting an e-mail that failed pre-routing to the next process	Inbound e-mail preprocessing str uses IRD objects Generic Segmentation, Multi-Assign, and Queue Interaction Uses Interaction Subtype Business Attributes (see page 161 and page 331)	Inbound e-mails, Collaboration reply e-mails, E-mails to route to original agent, Inbound e-mail failure, Chat inbound queue, Inbound e-mail postprocessing
Step 2.1. NDR Handling Route Interactions to original agent	Route Interactions to original agent st uses IRD objects Multi-Assign, Assign, If, Queue Interaction, and Route Interaction	E-mails route to original agent, E-mails for QA review
Step 2.2. Inbound Collaboration Reply Agent collaboration Collaboration reply sending	Inbound collaboration reply processing st uses IRD objects Reply From External Resource, Stop Interaction, Call Subroutine, Generic Segmentation, and Queue Interaction Terminate Interaction st (see Step 0) and E-mail service failure analysis st (see Step 0)	E-mails for QA review, Termination failure, Collaboration reply e-mails, Collaboration reply failure

Table 30: Step-Numbered Business Processes (Continued)

BP and functional area(s)	Strategies and objects used	Queue(s)
Step 2.3 New Inbound E-mails Handling Screening of inbound e-mails Automatic treatment with an acknowledgement e-mail Autoresponse when applicable Assigning failure codes	Preliminary e-mail screening st strategy uses IRD objects Screen, Call Subroutine, Generic Segmentation, Function, If, Queue Interaction, Stop, Autoresponse, and Acknowledgement Terminate Interaction st (see Step 0) and E-mail service failure analysis st (see Step 0)	Inbound e-mail postprocessing, Redirect e-mail, Forward e-mails, Preprocessing failure, Termination failure, E-mails for processing by agents, Outbound e-mails
Step 3.1. Processing by Agents Routing to agents Processing by agents	E-mail distribution for processing st contains IRD object Queue Interaction	E-mails for processing by agents, E-mails for QA review, Forward e-mails
Step 3.2: Routing E-mails for QA Review Processing of attached data Skill-based review of agent response Re-processing e-mails that failed quality control Re-processing e-mails that failed sending	Outbound e-mail 65x QA st uses IRD objects Multi-Assign, Assign, Generic Segmentation, Route Interaction, Queue E-mail, If, and Function	E-mails for QA review, Quality Control, E-mails failed QA, Outbound e-mails
Step 3.3. Forwarding Stopping an e-mail with a reason code	Forward e-mail processing st uses IRD objects Forward E-mail, Stop Interaction, Call Subroutine, Generic Segmentation, and Function Terminate Interaction st (see Step 0) and E-mail service failure analysis st (see Step 0)	Forward e-mails, Termination failure, Forward e-mail failure, Outbound e-mails

Table 30: Step-Numbered Business Processes (Continued)

BP and functional area(s)	Strategies and objects used	Queue(s)
Step 3.4. Redirecting Redirecting an e-mail	Redirect e-mail processing st uses IRD objects Redirect E-mail, Stop Interaction, Function, Queue Interaction, Call Subroutine, and Generic Segmentation Terminate Interaction st (see Step 0) and E-mail service failure analysis st (see Step 0)	Redirect e-mail, Termination failure, Redirect e-mail failure, Outbound e-mails
Step 4. Outbound Sending Quality control for outbound e-mails based on screening Sending e-mail responses to customers	Quality Control st uses IRD objects Screen, If, Queue E-mail, Call Strategy, and Function Outbound e-mail sending st uses IRD objects Send E-mail, Stop Interaction, Call Subroutine, Generic Segmentation, Function, Queue Interaction Terminate Interaction st (see Step 0) and E-mail service failure analysis st (see Step 0)	Quality Control, Outbound e-mails, E-mail failure analysis, Termination failure, E-mails send error

This appendix now details each step-numbered business process. In addition to detailing interaction flow, the descriptions show how individual business processes can be connected via queues.

Note: After each step-numbered business process description, a graphic depicts the Default BP area that supplies the same functionality.

Step 1. Pre-Routing

The purpose of this business process is to determine if an inbound interaction is new or has previously been processed by Genesys and process the interaction accordingly. It does this through the existence (or nonexistence) of an Interaction Subtype code.

Figure 341 on [page 392](#) shows the Step 1. Pre-Routing business process.

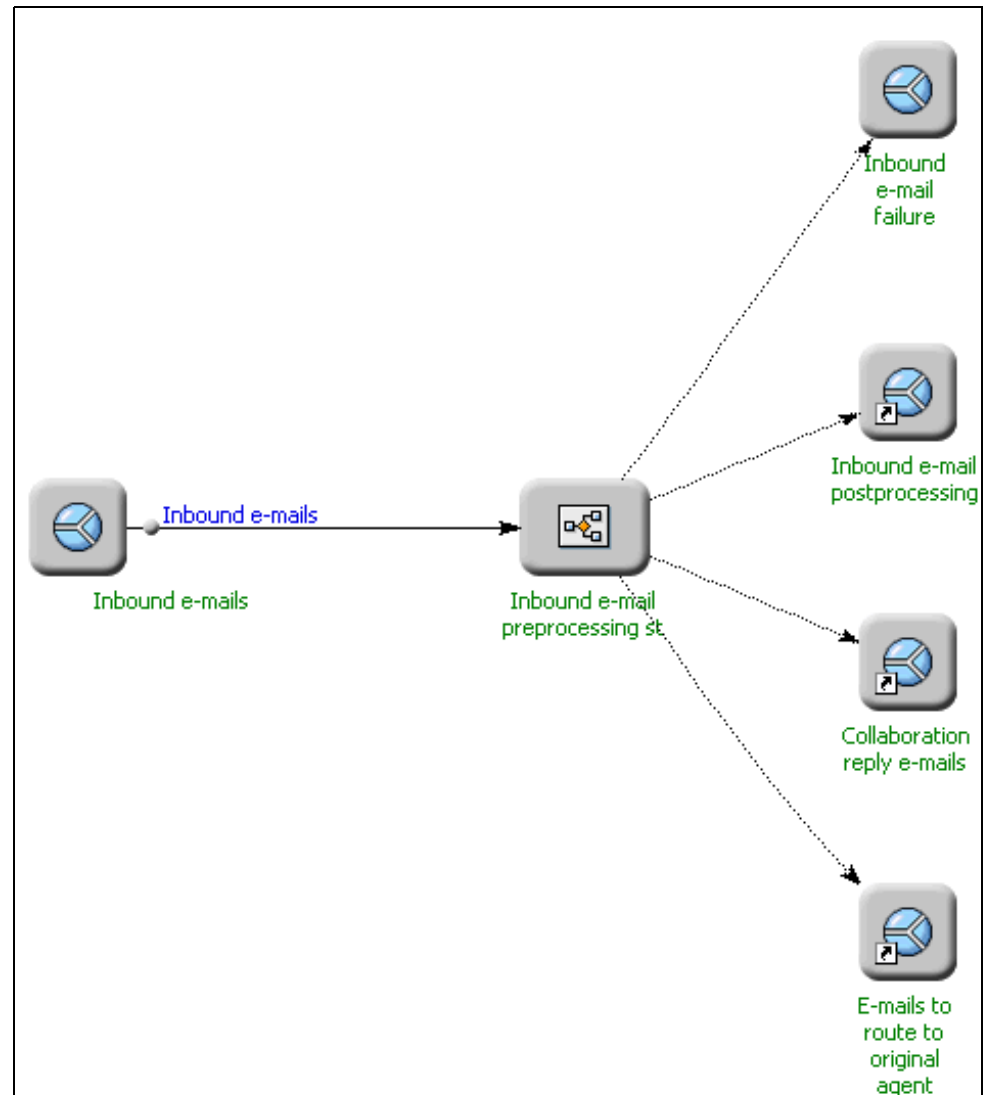


Figure 341: Step 1. Pre-Routing

Note: Note the up arrows located on the queue nodes in [Figure 341](#). This indicates a queue that originated in another business process as described on [page 28](#) and shown in [Figure 9](#) on [page 28](#).

Processing Objects

This section describes the various objects in [Figure 341](#) on [page 392](#).

A view (Inbound e-mails) that has no Conditions (see [Figure 222](#) on [page 273](#)) or Order By information (see [Figure 224](#) on [page 274](#)) extracts e-mails from the Inbound e-mails queue (see [Figure 3](#) on [page 23](#)) and submits them to the Inbound e-mail preprocessing st strategy. Incoming e-mails may be new ones from customers or they may be e-mails that have

already gone through Genesys e-mail processing as indicated by the assignment of an Interaction Subtype (see Figure 148 on [page 164](#)).

The flow of an e-mail through the strategy is determined by the existence or nonexistence of an Interaction Subtype (see [page 331](#)).

- If the e-mail has an NDR Interaction Subtype, it is sent to a queue for delivery to the original agent.
- If the e-mail has an InboundCollaborationReply Interaction Subtype, it is sent to a queue handling collaboration replies from one agent to another.
- If the e-mail does not contain either of these Interaction Subtypes, the strategy looks for an inbound preprocessing failure flag. If found, the e-mail is sent to a queue for inbound e-mail failures. If not found, the e-mail is sent to a queue for new inbound e-mails.

To see the IRD objects that are used in the Inbound e-mail preprocessing strategy in Figure 341 on [page 392](#), see the *Universal Routing 8.1 Strategy Samples*.

Step 2.1. NDR Handling

The purpose of this business process is to continue the processing started in Step 1. Pre-Routing. It processes interactions with a Non Delivery Report (NDR) Interaction Subtype code by sending them to either the original agent or, if the agent name cannot be found, to a queue for QA review.

[Figure 342](#) shows the Step 2.1. NDR Handling business process.

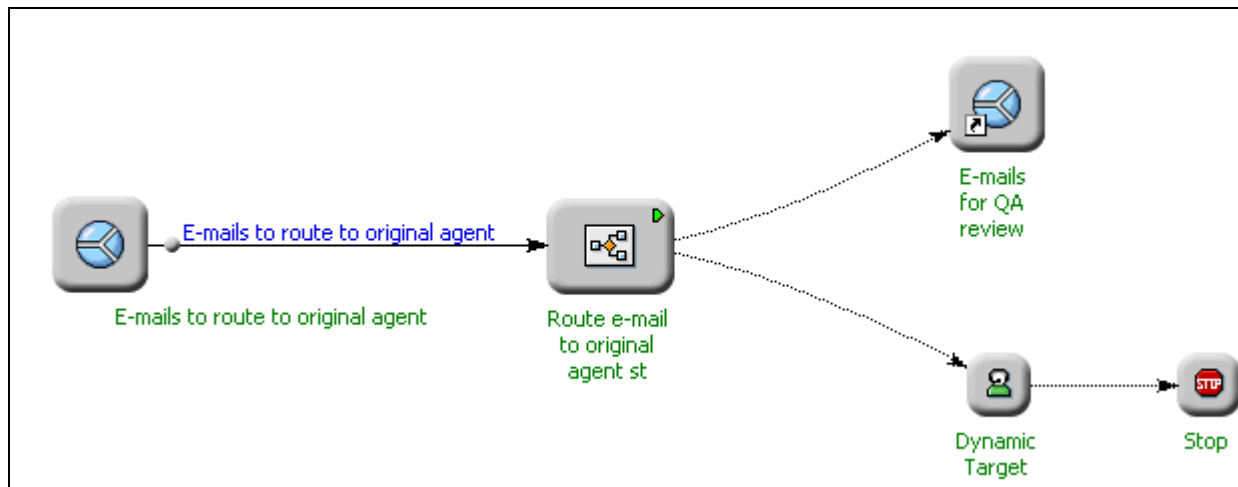


Figure 342: Step 2.1: Non-Delivery Report Handling

Processing Objects

This section describes the various objects in [Figure 342](#).

The E-mails to route to original agent queue is the same queue that is shown in Step 1. Pre-Routing (see **Note** on [page 392](#)). A view that has no Conditions (see Figure 222 on [page 273](#)) or Order By information (see Figure 224 on [page 274](#)) attached to the queue extracts e-mails. Interactions are submitted to the Route e-mail to original agent st strategy.

The Route e-mail to original agent st strategy demonstrates how to route a customer reply e-mail back to the agent that handled the original e-mail. It checks whether the original agent employee ID or QA reviewer employee ID is contained in the interaction attached data.

- If a variable contains the name of the original agent, the e-mail is routed to the original agent.
- If this same variable does not contain the name of the original agent, the e-mail is routed to a queue for QA review.

Note: To see the IRD objects that are used in the Route Interaction to original agent st strategy, see the *Universal Routing 8.1 Strategy Samples*.

Step 2.2. Inbound Collaboration Reply

The purpose of this business process is to continue the processing started in Step 1. Pre-Routing. It processes interactions with an Inbound Collaboration Reply Interaction Subtype code indicating one resulting from two agents collaborating on a customer reply. [Figure 343](#) shows the Step 2.2 Inbound Collaboration Reply business process.

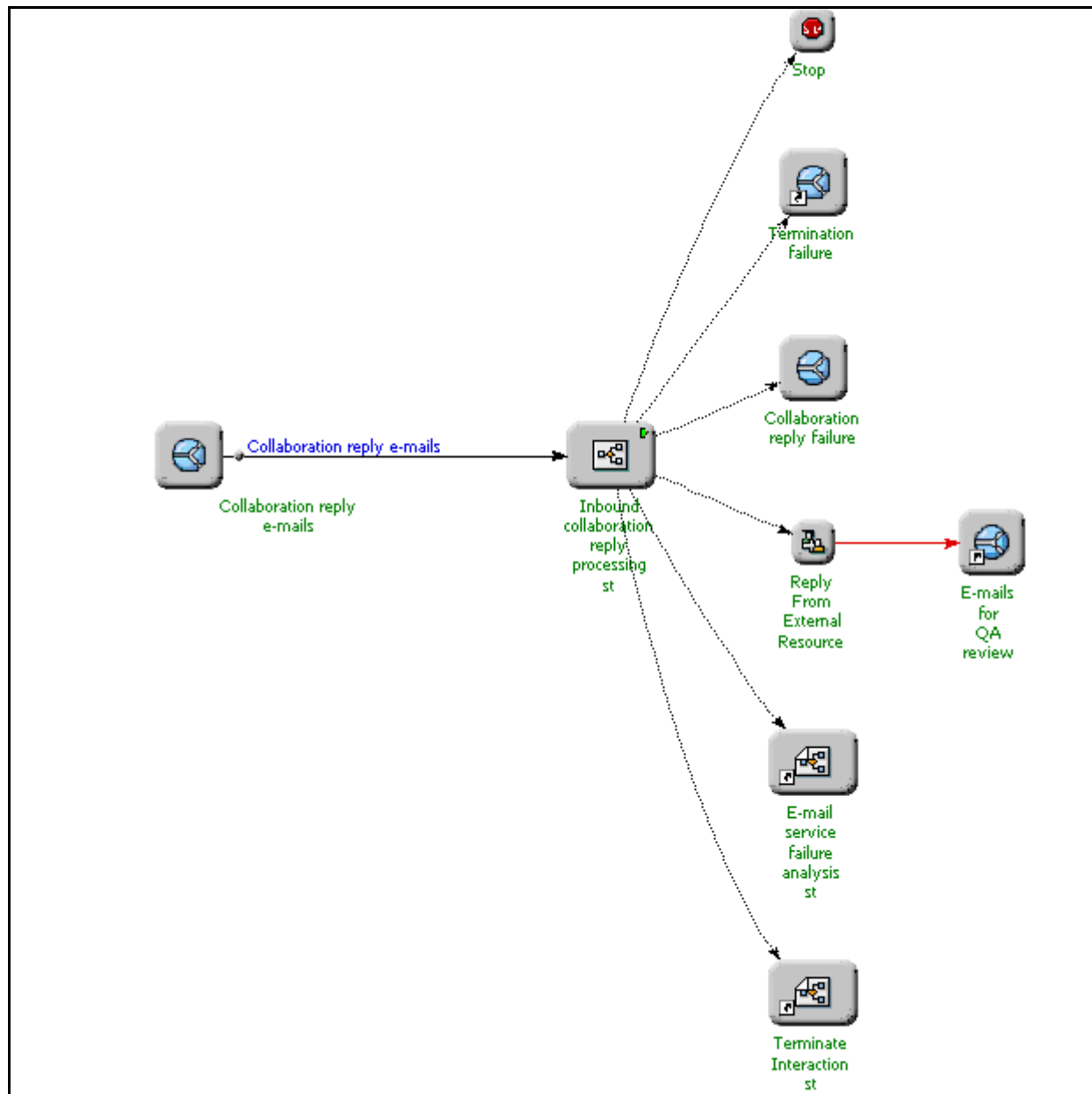


Figure 343: Step 2.2. Inbound Collaboration Reply

Collaboration replies are e-mails from *external resources*. An external resource is a name for any object outside the contact center. It may be an external agent or another contact center.

A collaboration reply inbound e-mail arrives as a result of the following actions:

- The parent e-mail is forwarded by an agent (via the Forward E-mail object) requesting collaboration with another agent.
- The collaborating agent constructs a response.

- The collaborating agent sends the reply back to the requesting agent creating a collaboration reply inbound e-mail.

Processing Objects

This section describes the various objects in Figure 343 on [page 395](#).

The Collaboration reply e-mails queue is the same queue that is shown in Figure 341 on [page 392](#) (see **Note** on [page 392](#)). In Default BP, this queue connects the Step 1. Pre-routing business process with the Step 2.2 Inbound Collaboration Reply business process.

A view that has no Conditions (see Figure 222 on [page 273](#)) or Order By information (see Figure 224 on [page 274](#)) extracts e-mails from the queue.

A submitter submits them to the Inbound collaboration reply processing strategy.

A Reply From External Resource (see [page 204](#)) object in the strategy takes the collaboration reply as input, extracts the reply text from it, creates a customer reply outbound e-mail with it, and places the e-mail in an interaction queue (E-mails for QA review).

A Stop Interaction object notifies Interaction Server that processing is finished.

Error Handling

The following objects in Figure 343 on [page 395](#) are the result of error handling: Collaboration reply failure queue, E-mail service failure analysis strategy, and Terminate Interaction strategy.

Note: For details on strategy error handling, as well as the IRD objects used in the Inbound collaboration reply processing strategy, see *Universal Routing 8.1 Strategy Samples*.

Step 2.3. New Inbound E-mails

The purpose of this business process is to continue the processing started in Step 1. Pre-Routing. It processes interactions without an Inbound Collaboration Reply or NDR Interaction Subtype code (or preprocessing failure flag) indicating a new inbound interaction from a customer. [Figure 344](#) shows the Step 2.3. New Inbound E-mails business process.

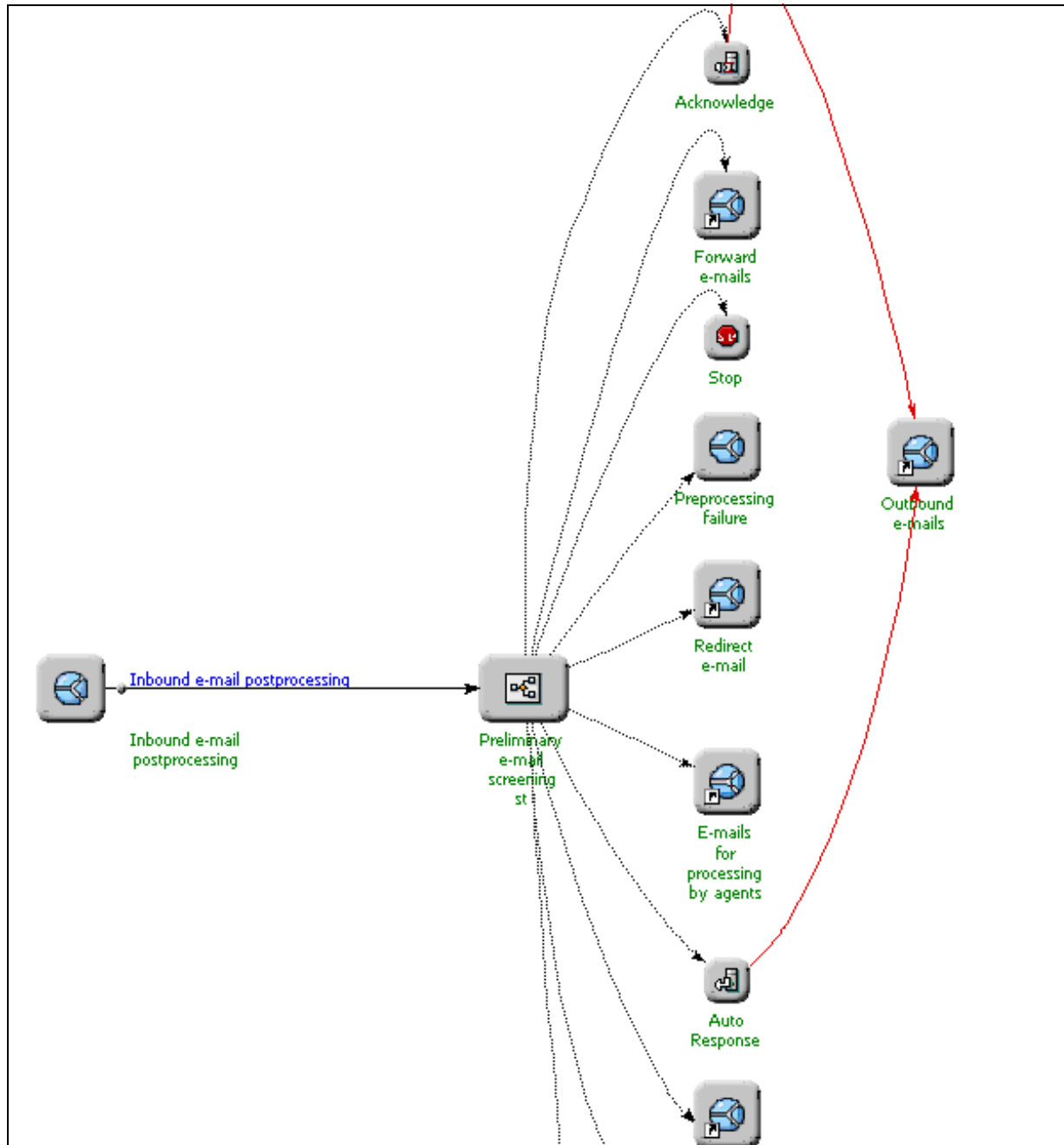


Figure 344: Step 2.3. New Inbound E-mails

Processing Objects

This section describes the various objects in Figure 344 on [page 397](#).

This business process begins with the Inbound e-mail postprocessing queue, which is one of four output queues that are shown in Figure 341 on [page 392](#). In Default BP, this queue connects the Step 1. Pre-routing business process

with the Step 2.3. New Inbound E-mails business process (see **Note** on [page 392](#)).

A view that has no Conditions (see Figure 222 on [page 273](#)) or Order By information (see Figure 224 on [page 274](#)) extracts e-mails from the queue.

A submitter submits them to the Preliminary e-mail screening st routing strategy.

This strategy screens e-mails by using three Screening Rules (see [page 185](#)).

1. If the screening using the first rule (Auto Response Available) produces a match, an Autoresponse object (Autoresponse strategy-linked node in Figure 344 on [page 397](#)) attaches a Standard Response to the interaction and places the interaction in the Outbound e-mails queue.
2. If the first screening does not produce a match, a second screening occurs using a different rule (Warranty Problem). Results are written to a variable, which is subsequently used in an If expression. If the expression is true (Screening Rule match found), the interaction goes to the queue Forward e-mails. If the expression is false (no match), the interaction goes through a third screening.
3. If the second screening does not produce a match, a third screening occurs using a different Screening Rule (Tech Support). Results are again written to a variable, which is subsequently used in an If expression.

If the expression is true, the interaction requires a technical support agent so it goes to the Redirect e-mails queue. A Stop object then notifies Interaction Server that processing has stopped since the Redirect object is used for e-mails do not require any further processing (see [page 204](#)).

If the expression is false (no match), an Acknowledgement object (Acknowledge strategy-linked node in Figure 344 on [page 397](#)) attaches a Standard Response to the interaction and places it in the E-mails for processing by agents queue.

The following objects in Figure 344 on [page 397](#) are the result of error handling:

E-mail service failure analysis st strategy

Terminate Interaction st strategy

Preprocessing failure queue

Termination failure queue

Note: For details on strategy error handling, see *Universal Routing 8.1 Strategy Samples*.

Step 3.1. Processing By Agents

The purpose of this business process is to continue the processing from Step 2.3 New Inbound E-mails. It processes interactions in the E-mails for processing by agents queue by sending them to members of an agent group. Once an agent is finished, the interaction is placed in a queue for quality assurance review.

Figure 345 shows the Step 3.1. Processing By Agents business process.

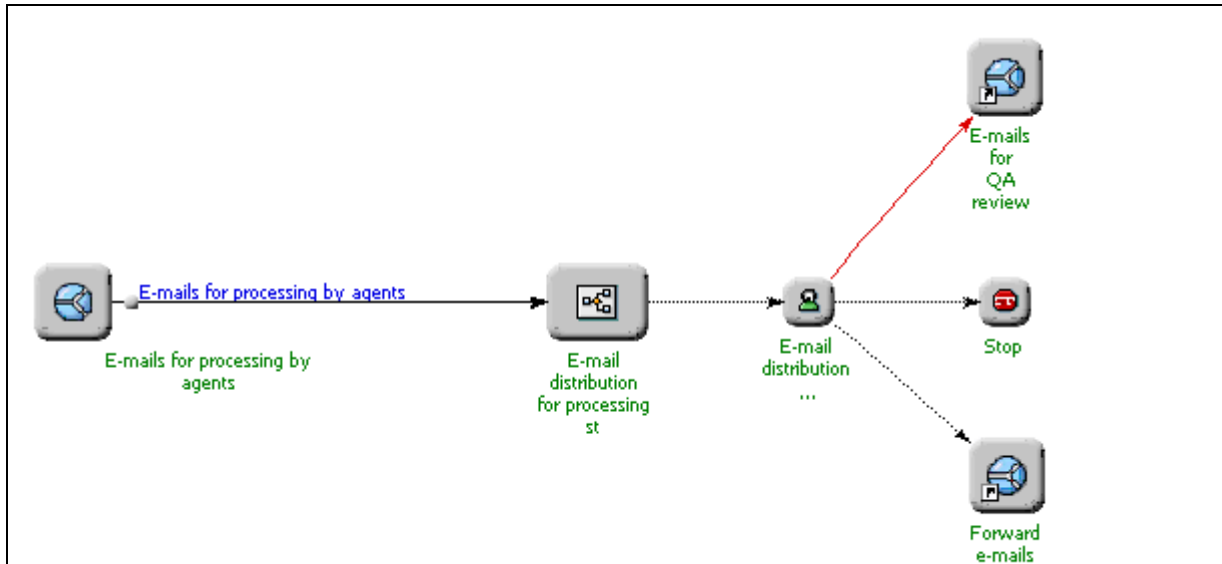


Figure 345: Step 3.1. Processing by Agents

Processing Objects

This section describes the various objects in Figure 345.

The E-mails for processing by agents queue is the same queue that is shown in Figure 344 on page 397 (see **Note** on page 392). In Default BP, this queue connects the Step 2.3. New Inbound E-mails Handling business process with the Step 3.1. Processing By Agents business process. This queue is used when a Standard Response cannot be used and the interaction does not require redirecting as described on page 398.

A view that has no Conditions (see Figure 222 on page 273) or Order By information (see Figure 224 on page 274) extracts e-mails from the queue.

A submitter submits them to the E-mail distribution for processing st strategy.

This routing strategy contains only an Entry object, a Route Interaction object, and Exit object. Figure 346 on page 400 shows the E-mail distribution for processing st strategy.

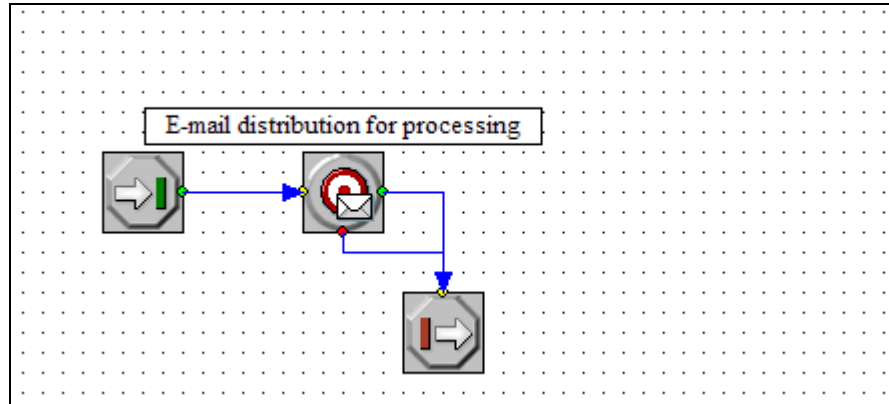


Figure 346: E-mail Distribution For Processing Strategy

The Route Interaction object routes to an Agent Group target type. The name of the Agent Group is E-mail distribution for processing (see [Figure 347](#)).

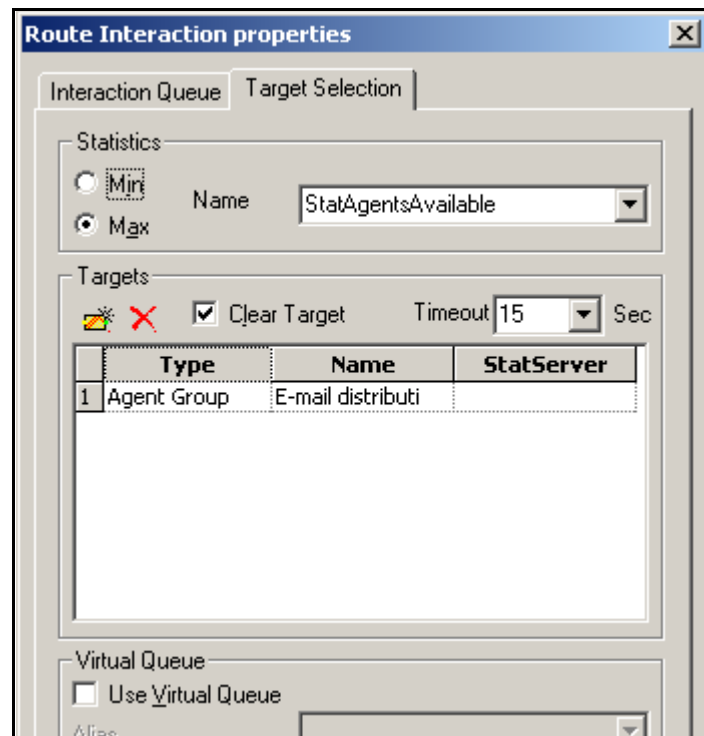


Figure 347: Route Interaction Properties Dialog Box

StatAgentsAvailable is specified under Statistics, Max. URS uses this statistic to select a routing target if more than one target is available. For more information about this statistic, see the *Universal Routing 8.1 Reference Manual*.

The Route Interaction object also has an Interaction Queue tab (see [Figure 348](#)).

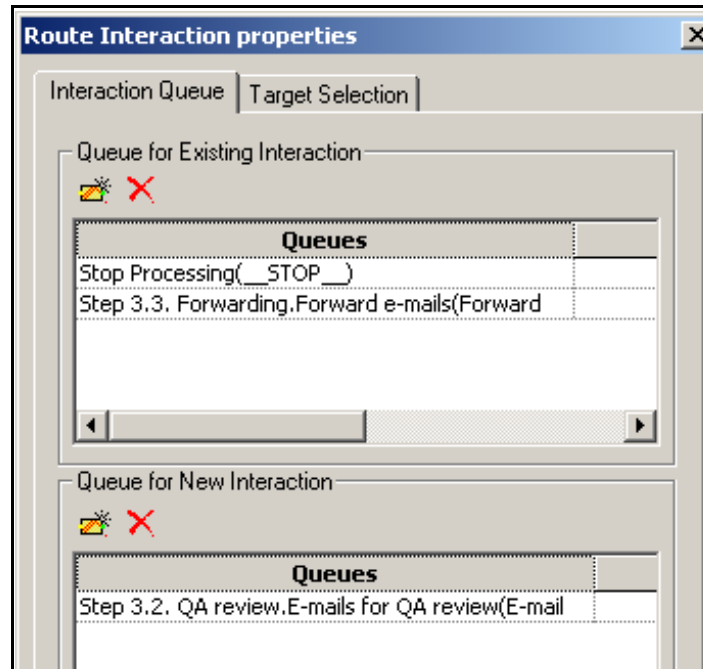


Figure 348: Route Interaction Properties Dialog Box, Interaction Queue Tab

The Interaction Queue tab gives the option of specifying two types of queues.

1. Queue for existing interaction. If the agent can't handle the e-mail and determines it should be forwarded to another agent, the Description field provides a desktop hint for the agent on the Forward e-mails queue. (The existing interaction is being forwarded, but will eventually come back to the forwarding agent.) This selection generates the Forward e-mails strategy-linked queue node (see [page 34](#)) in Figure 345 on [page 399](#).

Just as in Figure 330 on [page 376](#), the Genesys predefined queue Stop Processing(_STOP_) indicates to Interaction Server that processing of the existing interaction has stopped for now (because the e-mail is being forwarded). This entry generates the Stop strategy-linked node in Figure 345 on [page 399](#).

2. Queue for new interaction. If the agent creates a new interaction in the form of an e-mail response to the customer, the Description field is used by the desktop to provide a description for the agent on the purpose of the E-mails for QA review queue. This entry generates E-mails for QA review strategy-linked node in Figure 345 on [page 399](#).

Step 3.2. QA Review

The purpose of this business process is to continue the processing from Step 3.1 Processing by Agents. It processes interactions in the E-mails for QA

review queue by determining whether QA review is necessary and then taking the appropriate action.

Figure 349 on [page 402](#) shows the Step 3.2. QA Review business process.

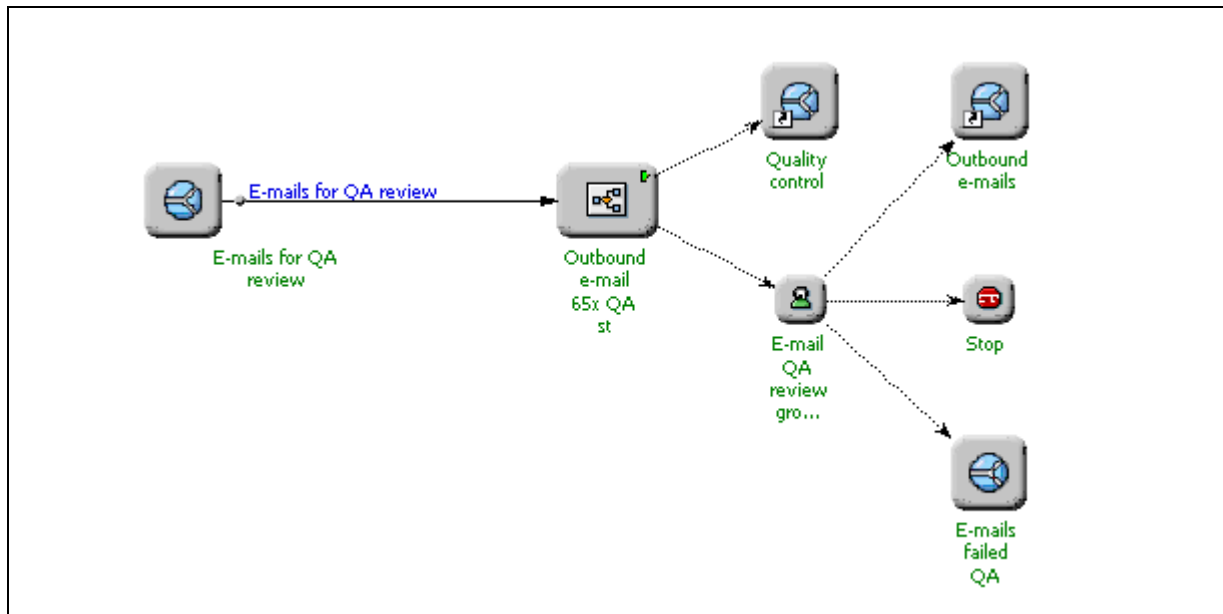


Figure 349: Step 3.2. QA Review

Processing Objects

This section describes the various objects in [Figure 349](#).

The E-mails for QA review queue in [Figure 349](#) is the same queue that is shown in [Figure 345](#) on [page 399](#) (see **Note** on [page 392](#)). In Default BP, this queue connects the Step 3.1. Processing by Agents business process with the Step 3.2. QA Review business process.

A view (E-mails for QA review) that has no Conditions (see [Figure 222](#) on [page 273](#)) or Order By information (see [Figure 224](#) on [page 274](#)) extracts e-mails from the queue.

A submitter submits interactions to the Outbound e-mail 65x QA st strategy.

This strategy determines whether an agent's e-mail response has undergone QA review. If the existence of a flag in the interaction indicates that QA has already reviewed, the response goes to the queue Quality control. If QA has not reviewed, the strategy determines whether QA review is necessary based on the skill level of the handling agent.

- If the responding agent has the default skill level or higher, QA review is not necessary so the e-mail goes to a queue for sending to the customer (Outbound e-mails).

- If the responding agent does not have the default skill level or higher, the e-mail response is routed to QA for checking (E-mail QA review group). If QA review does not uncover any errors, the e-mail goes to the queue Outbound e-mails. If the review uncovers errors, the e-mail goes to the queue E-mails failed QA.

Note: For details on strategy error handling, as well as the IRD objects used in the Outbound e-mail 65x QA strategy, see *Universal Routing 8.1 Strategy Samples*.

Step 3.3. Forwarding

The purpose of this business process is to continue the processing started in Step 2.3 New Inbound E-mails. It forwards interactions in the Forward e-mails queue with the expectation of getting a response back. [Figure 350](#) shows Step 3.3. Forwarding business process.

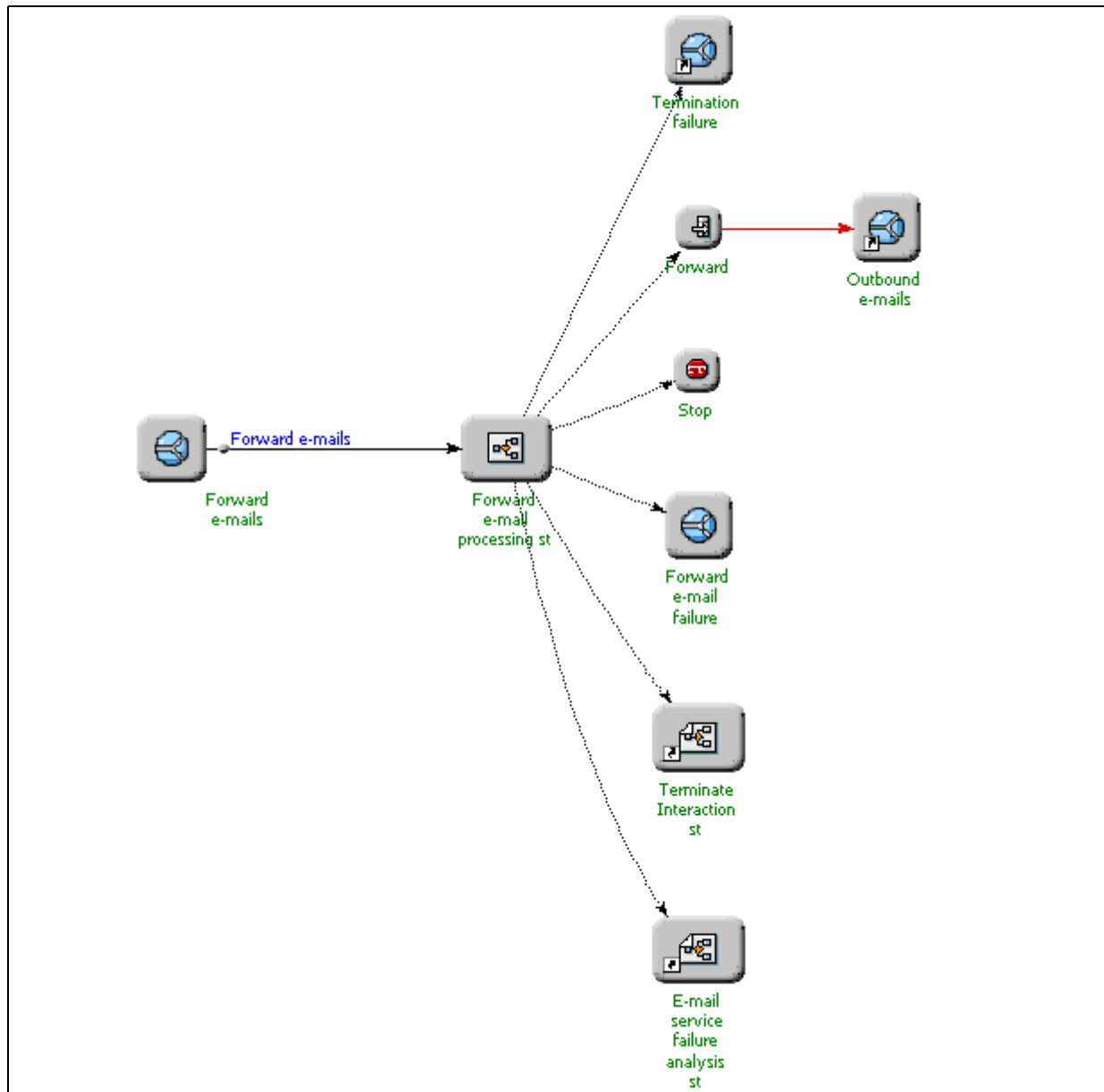


Figure 350: Step 3.3. Forwarding

Processing Objects

The Forward e-mails queue in Figure 350 is the same queue that is shown in Figure 345 on page 399 (see **Note** on page 392). In Default BP, this queue connects the Step 3.1. Processing by Agents business process with the Step 3.3. Forwarding business process.

A view (Forward e-mails) that has no Conditions (see Figure 222 on page 273) or Order By information (see Figure 224 on page 274) extracts e-mails from the queue. A submitter submits interactions to the Forward e-mail processing st strategy.

The Preliminary e-mail screening st strategy in Figure 344 on [page 397](#) previously determined that the e-mail matched the Warranty support Screening Rule (see [page 398](#)) and needs to be forwarded.

The Forward e-mail processing st strategy that is shown in Figure 350 on [page 404](#) uses the Forward object to request E-mail Server (see [page 51](#)) to create an e-mail using the external address that is associated with the E-mail Accounts Business Attribute (see Figure 148 on [page 164](#)) that is called Warranty support. After the e-mail has been generated, it goes into the Outbound e-mails queue. A Stop object notifies Interaction Server that processing for this interaction is finished.

Error Handling

The following objects in Figure 350 on [page 404](#) are the result of error handling:

Forward e-mail failure queue

Termination failure queue

E-mail service failure analysis st strategy

Terminate interaction st strategy

Note: For details on strategy error handling, see *Universal Routing 8.1 Strategy Samples*.

Step 3.4. Redirecting

The purpose of this business process is to continue the processing started in Step 2.3 New Inbound E-mails. It forwards interactions in the Redirect e-mails queue to an outbound queue for sending to other agents/experts without the expectation of getting a response back. [Figure 351](#) shows the Step 3.4. Redirecting business process.

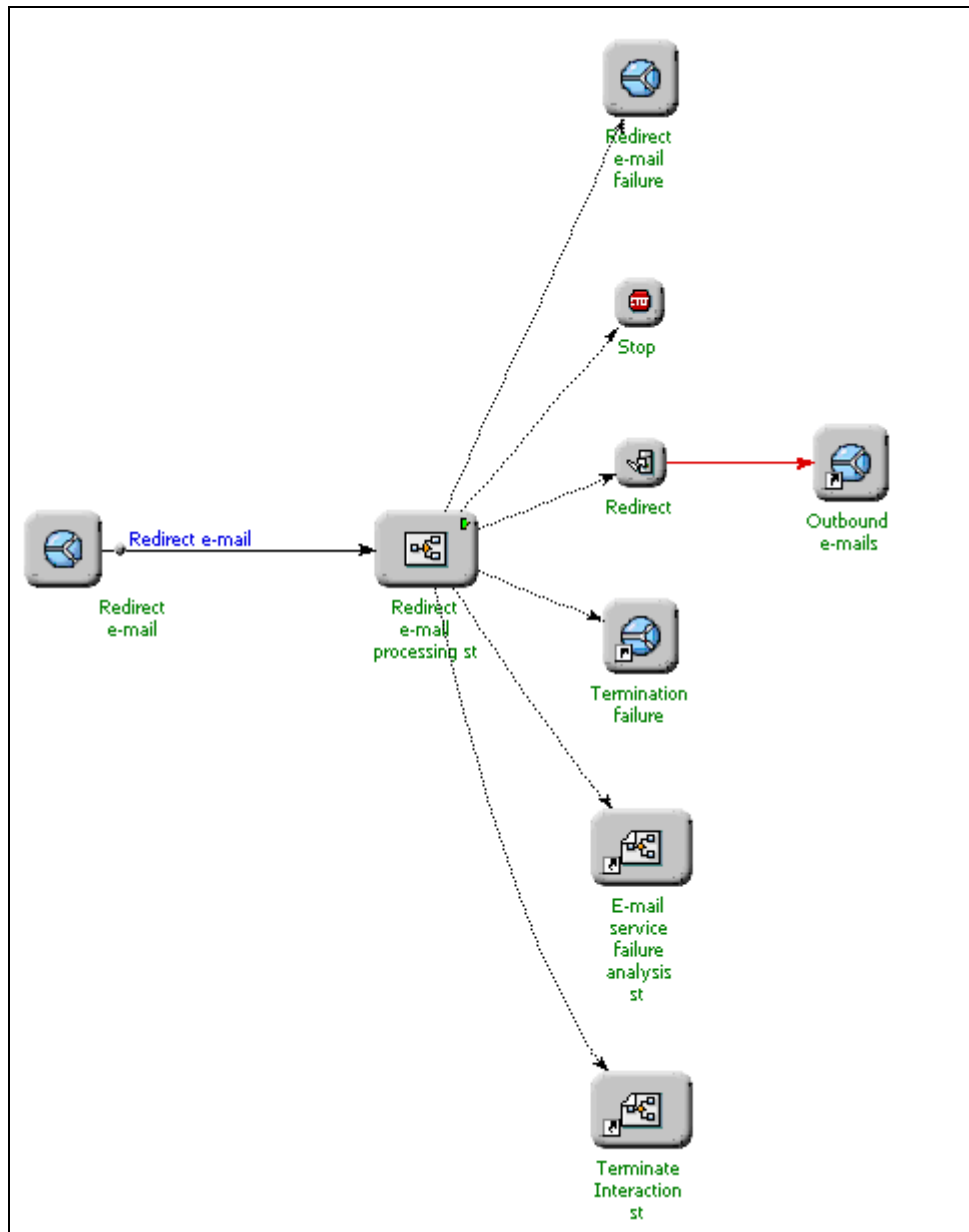


Figure 351: Step 3.4. Redirecting Business Process

Processing Objects

The Redirect e-mail queue in [Figure 351](#) is the same queue shown in [Figure 344](#) on [page 397](#) (see [Note](#) on [page 392](#)). In Default BP, this queue connects the Step 2.3. New Inbound E-mails business process with the Step 3.4. Redirecting business process.

A view (Redirect e-mail) that has no Conditions (see [Figure 222](#) on [page 273](#)) or Order By information (see [Figure 224](#) on [page 274](#)) extracts e-mails from

the queue. A submitter submits interactions to the Redirect e-mail processing strategy.

The Preliminary e-mail screening strategy in Figure 344 on [page 397](#) previously determined that the e-mail matched the Tech support Screening Rule (see [page 398](#)) and must be redirected.

The Redirect e-mail processing strategy that is shown in [Figure 351](#) uses the Redirect object to request E-mail Server (see [page 51](#)) to create an e-mail using the external address that is associated with the E-mail Accounts Business Attribute (see Figure 148 on [page 164](#)) that is called Tech support.

After the e-mail has been generated, it goes into the Outbound e-mails queue. A Stop object notifies Interaction Server that processing for this interaction is finished.

Error Handling

The following objects in Figure 350 on [page 404](#) are the result of error handling: Redirect e-mail failure queue, Termination failure queue, E-mail service failure analysis strategy, Terminate interaction strategy

Note: For details on strategy error handling, see *Universal Routing 8.1 Strategy Samples*.

Step 4. Outbound Sending

The purpose of this business process is to perform quality control checking and, for interactions that pass, place interactions in an outbound queue for sending. It also performs failure analysis for interactions that cannot be sent. In Default BP, the Outbound e-mails queue can be found in the following business processes:

- Step 3.2. QA Review
- Step 3.3. Forwarding
- Step 3.4. Redirecting

[Figure 352](#) shows the Step 4. Outbound Sending business process.

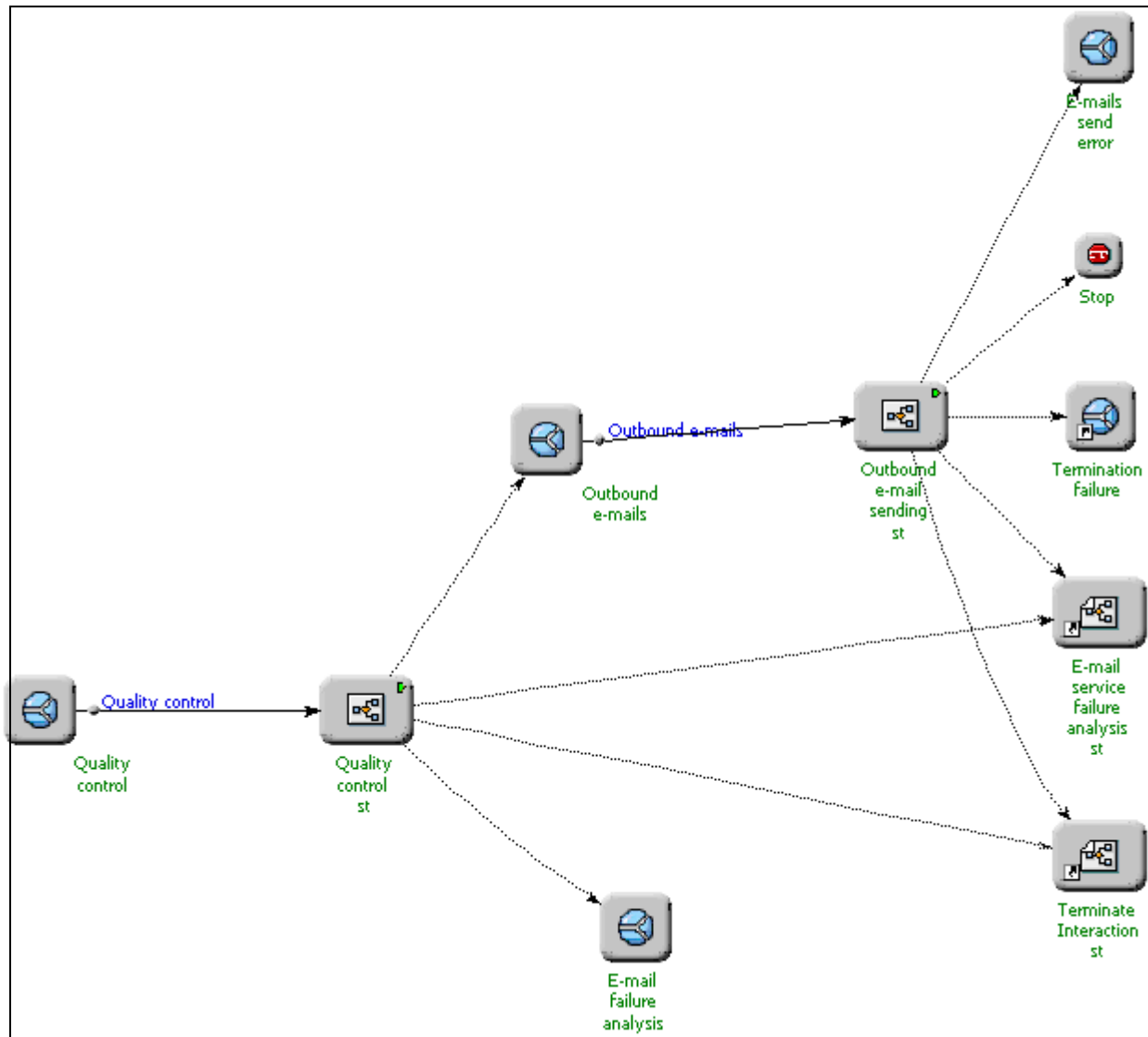


Figure 352: Step 4. Outbound Sending

Processing Objects

The Quality control queue in Figure 352 is the same one that is shown in Figure 349 on page 402 (see Note on page 392). This queue connects the Step 3.2. QA Review business process with the Step 4. Outbound sending business process.

A view (Quality control) that has no Conditions (see Figure 222 on page 273) or Order By information (see Figure 224 on page 274) extracts interactions from the queue. A submitter submits interactions to the Quality control st strategy.

The Quality control strategy uses the Screen object to determine whether an agent's response needs failure analysis because the Outbound e-mail 65x QA st

strategy (see Figure 349 on [page 402](#)) placed the interaction in a queue for quality control checking.

Screening results are written to a variable, which is subsequently used in an If expression.

- If the expression is true (Screening Rule match found), the interaction goes to the queue E-mail failure analysis queue.
- If the expression is false, the interaction does not need failure analysis and goes to the Outbound e-mails queue.

A view (Outbound e-mails) attached to this queue submits the interaction to the Outbound e-mail sending strategy

The purpose of this strategy is to send interactions that have undergone quality control to E-mail Server for sending to the customer. If the e-mail cannot be sent, the strategy performs error processing.

Error Handling

The following objects in Figure 352 on [page 408](#) are the result of error handling:

E-mail failure analysis queue

Termination failure queue

E-mails send error queue

E-mail service failure analysis strategy

Terminate interaction strategy

Note: For details on strategy error handling, see *Universal Routing 8.1 Strategy Samples*.

In order to understand fully how Default BP and the step-numbered business processes implement the preceding functional areas, you must also study the routing strategies. *Universal Routing 8.1 Strategy Samples* shows the IRD objects that are used by many of the strategies in the step-numbered business processes. It also explains the processing flow.

How To: Business Processes

In addition to the step-numbered business processes that were just described, the Genesys-supplied samples also supply various “How to” business processes (see Figure 327 on [page 373](#)).

[Table 31](#) lists and describes the “How to” business processes.

Table 31: How To: Business Process Functionality

Functional area	Strategies and subroutines used	Output queues/workbins
Apply escalation procedure (move interactions overdue for processing from an agent workbin to a supervisor workbin)	Move overdue interactions	Workbins: Supervisors workbin, Workbin for Original Agent
Attach classification Categories and use Attach Categories object	Classify customer inquiry strategy att-cc Subroutines: E-mail service failure analysis, Terminate Interaction	Queues: New inbound interactions, E-mails for QA Review, Preprocessing failure Workbin: E-mail distribution
Attach classification Categories and use Multi-Screen object	Classify customer inquiry Subroutines: E-mail service failure analysis, Terminate Interaction	Queues: New inbound interactions, E-mails for QA Review, Preprocessing failure Workbin: E-mail distribution
Conduct a survey by using email	Survey for email inbound strategy Survey for email outbound strategy Survey for email outbound with a survey link Submission of surveys from the web	Queues: Existing Interactions, New Interactions, Create New Interaction
Get credit card numbers	Screen e-mail for credit card numbers	Inbound e-mail queue, Non-credit card payment, Paid with credit card
Handle fax interactions	Preliminary fax screening	Processing by agents, Forward interaction, Redirect interaction, Queue for responses
Identify whether a contact is new or existing and create an interaction record for a new contact	Identify contact and create interaction	Interactions with new contacts Interactions with existing contacts

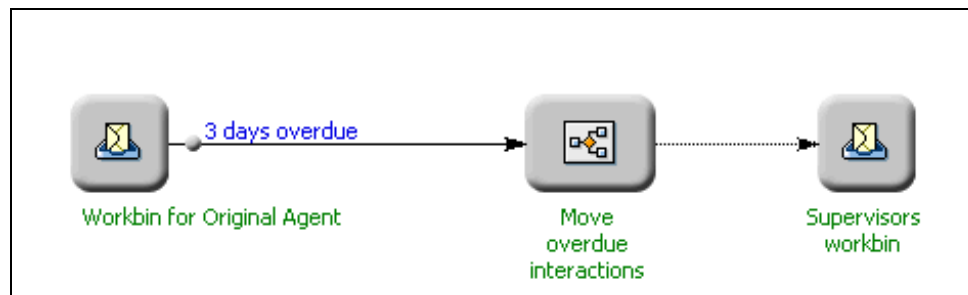
Table 31: How To: Business Process Functionality (Continued)

Functional area	Strategies and subroutines used	Output queues/workbins
Place an interaction into a workbin	Place the interaction into the workbin	E-mails route to original agent, E-mails for QA review Workbin: Workbin for original agent
Screen multiple rules	Preliminary e-mail screening ms Subroutines: E-mail service failure analysis, Terminate interaction	E-mails for processing by agents, Forward e-mails, Inbound e-mail postprocessing, Redirect e-mails, Preprocessing failure, Outbound e-mails, Termination failure

The next sections describe each “How to” business process.

How To: Apply Escalation Procedure

This business process, listed in Figure 327 on [page 373](#), demonstrates how to move interactions that are overdue for processing from an agent workbin to a supervisor workbin. [Figure 353](#) shows the How to: Apply Escalation Procedure business process.

**Figure 353: Apply Escalation Procedure Business Process**

If you need a review of workbins, see “Workbin Object” on [page 33](#).

Processing Objects

This section describes the various objects in [Figure 353](#).

A view (3 days overdue) that has a Condition that specifies interactions with a time in queue greater than 4,320 seconds (see [Figure 223](#) on [page 273](#)) extracts

interactions from the workbin (Workbin for Original Agent) and submits them to the Move overdue interactions strategy (see [Figure 354](#)).

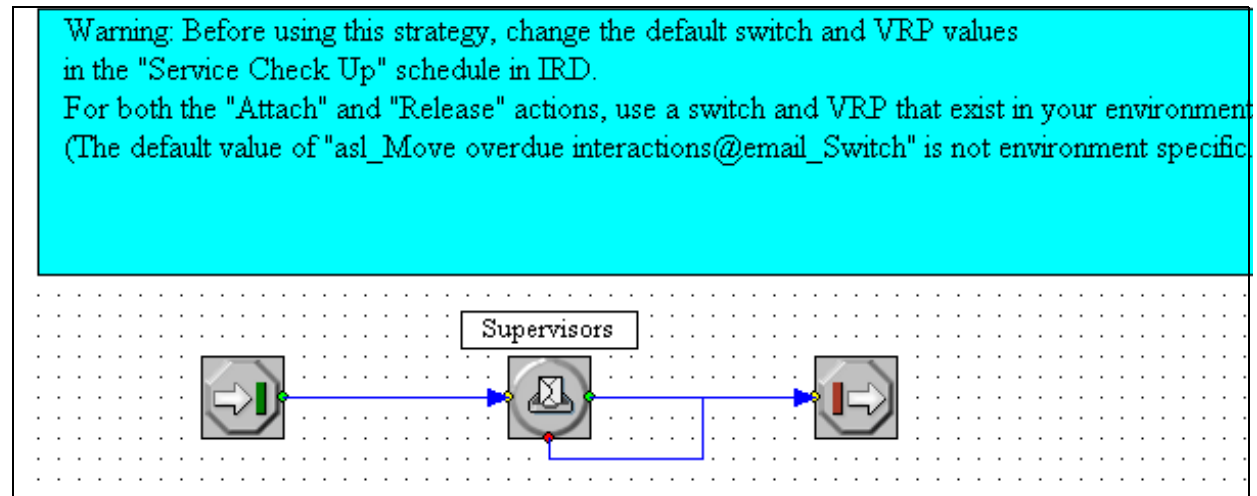


Figure 354: Move Overdue Interactions Strategy

[Figure 355](#) shows the General and Target Selection tabs in the properties dialog box for the Supervisors Workbin object (the Interaction Queue tab is not used).

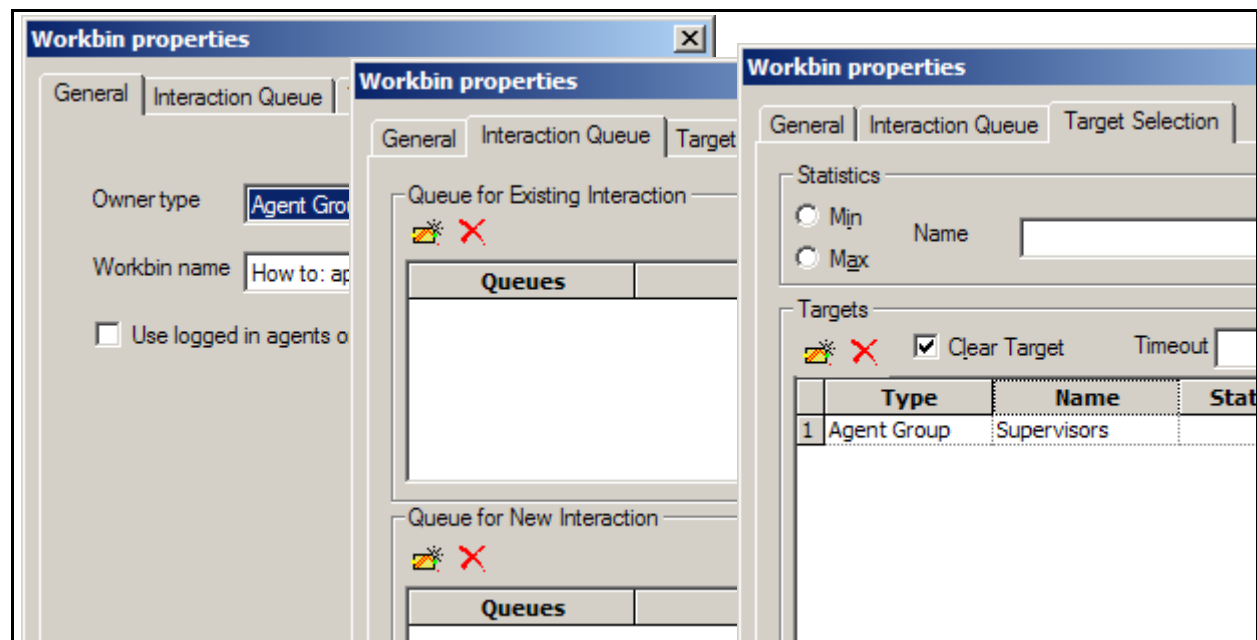


Figure 355: Workbin Properties Dialog Box

The Target Selection tab (see [Figure 355](#)) indicates that the interaction is being sent to a workbin that is associated with an Agent Group that is named Supervisors. You can see this workbin represented as the Supervisors workbin strategy-linked node in the business process that is shown in [Figure 353](#) on [page 411](#).

How To: Attach Classification Categories and Use Attach Categories Object

This business process, listed in Figure 327 on [page 373](#), demonstrates how to manually attach classification Categories to new inbound interactions for the purpose of segmenting those interactions in order to take different paths in the strategy. If you need to review information about classification Categories, see “Categories Tab” on [page 178](#).

[Figure 356](#) shows the How to: Attach Classification Categories and use attach categories object business process.

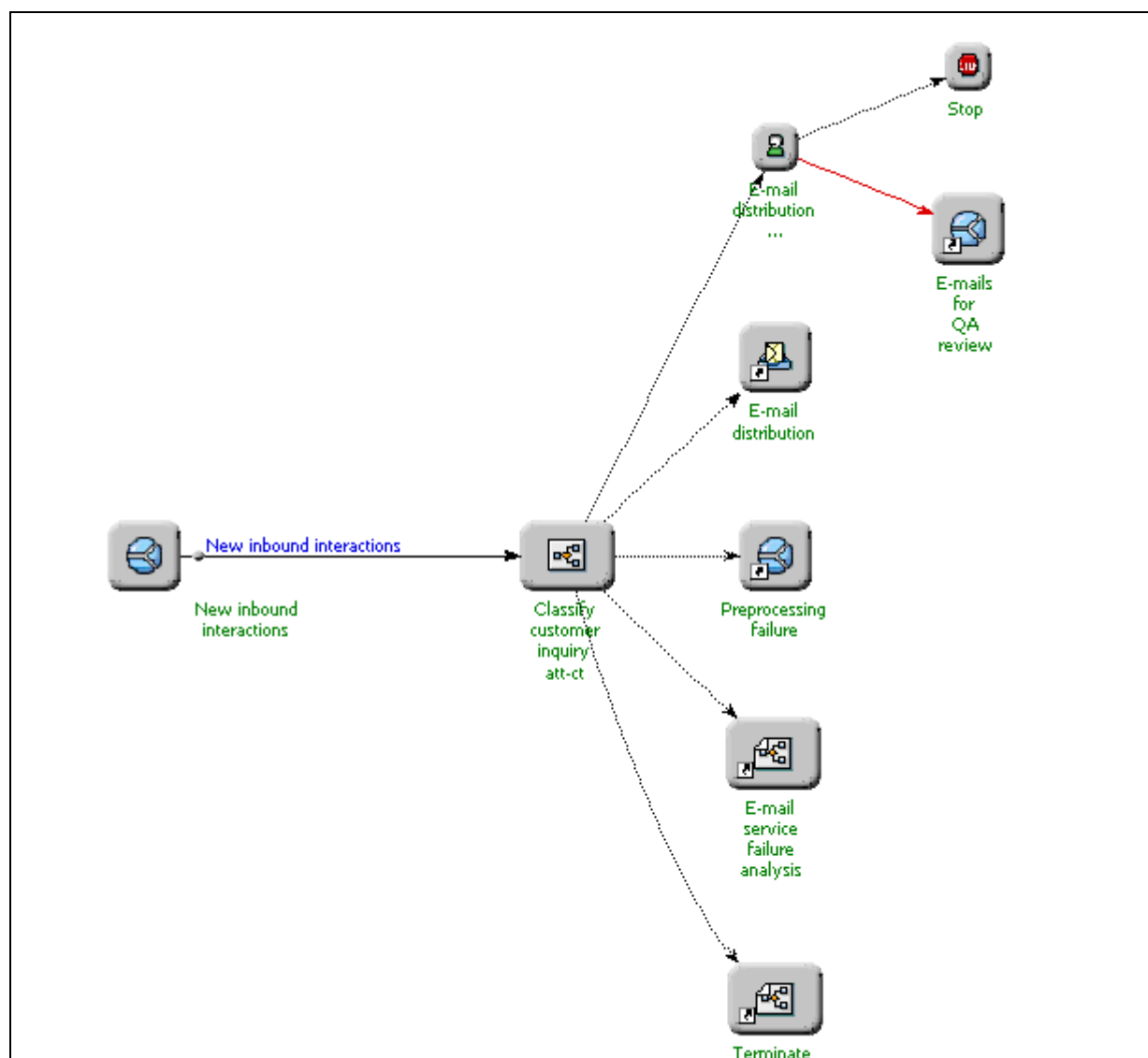


Figure 356: Attach Classification Categories and Use Attach Categories Business Process

Processing Objects

This section describes the various objects in [Figure 356](#).

A view (New inbound interactions) that is attached to a queue (New inbound interactions) that has no Conditions or Order By information, extracts interactions from the queue and sends them to the Classify customer inquiry att-ct strategy (see [Figure 357](#)).

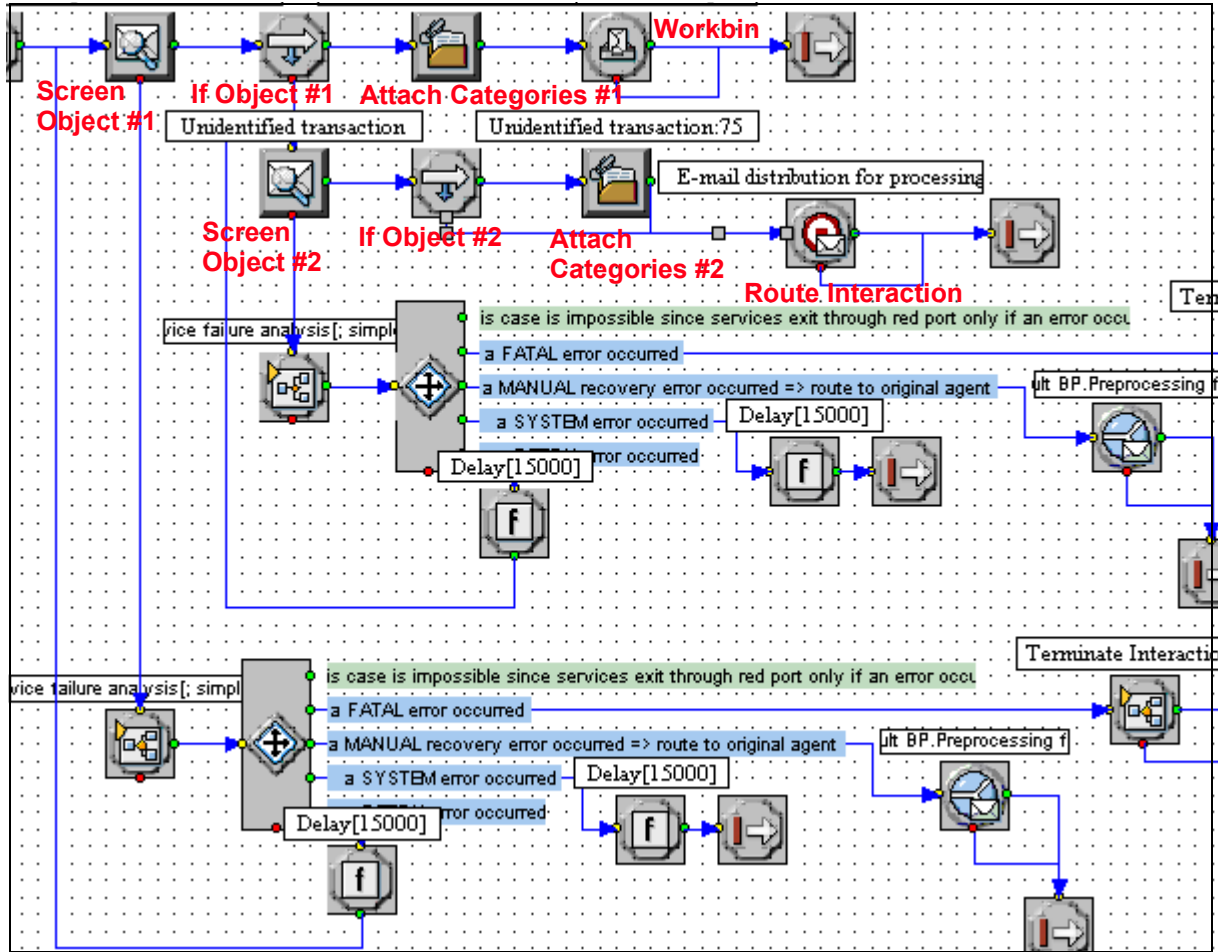


Figure 357: Classify Customer Inquiry ATT-CT Strategy

Screen Object

This strategy starts with a Screen object (#1) that screens for certain words or word patterns using a single Screening Rule (see “Screening Tab” on [page 185](#) if you need a review) and returns the Category (or Categories) associated with the Screening Rule.

In the case of the Classify customer inquiry att-ct strategy that is shown in [Figure 357](#), the object of the strategy is to:

- Screen for interactions that contain wrong transaction amounts and forward them to agent workbins for processing at a later time.

- Send unidentified interactions to agents for immediate processing.

You can see the Screening Rule and the instruction to return classification Categories when you open the properties dialog box for the top-left Screen object in the strategy that is shown in [Figure 357](#). [Figure 358](#) shows the properties dialog box.

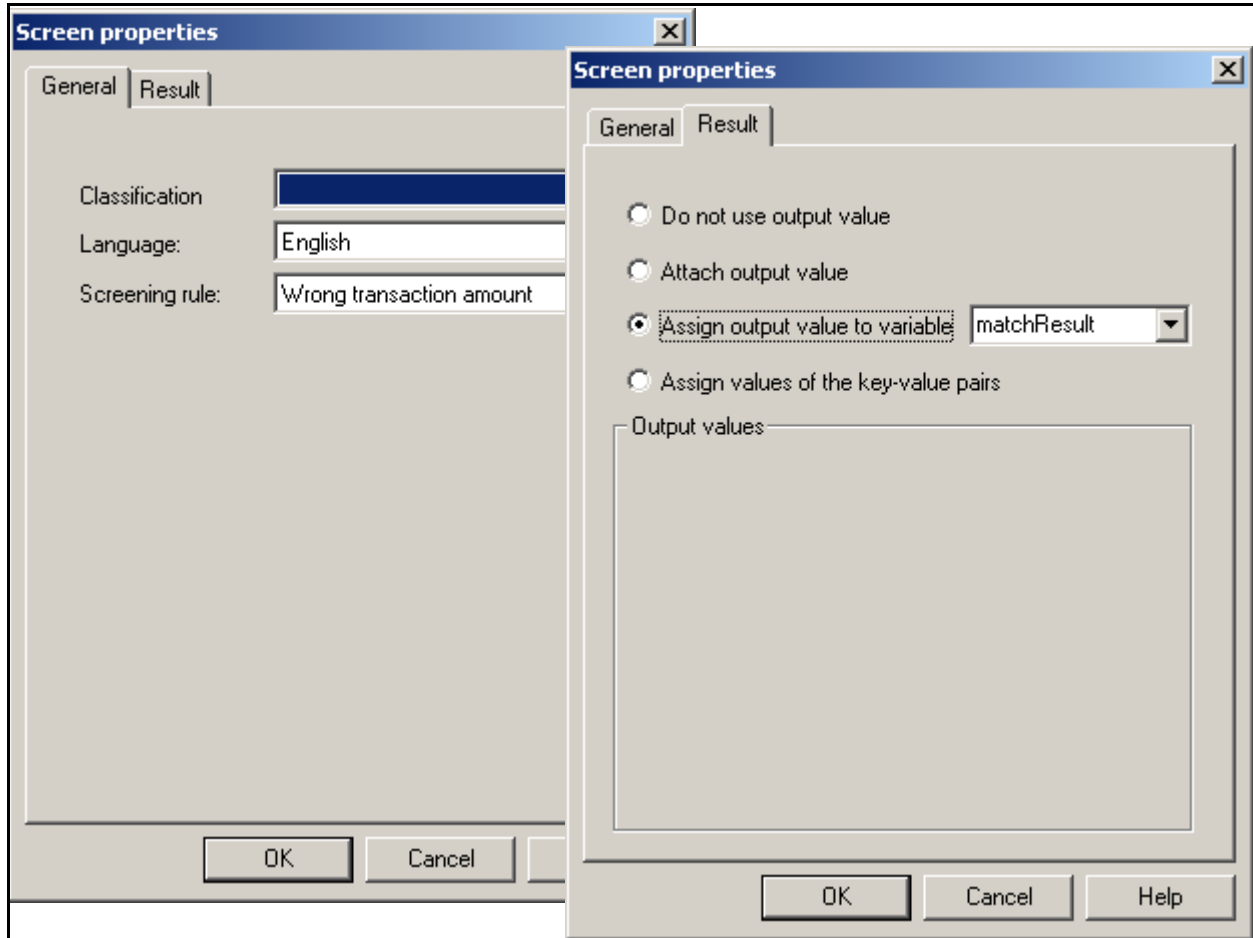


Figure 358: Screen Properties Dialog Box

The Screening Rule used in Screen object #1 is Wrong transaction amount. Note also that the Result tab in [Figure 358](#) instructs to assign the screening result output value to a variable named `matchResult`.

- If a Screening Rule match in Screen object #1 occurs, the interaction goes out the side port to an If object (#1 in [Figure 357](#) on [page 414](#)).
- If a match does not occur, the interaction goes out the bottom port to a Call Subroutine object that performs failure analysis (see [Figure 357](#) on [page 414](#)).

If Object

Note the If object #1 in Figure 357 on [page 414](#). [Figure 359](#) shows the If object Properties dialog box.

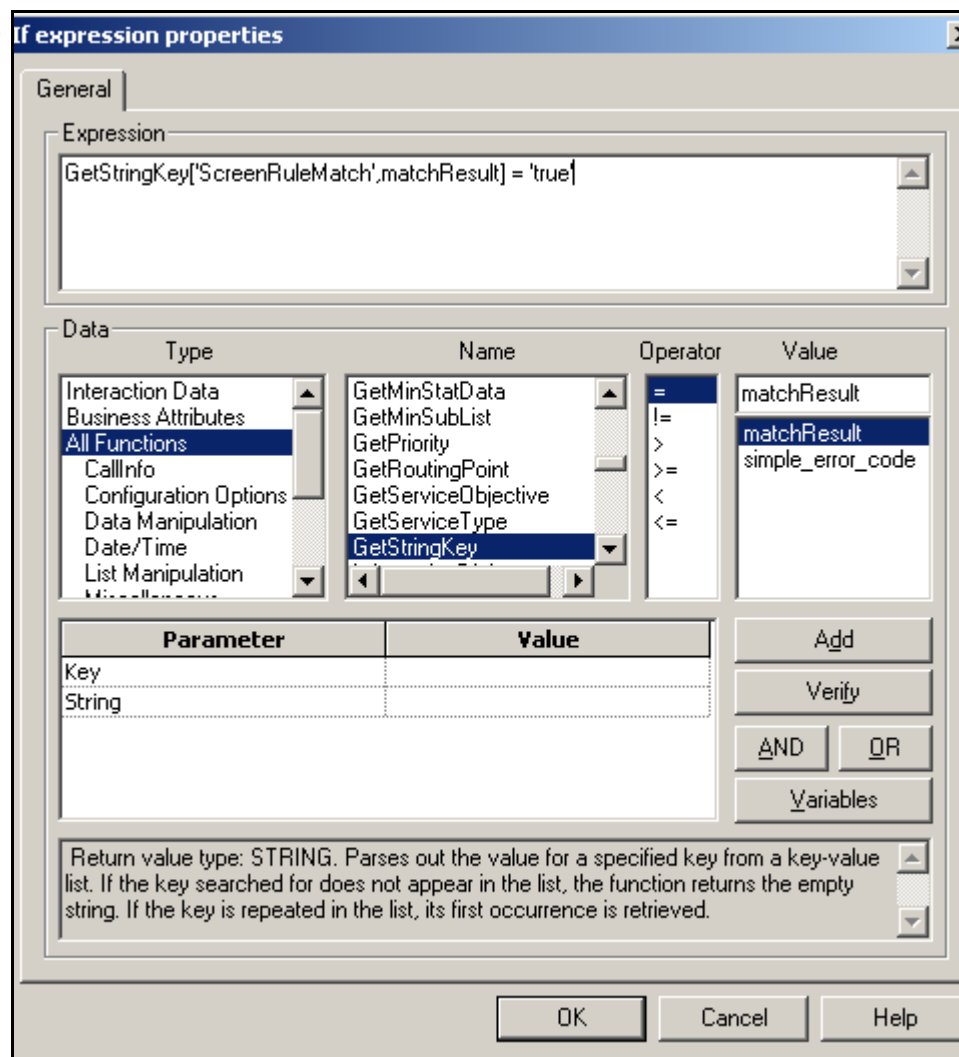


Figure 359: If Object Properties Dialog Box

The true/false value of the expression in [Figure 359](#) determines whether the strategy sends the interaction to Attach Categories object #1 or whether the interaction is sent for further screening.

- If the expression in [Figure 359](#) is true (if the variable `matchResult` contains `ScreenRuleMatch`), the interaction goes out the side port to Attach Categories object #1 (see [Figure 357](#) on [page 414](#)). Continue with “Attach Categories Object” on [page 417](#).
- If the expression in shown [Figure 359](#) is false, the interaction goes out the bottom port to Screen object #2 that screens using a different Screening Rule, Unidentified transaction. The result is also written to the

matchResult variable. The interaction goes out the side port to If object #2, whose properties dialog box appears the same as in [Figure 359](#). Again, if the expression in If object #2 is true, the interaction goes out the side port to the Attach Categories object #2 (see [Figure 357](#) on [page 414](#)).

Attach Categories Object

[Figure 360](#) shows the Properties dialog boxes for Attach Categories object #1 and #2 in the Classify customer inquiry att-ct strategy that is shown in [Figure 357](#) on [page 414](#).

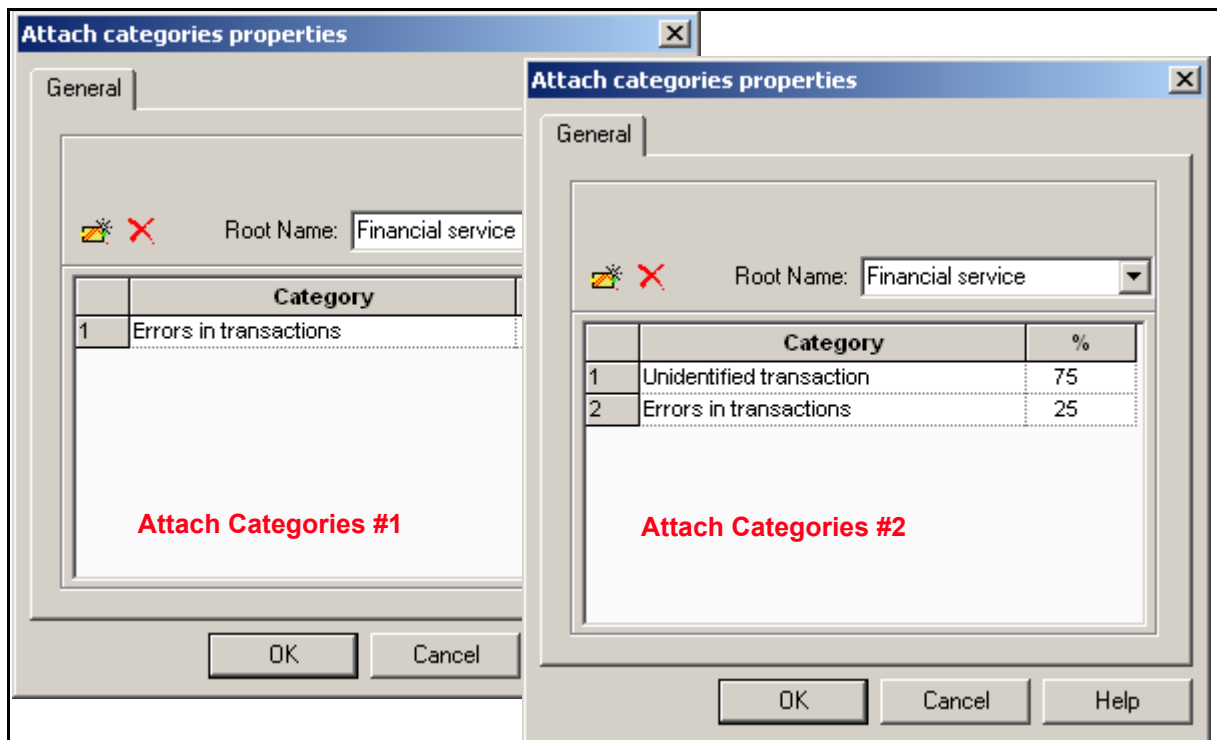


Figure 360: Attach Categories Properties Dialog Box

Attach Categories object #1 is used when initial screening indicates that the transaction contains an error (Wrong transaction amount Screening Rule match). The Screening Rule identifier is attached to the interaction, which then goes out the side port to a Workbin object for handling by a member of an Agent Group (E-mail distribution in [Figure 356](#) on [page 413](#)). [Figure 361](#) shows the Workbin Properties dialog box.

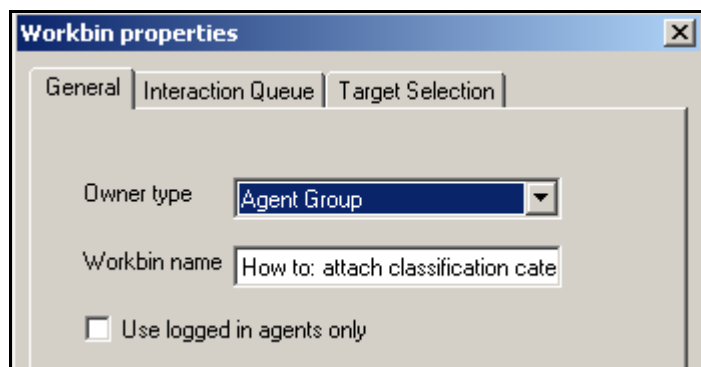


Figure 361: Workbin Properties Dialog Box

Attach Categories Properties object #2 in Figure 360 on [page 417](#) is used when evaluation of the expression in If object #2 indicates that the interaction is an unidentified one or contains an error. In this case, the interaction goes out the side port to a Route Interaction object (see Figure 357 on [page 414](#)).

[Figure 362](#) shows both tabs in the object properties dialog box for the Route Interaction object.

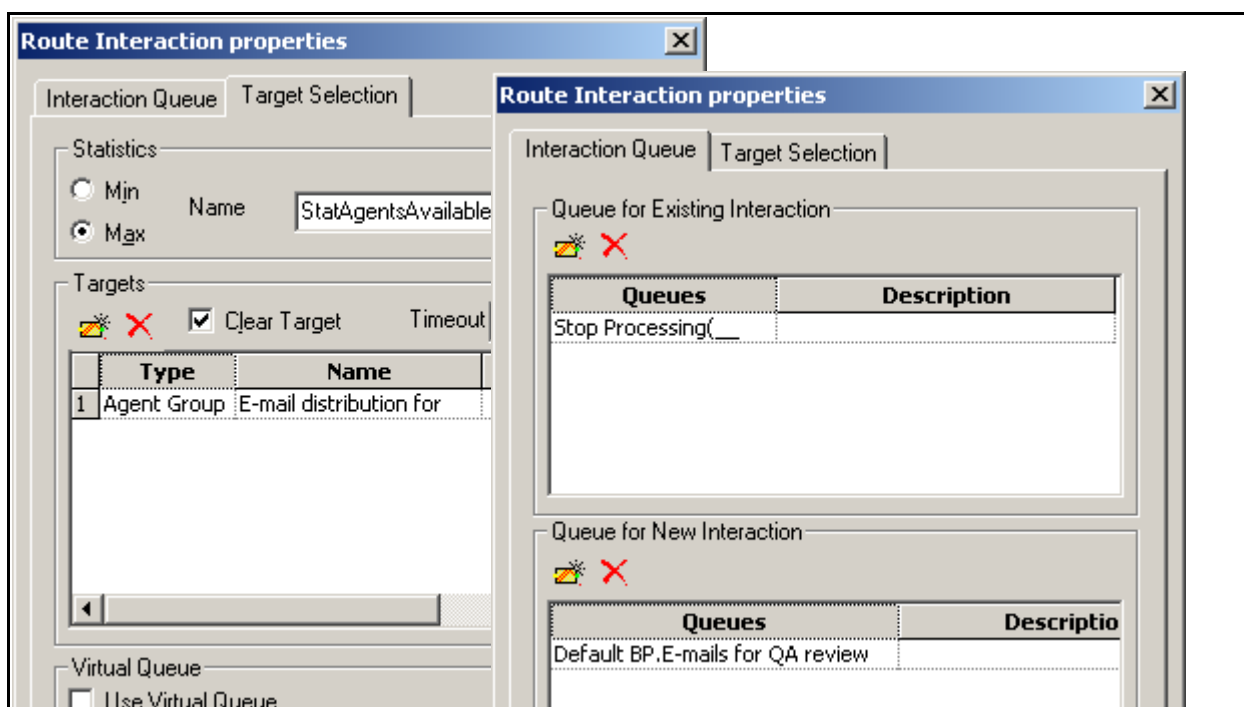


Figure 362: Route Interaction Properties Dialog Box

In the business process that is shown in Figure 356 on [page 413](#), you can see the following objects: E-mail distribution for processing, Stop, and E-mails for QA review.

The following objects in Figure 356 on [page 413](#) are the result of error handling:

E-mail service failure analysis subroutine

Terminate interaction subroutine

How To: Attach Classification Categories and Use Multi-Screen Object

This business process, listed in Figure 327 on [page 373](#), demonstrates how to attach classification Categories to new inbound interactions for the purpose of segmenting those interactions to take different paths in the strategy. If you need additional information about classification Categories, “Categories Tab” on [page 178](#). [Figure 363](#) shows the How to: Attach classification categories and use multi-screen object business process.

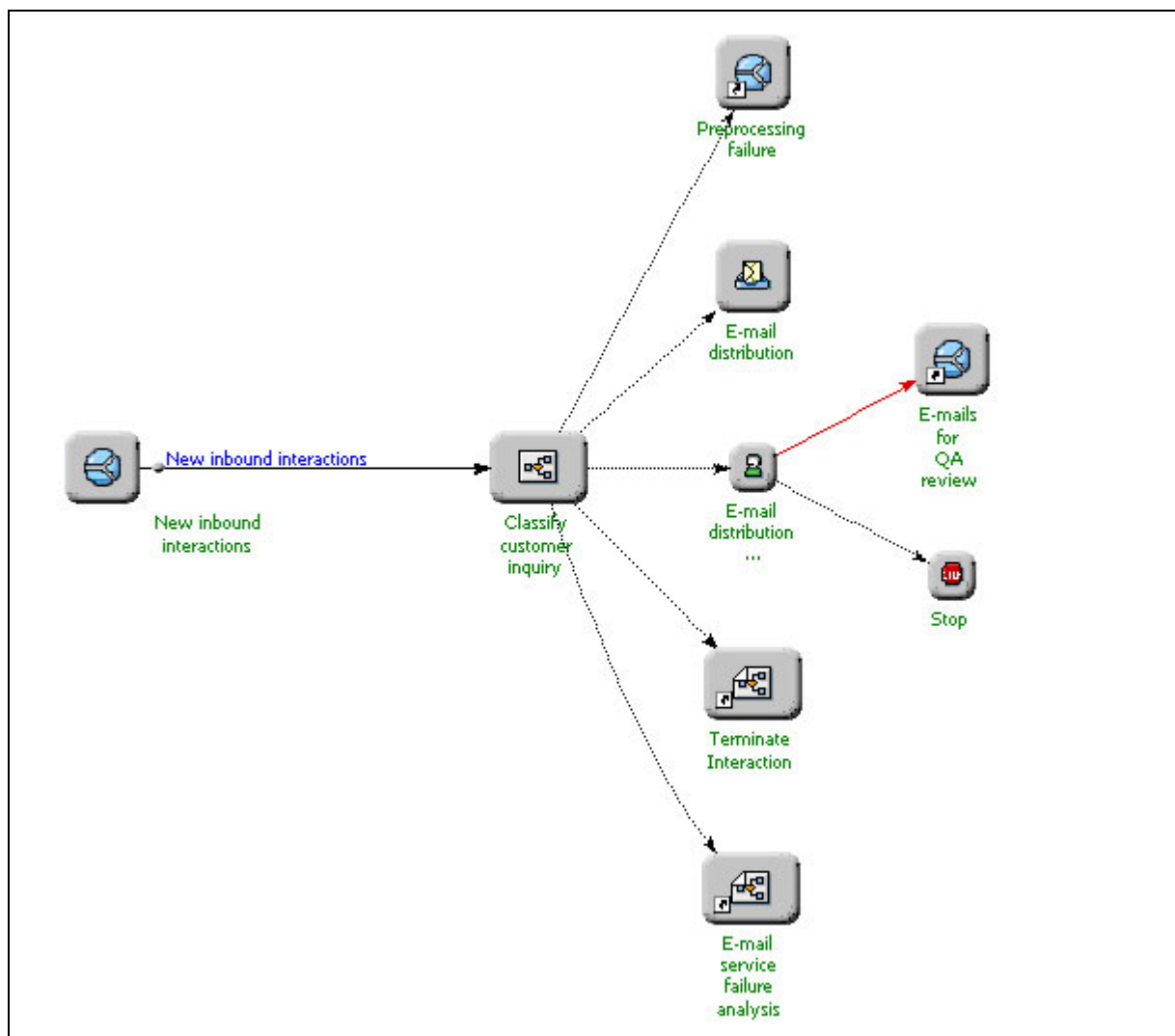


Figure 363: Attach Classification Categories and Use Multi-Screen Object Business Process

Processing Objects

This section describes the various objects in Figure 363 on [page 419](#).

A view (New inbound interactions) that is attached to a queue (New inbound interactions) that has no Conditions or Order By information, extracts interactions from the queue and sends them to the Classify customer inquiry strategy (see [Figure 364](#)).

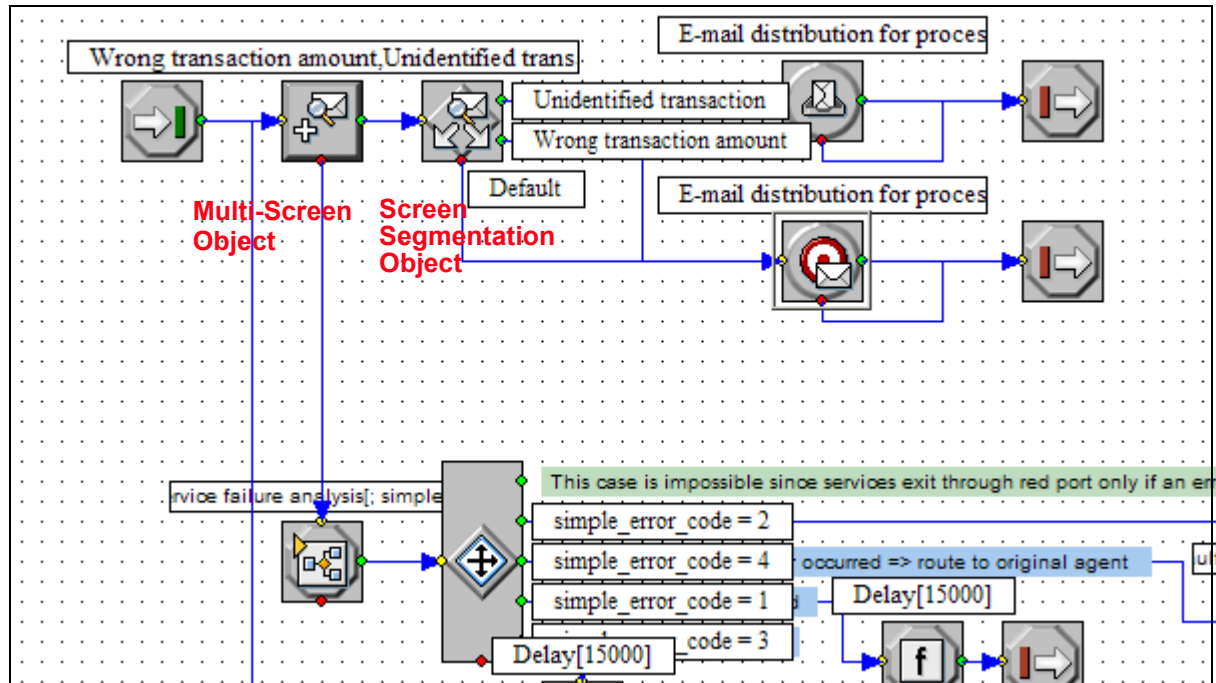


Figure 364: Classify Customer Inquiry Strategy

Multi-Screen Object

This strategy starts with Multi-Screen object that screens for certain words or word patterns using multiple Screening Rules and returns the Categories associated with the Screening Rule.

Note: Compare the strategy in [Figure 364](#), which uses the Multi-Screen object, with the Classify customer inquiry attach strategy that is shown in [Figure 357](#) on [page 414](#), which uses the Screen object. Complexity and the amount of byte code is reduced with the Multi-Screen object because Multi-Screen handles multiple rules and does not require a conditional test after each screening.

You can see the Screening Rules used and instruction to return classification Categories when you open the Multi-Screen object properties dialog box (see [Figure 365](#)).

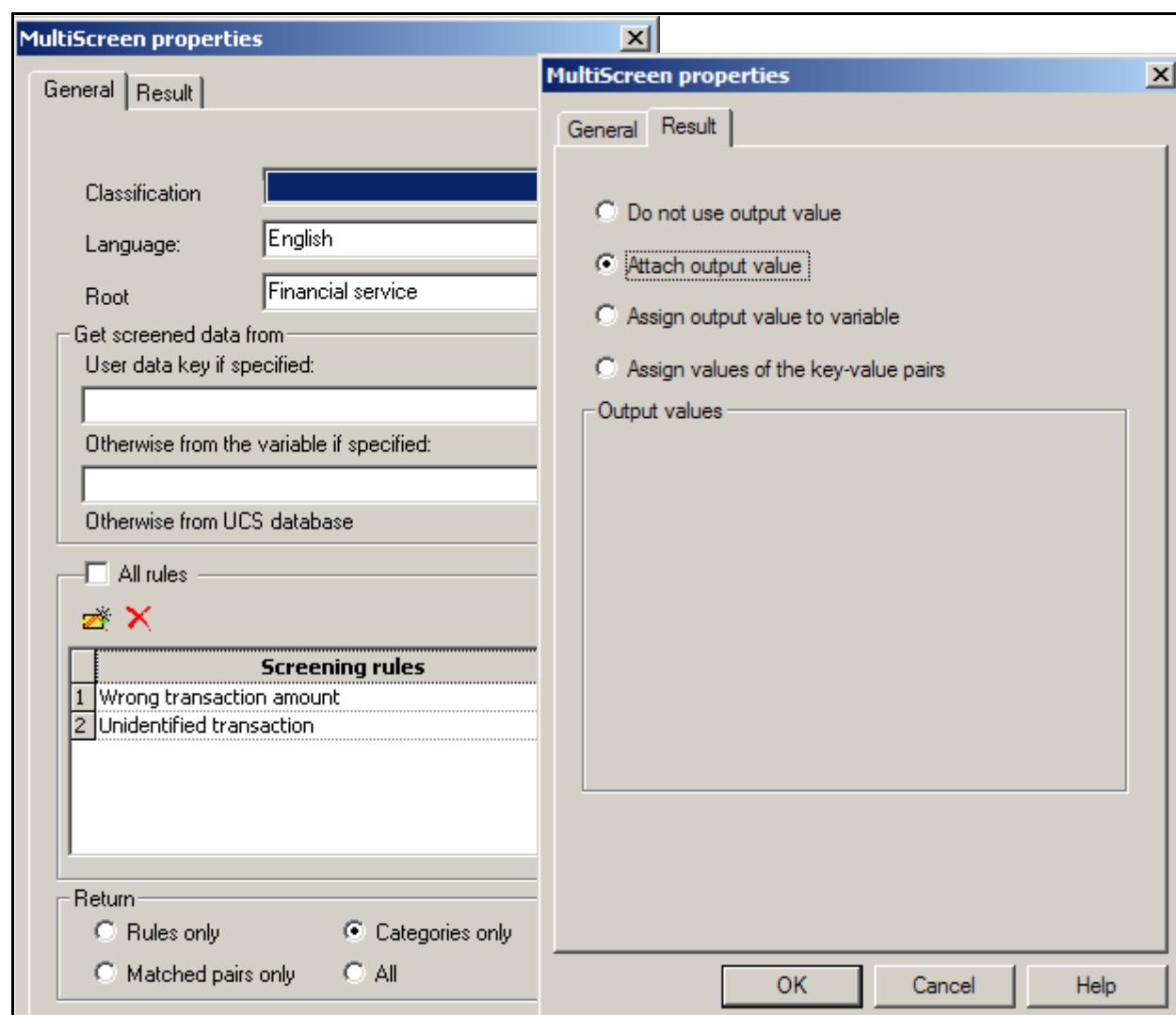


Figure 365: Multi-Screen Properties Dialog Box

The Screening Rules are Wrong transaction amount and Unidentified transaction. Under Return, note that Categories only is selected. Categories can be returned because Screening Rules can be associated with Categories in Knowledge Manager.

Note also that the Result tab in [Figure 365](#) instructs to attach the Categories to the interaction.

Screen Segmentation Object

Note the Screen Segmentation object in [Figure 364](#) on [page 420](#). Interactions with Categories attached by the Multi-Screen object go to a Screen Segmentation object, which causes interactions to take different path in the strategy based on a Screening Rule match. [Figure 366](#) shows its properties dialog box.

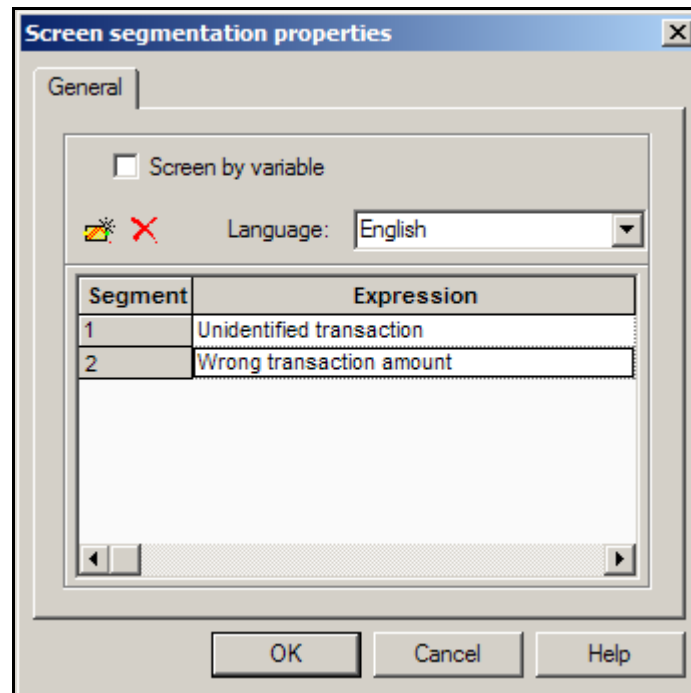


Figure 366: Screen Segmentation Properties Dialog Box

Each segment in the Screen Segmentation properties dialog box generates its own output port in the strategy in Figure 364 on [page 420](#).

- Interactions screened as Unidentified transaction (needing an agent response instead of a Standard Response) go a Workbin object. This is represented as the E-mail distribution Workbin strategy-linked node in Figure 363 on [page 419](#).

Figure 367 on [page 423](#) shows the various tabs in the Workbin properties dialog box.

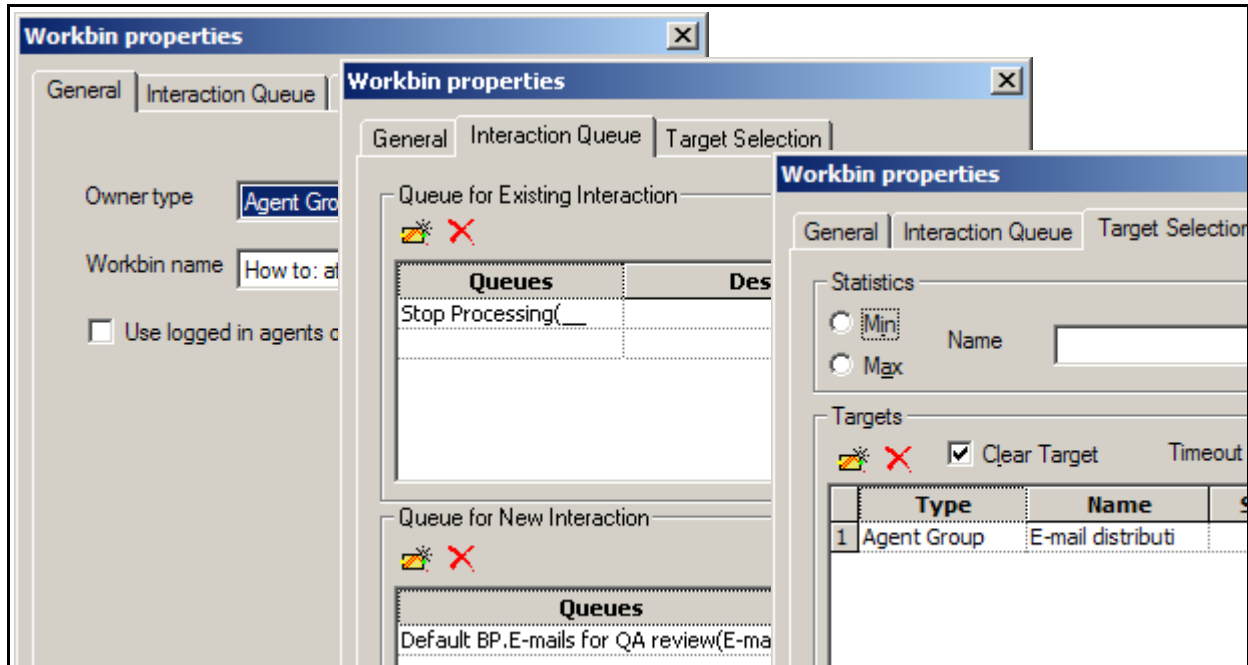


Figure 367: Workbin Properties Dialog Box

In the Target Selection tab, an Agent Group workbin named E-mail Distribution is selected. This is where the customer's e-mail will reside while a response is constructed.

In the Interaction Queue tab, under Queue for New Interaction, the selection is E-mails for QA review found in the Default BP business process. This is where the agent will place the new interaction (e-mail response to customer) so it can be checked by QA prior to sending. This is represented by the E-mails failed QA strategy-linked queue node in Figure 363 on [page 419](#).

The Genesys predefined Stop Processing(_STOP_) queue is represented by the Stop strategy-linked node in Figure 363 on [page 419](#). It indicates a notification to Interaction Server that processing of the existing interaction has stopped.

- Interactions screened as containing Wrong transaction amount go to a Route Interaction object.

[Figure 368](#) shows its properties dialog box.

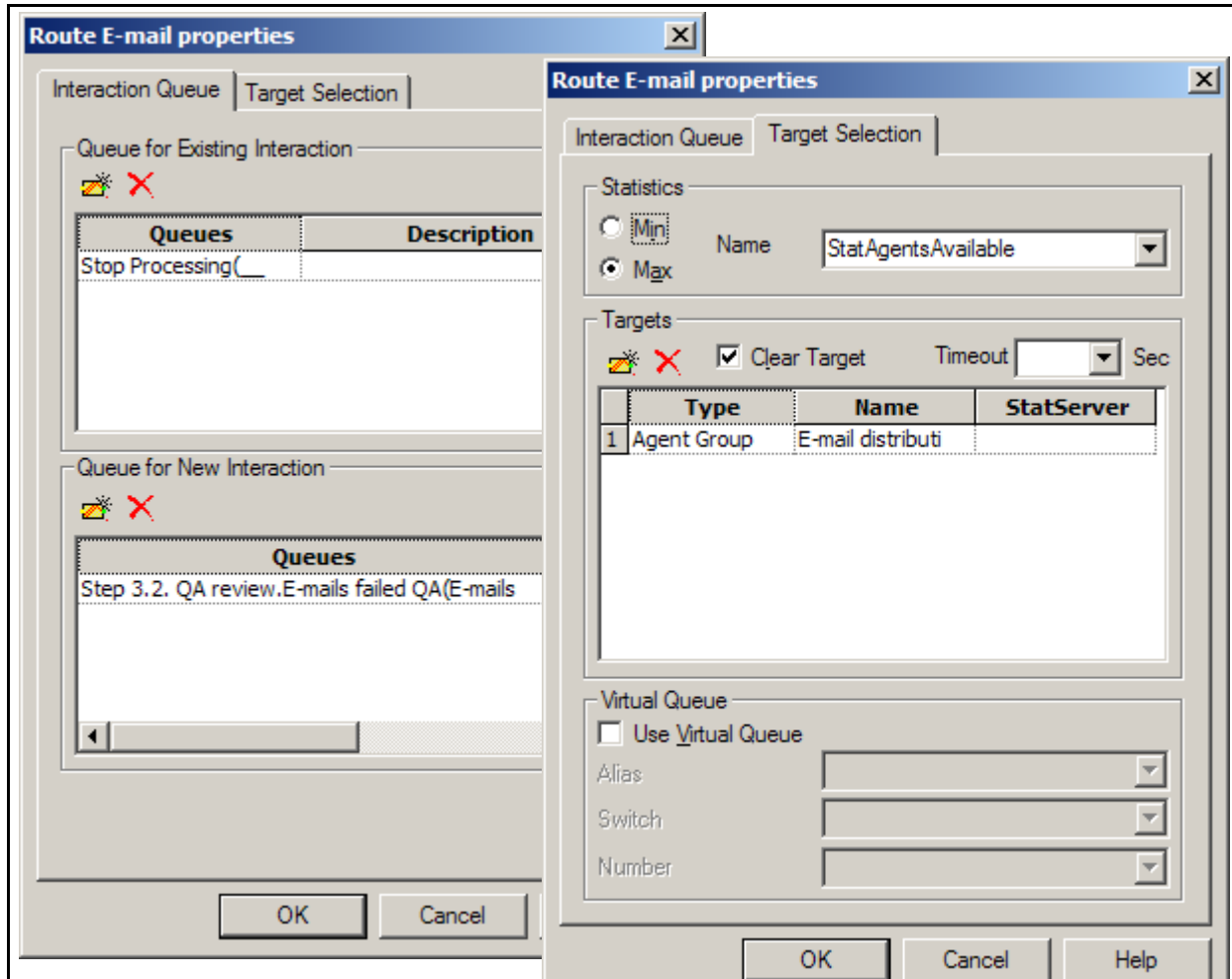


Figure 368: Route Interaction Properties Dialog Box

In the Target Selection tab, an Agent Group named E-mail Distribution is selected. This target is also represented as the E-mail distribution strategy-linked node in Figure 363 on [page 419](#).

In the Interaction Queue tab, under Queue for New Interaction, the selection is E-mails failed QA. This is the same queue used by the Workbin object (see Figure 367 on [page 423](#)). This is where the agent will place a new interaction (e-mail response to customer) so it can be checked by QA prior to sending. This is also represented by the E-mails failed QA strategy-linked queue node in Figure 363 on [page 419](#).

The Genesys predefined Stop Processing(_STOP_) queue is represented by the Stop strategy-linked node in Figure 363 on [page 419](#). It indicates a notification to Interaction Server that processing of the existing interaction has stopped.

Error Handling

The following objects in Figure 363 on [page 419](#) are the result of error handling:

E-mail service failure analysis subroutine

Terminate interaction subroutine

How To: Conduct a Survey by Using Email

This business process demonstrates how a call center offers satisfaction surveys to their customers through outbound email or after a chat session. The survey can be sent to customers in a separate window after the chat has ended or sent by the agent as a link.

The survey results are stored as:

- A transcript under the parent chat interaction.
- Attached data to the parent chat interaction (enables reports to be run).
- A parent interaction to the original email

The email or chat survey implementation consists of the ASP/JSP pages on a web site and a business process to handle flow control of the survey.

The script on a Java Server Page (JSP) or Active Server Page (ASP) collects the submitted data and all parameters from the original link, creates the interaction, and sends it to the Interaction Server. Interaction Server then sends this interaction to the business process and an interaction is created within UCS by the business process strategy. Finally, the UCS stores the data in its database and can viewed in the contact's historical data by using Genesys Application Desktop. Figure 369 on [page 426](#) demonstrates the business process flow.

For more information about Interaction Server, see the *eServices (Multimedia) 8.0 Deployment Guide*.

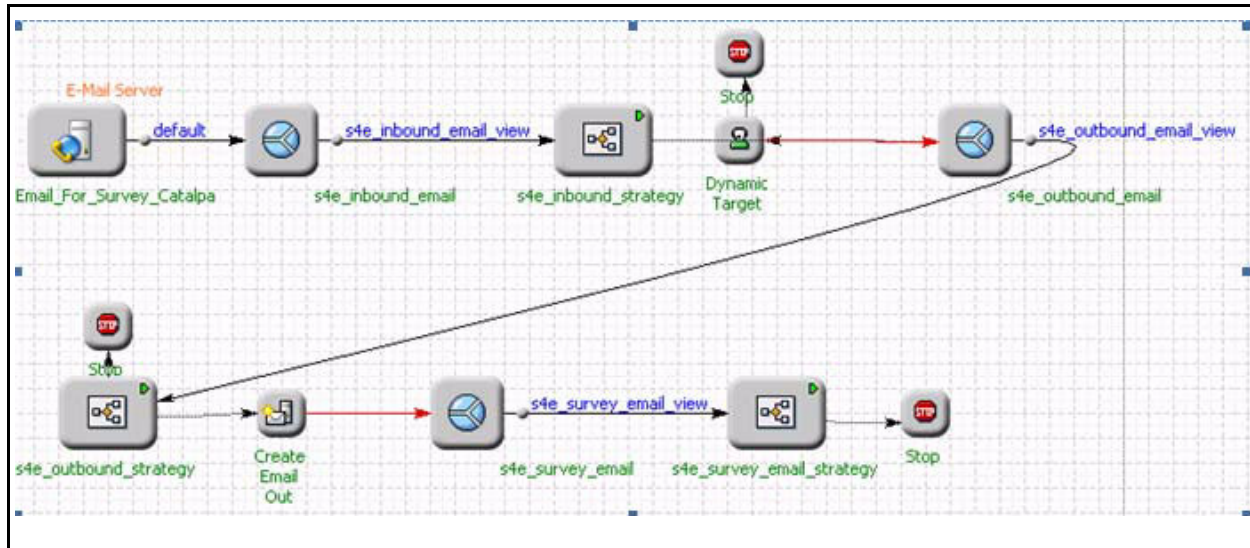


Figure 369: Email Survey Business Process Strategies

Applicable Strategies

The business process that is used to process the original email and send the auto-response to the customer consists of three strategies, with a fourth strategy to handle the submission of surveys after the customer fills out the form (to Interaction Server from the web). The strategies are described in the following sections, where the *s4e* prefix (meaning *survey for email*) is used in all of the views, strategies and subroutines.

s4e_inbound_strategy

This strategy handles incoming email and distributes them among any available agents. It stops the original interaction (incoming email) and sends the agent's reply to the outbound queue. See Figure 370 on [page 427](#).

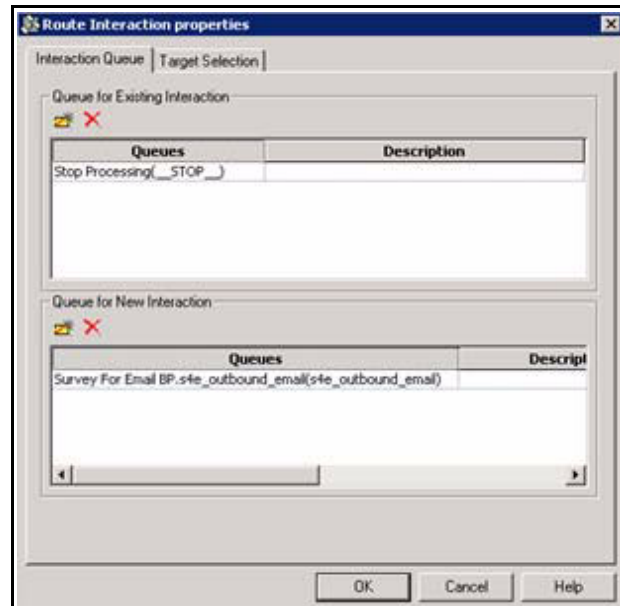


Figure 370: Route Interaction Properties

s4e_outbound_strategy

This strategy handles outgoing email, generates the standard response that contains the hard-coded link to the survey application, and passes the required parameters by using this link. See Figure 371 on [page 428](#).

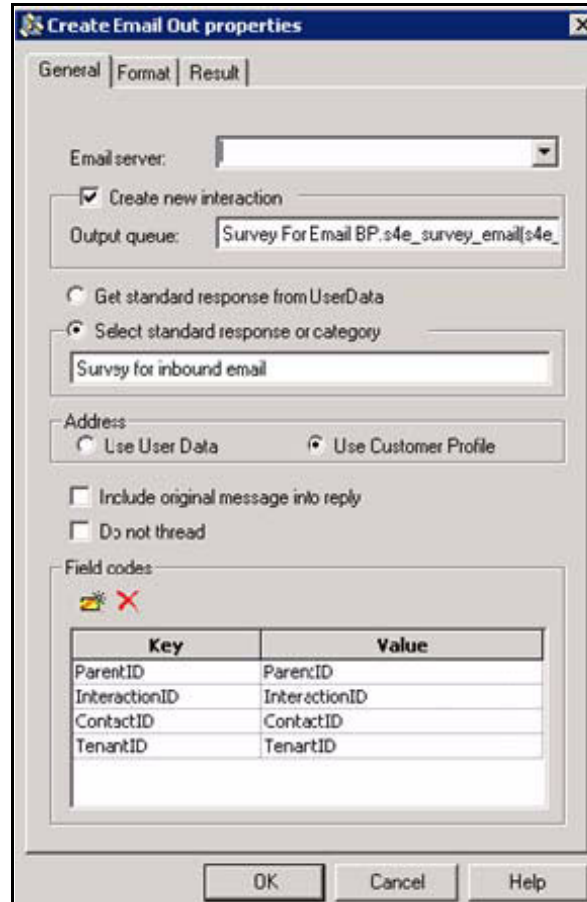


Figure 371: Create Email Out Properties

s4e_survey_email_strategy

This strategy sends the outbound email with a survey link. See [Figure 372](#).

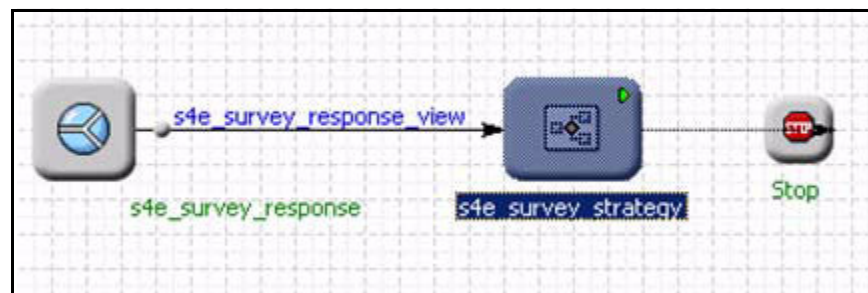


Figure 372: Strategy to Send Outbound Email

s4e_survey_strategy

This strategy handles the submission of surveys after customer has completed the form. The form is submitted to Interaction Server from the web. It is used

to create the interaction in UCS and associate this interaction with the customer and parent interaction if one exists. See [Figure 373](#).

Figure 373: Create Interaction Properties

Deploying the Email Survey Business Process

The following steps are required to deploy the Email survey business process:

1. Send the business process that is used to process the incoming email to the IRD.
2. In the Knowledge Manager application, configure a standard response.
3. In Configuration Server, add a new survey media type to the tenant.
4. In Tenant > Business Attributes > E-mail Accounts > Attribute Values, add a new Survey invitation element. Populate this element as follows:
 - a. On the Annex tab, create the general section
 - b. Add the address option with the survey_invitation value.

For more information about Knowledge Manager, see the *eServices (Multimedia) 8.0 Deployment Guide*.

Customizing the Business Process Configuration Options

Depending on your configuration, you might want to manually change some of the configuration options inside the strategy according to your business needs. After the business process is deployed, the options in [Table 32](#) can be changed.

Table 32: Email Survey BP Configuration Options That Can be Changed

Element name	Property name	Default value
s4e_inbound_strategy		
Route interaction	Queue for new interaction	Survey For Email BP.s4e_outbound_email(s4e_outbound_email)
	Agent Group	E-mail distribution for processing
s4e_inbound_strategy		
Create email output	Output queue	Survey For Email BP.s4e_survey_email(s4e_survey_email)
	From	Survey invitation
s4e_survey_strategy		
Create interaction	User Data Key	survey_answer_Text

How To: Get Credit Card Number From the E-mail

This business process, which is listed in Figure 327 on [page 373](#), demonstrates how to screen an interaction for credit card information.

- If the customer paid by credit card, the interaction is written to a queue for those types of interactions.
- If the customer did not pay by credit card, the interaction is written to a different queue.

[Figure 374](#) shows the How to: Get Credit Card Number From the E-mail business process.

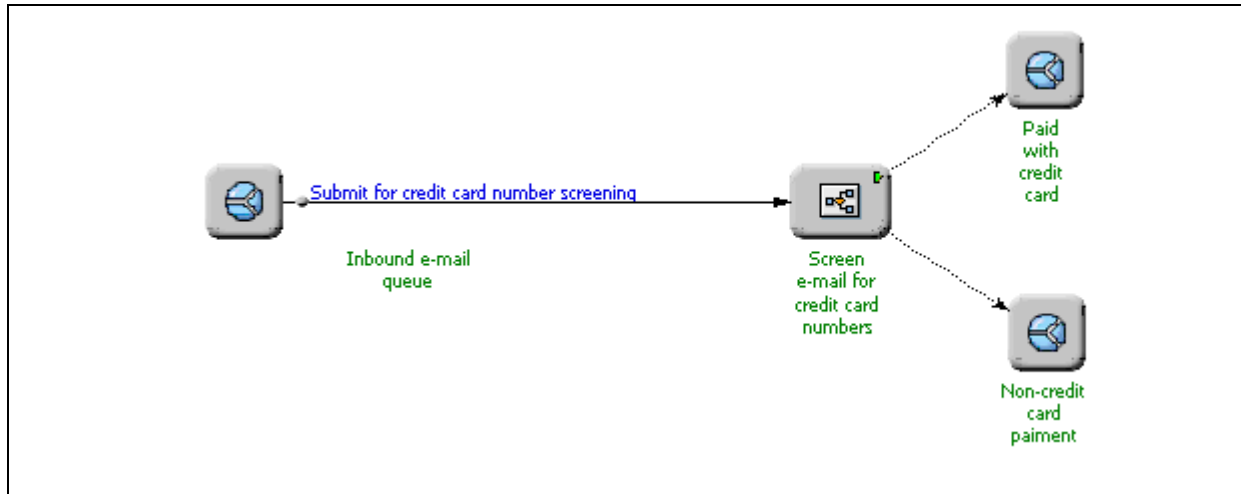


Figure 374: Get Credit Card Number From the E-mail Business Process

If you need a review of screening, see “Screening Tab” on [page 185](#).

Processing Objects

This section describes the various objects in [Figure 374](#).

A view (Submit for credit card number for screening) that has no Conditions or Order By information (see [Table 24](#) on [page 273](#)) extracts interactions from Inbound e-mail queue and sends them to the Screen e-mail for credit card numbers strategy (see [Figure 375](#)).

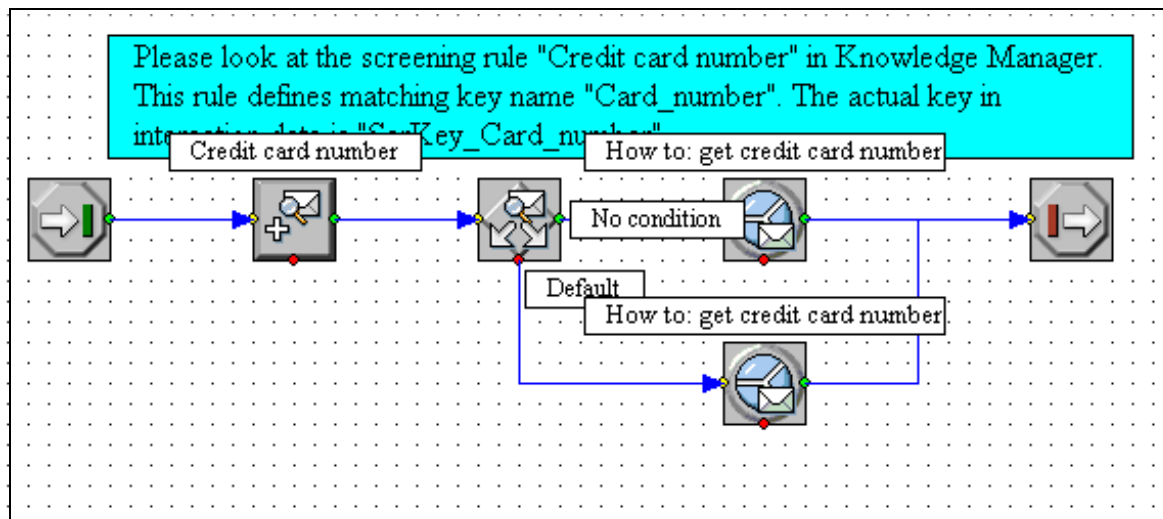


Figure 375: Screen E-mail for Credit Card Numbers Strategy

This strategy starts with the Multi-Screen object that screens for certain words or word patterns using multiple Screening Rules. It then returns the Categories (see [page 178](#)) associated with Screening Rules that matched.

Figure 376 shows the General and Result tab in the properties dialog box for the Multi-Screen object.

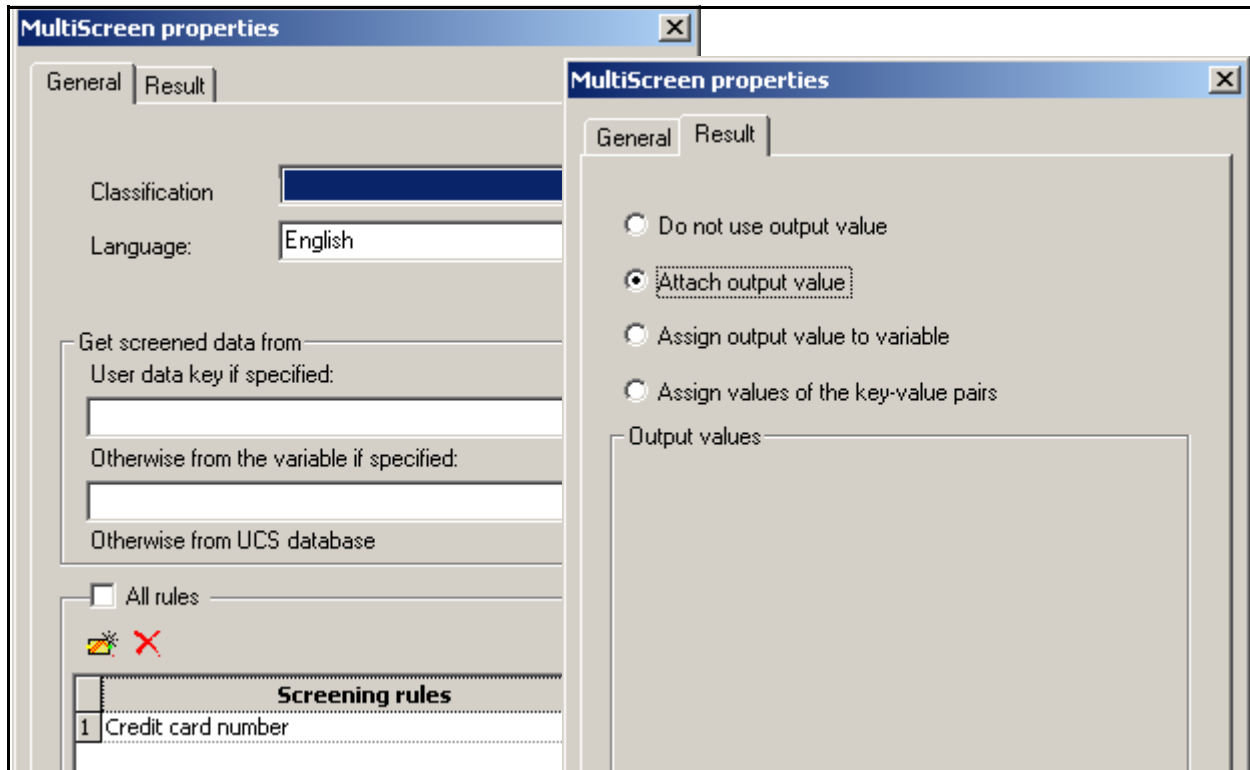


Figure 376: Multi-Screen Properties Dialog Box

The name of the Screening Rule is Credit card number. (If the Screening Rule does not display, see “Properties Dialog Boxes for Strategy Objects” on [page 373](#).) Under Return, note that Matched pairs only is selected. This returns pairs consisting of a screening rule identifier and the specific string of words in the interaction that matches the screening rule. The Result tab in [Figure 376](#) instructs to attach the Categories to the interaction.

Screen Segmentation Object

The next object in the strategy that is shown in [Figure 375](#) on [page 431](#) is a Screen Segmentation object. Interactions with Categories attached by the Multi-Screen object go to a Screen Segmentation object. It causes interactions to take different path in the strategy based on whether a Screening Rule match occurred. [Figure 377](#) shows its properties dialog box.

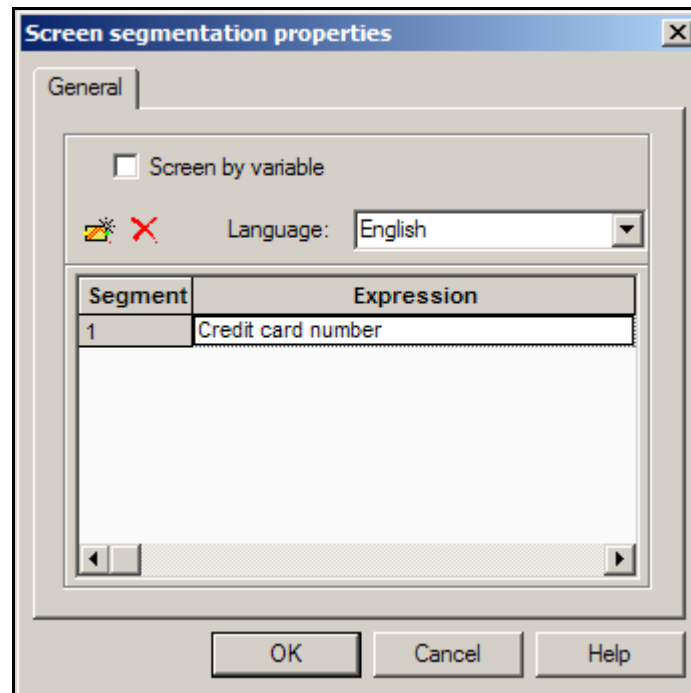


Figure 377: Screen Segmentation Properties Dialog Box

As shown in Figure 374 on [page 431](#):

- Interactions matching the Credit card number Screening Rule go out the side port to a Queue Interaction object that specifies an interaction queue that is called Paid with credit card.
- Interactions that do not match the Credit card number Screening Rule go to another Queue Interaction object that specifies an interaction queue that is called Non-credit card payment.

[Figure 378](#) shows the properties dialog box for each Queue Interaction object after clicking the down arrows to show all queues including the selected queues.

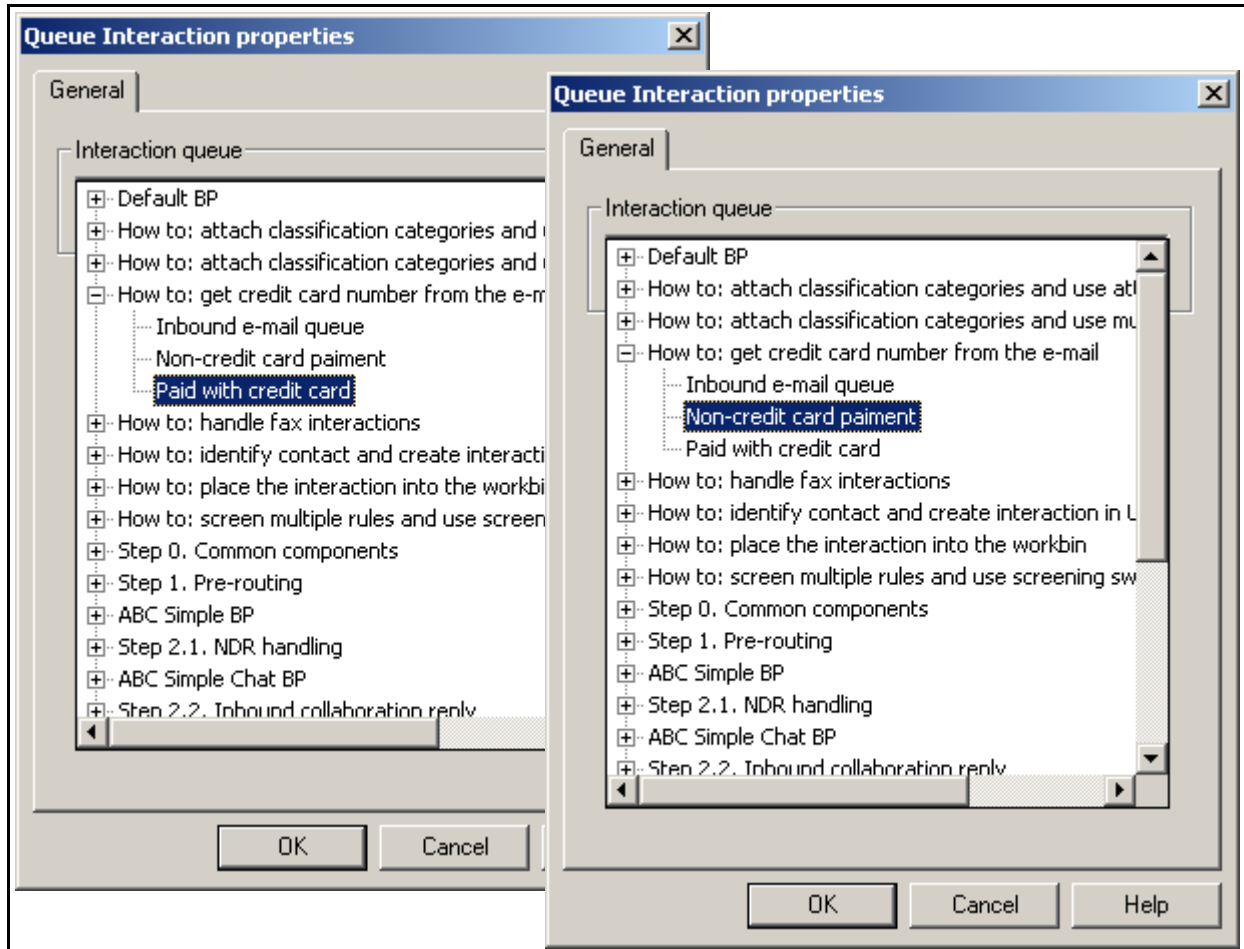


Figure 378: Queue Interaction Properties Dialog Boxes

The names of both interaction queues are reflected in the business process that is shown in Figure 374 on [page 431](#).

How To: Handle Fax Interactions

This business process, listed in Figure 327 on [page 373](#), demonstrates how screening can work with various medias, such as fax.

- Interactions that match a Screening Rule trigger an automatic response and/or redirecting or forwarding to other agents.
- If an interaction fails the screening, this means the interaction cannot be processed automatically and requires an agent's attention. An acknowledgement e-mail is generated and the interaction goes to a queue for further processing.

Figure 379 on [page 435](#) shows the How to: Handle Fax Interactions business process.

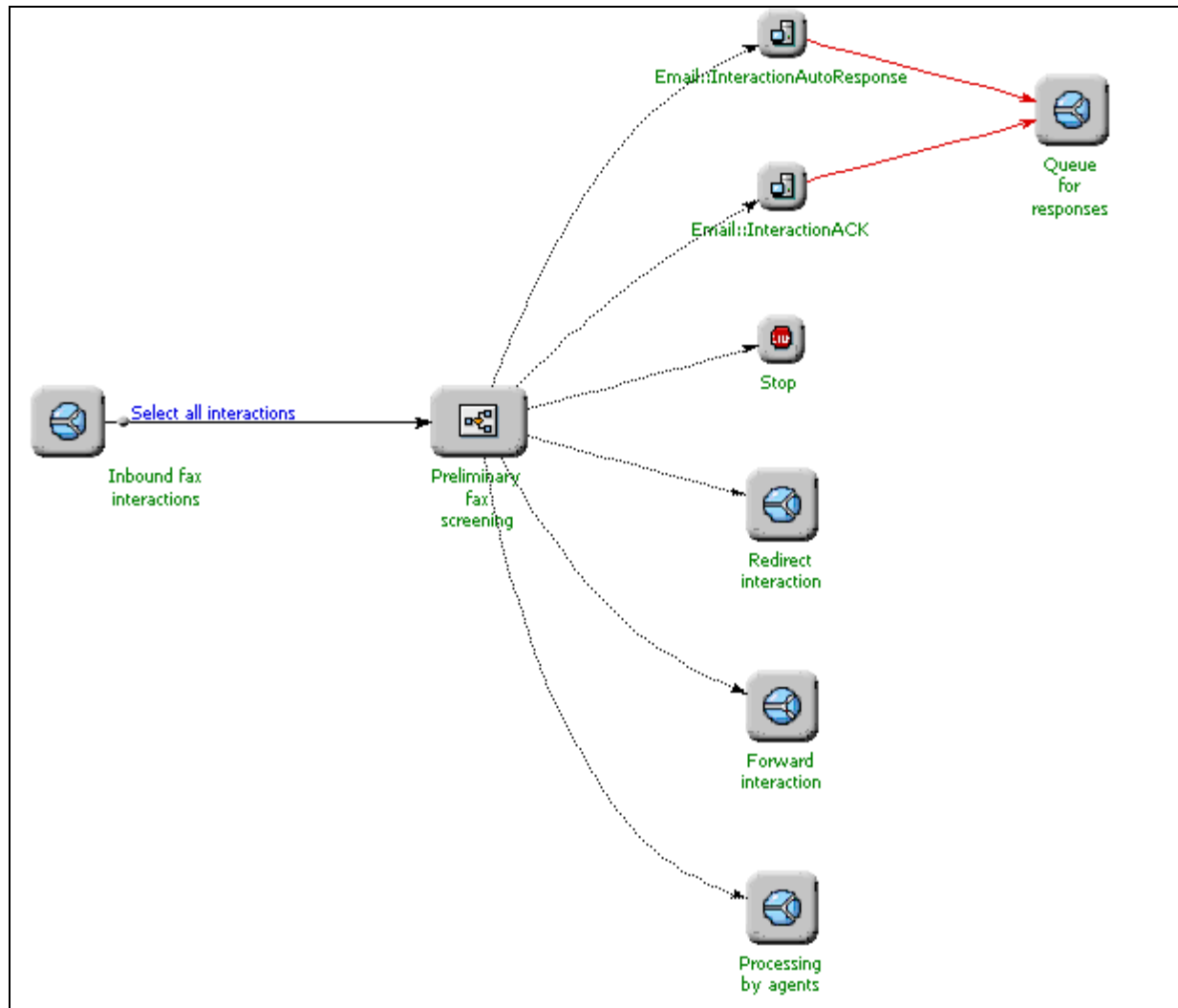


Figure 379: Handle Fax Interactions Business Process

Processing Objects

This section describes the various objects in [Figure 379](#).

A view (Select all interactions) that has no Conditions or Order By information (see Table 24 on [page 273](#)) extracts interactions from the Inbound fax Interactions queue and sends them to the strategy, Preliminary fax screening (see [Figure 380](#)).

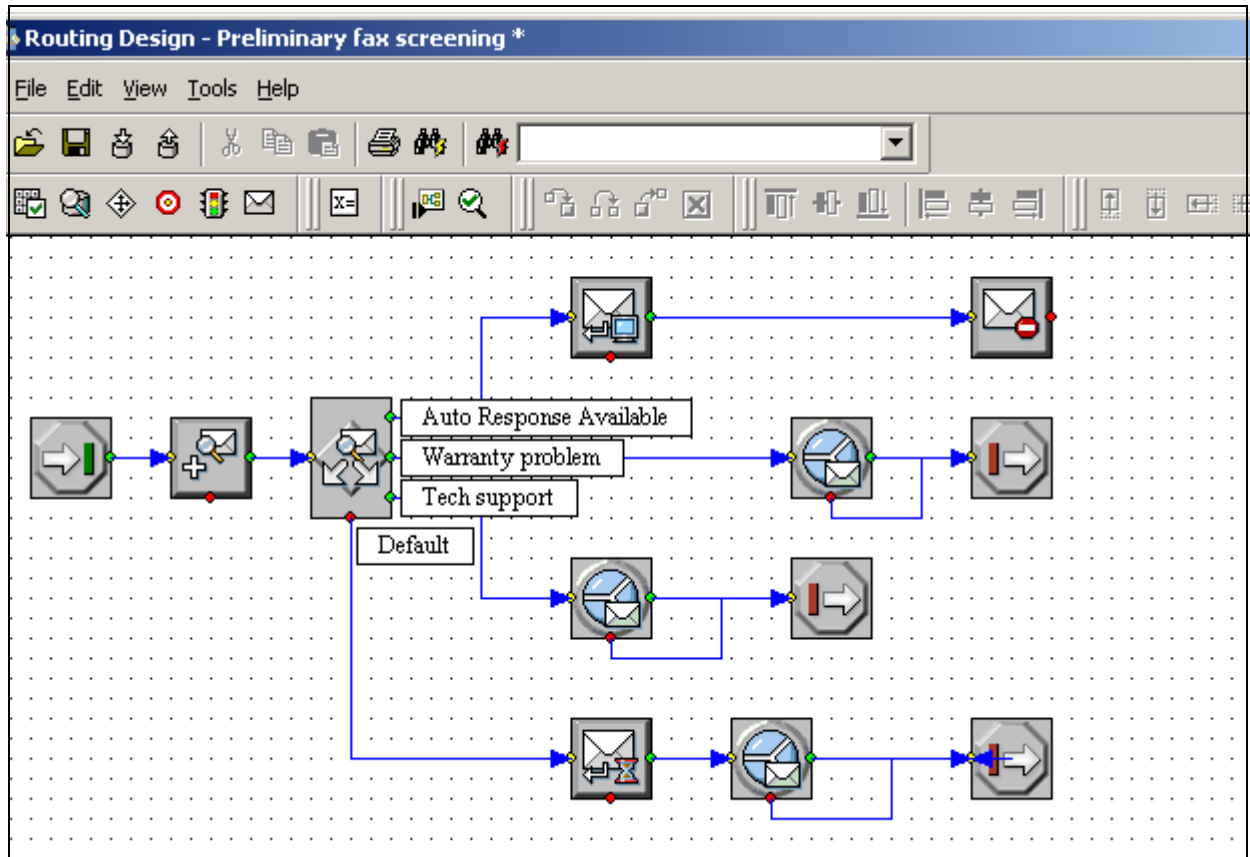


Figure 380: Preliminary Fax Screening Strategy

Multi-Screen Object

After the Entry object, a Multi-Screen object screens for certain words or word patterns using multiple Screening Rules. The properties dialog box for the Multi-Screen object is shown in [Figure 381](#).

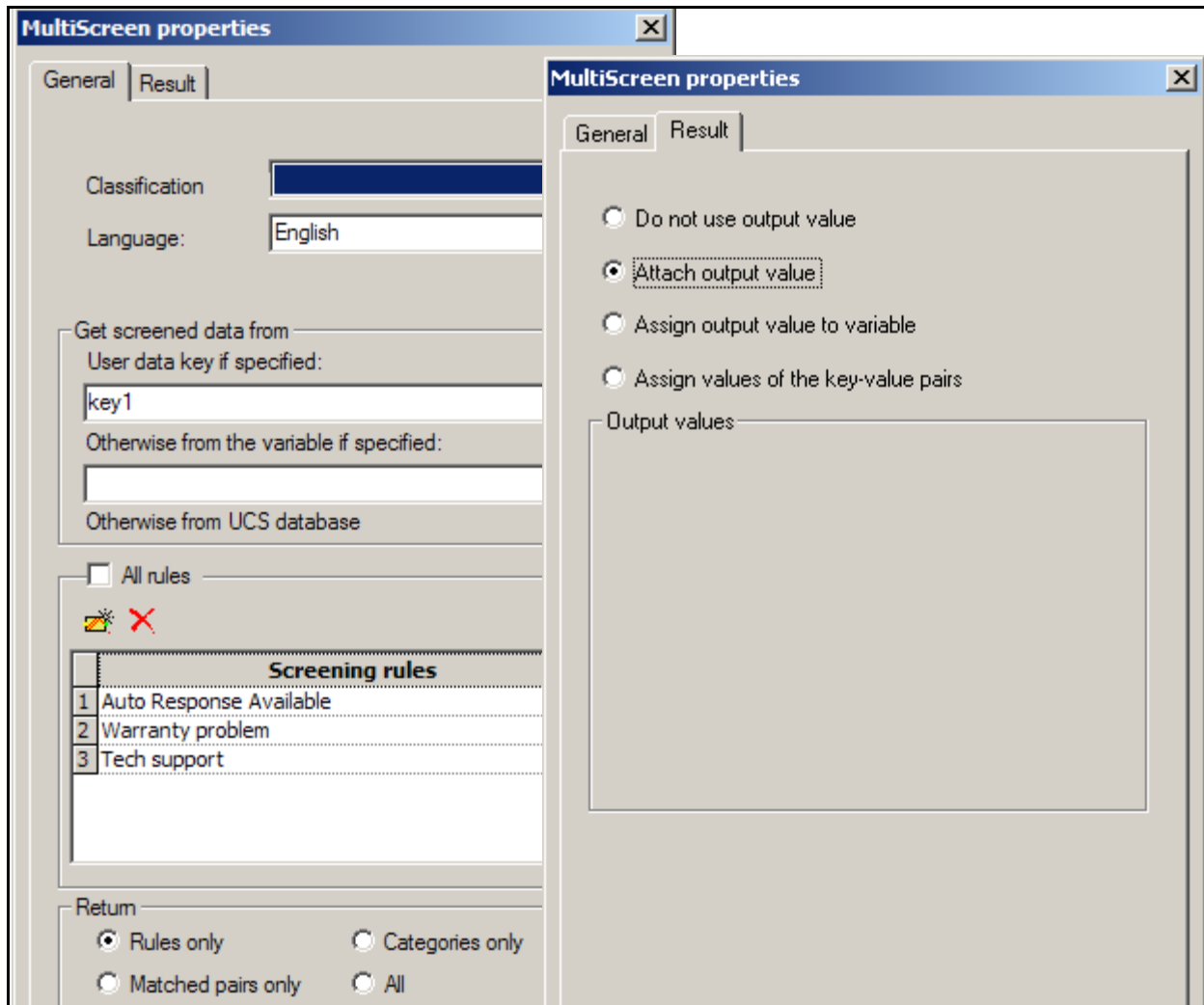


Figure 381: Multi-Screen Properties Dialog Box

The Screening Rules are Auto Response Available, Warranty problem, and Tech support.

Under Return, Rules only is selected, which returns only the Screening Rule identifier when a match is found.

The Result tab instructs to attach the Screening Rule identifier to the interaction.

Screen Segmentation Object

After the Multi-Screen object, the next object in the strategy that is shown in Figure 380 on [page 436](#) is a Screen Segmentation object. Interactions take different paths in the strategy based on the Screening Rule that was matched. [Figure 382](#) shows its properties dialog box.

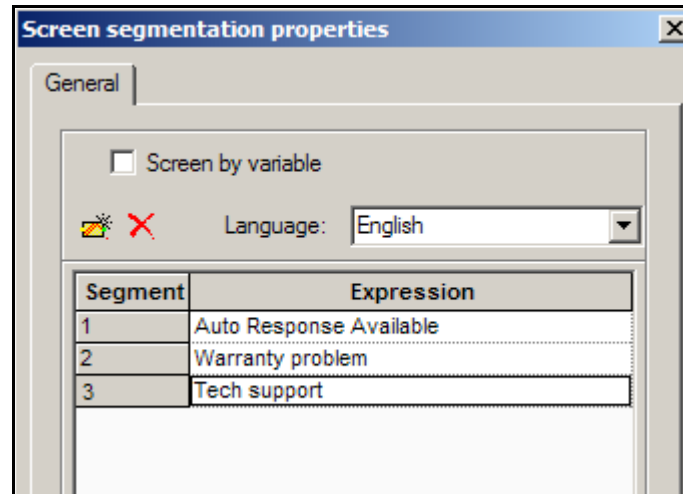


Figure 382: Screen Segmentation Properties Dialog Box

Each segment in the Screen Segmentation properties dialog box generates its own output port in the strategy (see Figure 380 on [page 436](#)).

Autoresponse Object

Interactions matching the Screen Rule Auto Response Available go an Autoresponse object that uses Customer Support phone text from a Standard Response Library to create an automatic response (see [Figure 383](#)).

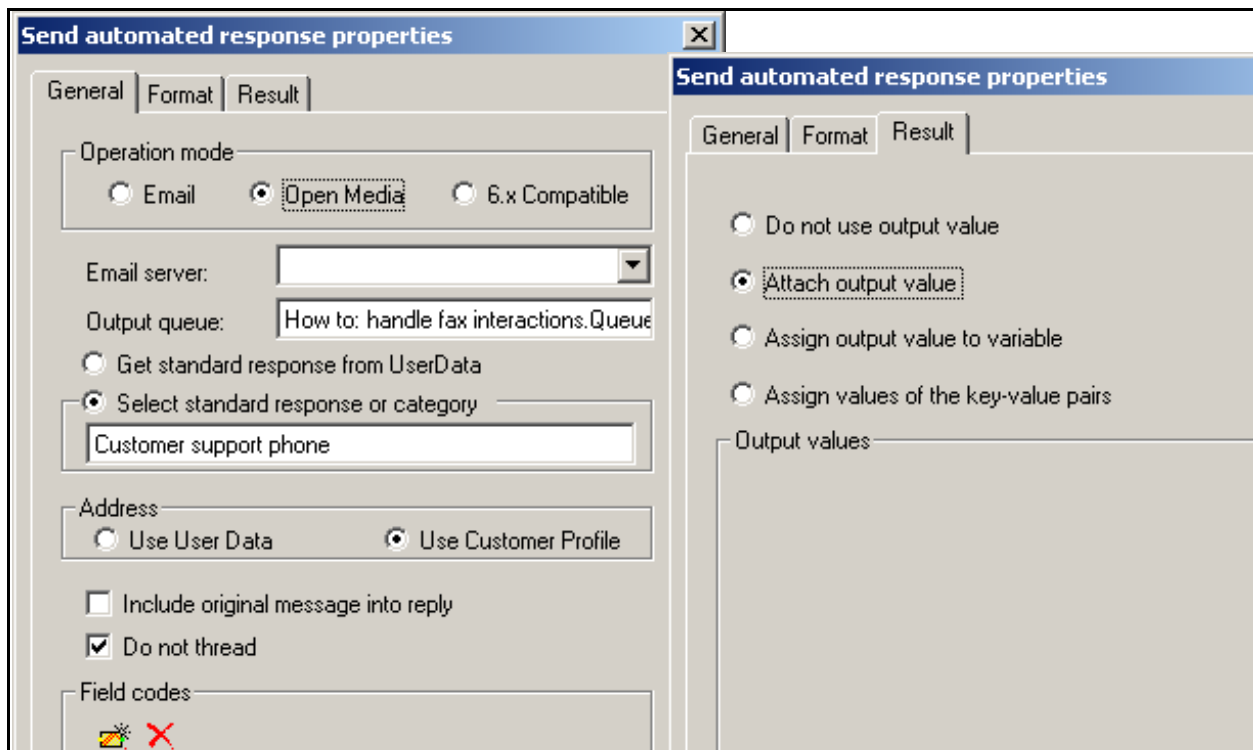


Figure 383: Send Automated Response Properties

Under Operation Mode in Figure 383 on [page 438](#), Open Media is selected.

After the Autoresponse object in the strategy in Figure 380 on [page 436](#), a Stop Interaction object notifies Interaction Server that processing for this particular interaction has stopped and supplies a reason code.

Warranty Problem Segment

Interactions in Figure 380 on [page 436](#) with a screening result of Warranty problem go to an Queue Interaction object that specifies an interaction queue that is called Forward interaction (see [Figure 384](#)).

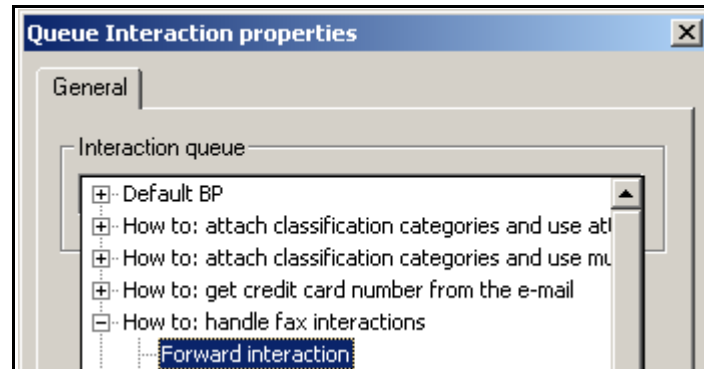


Figure 384: Queue Interaction Properties Dialog Box

Tech Support Segment

Interactions in Figure 380 on [page 436](#) with a screening result of Tech support go to an Queue Interaction object that specifies an interaction queue that is called Redirect Interaction (see [Figure 385](#)).

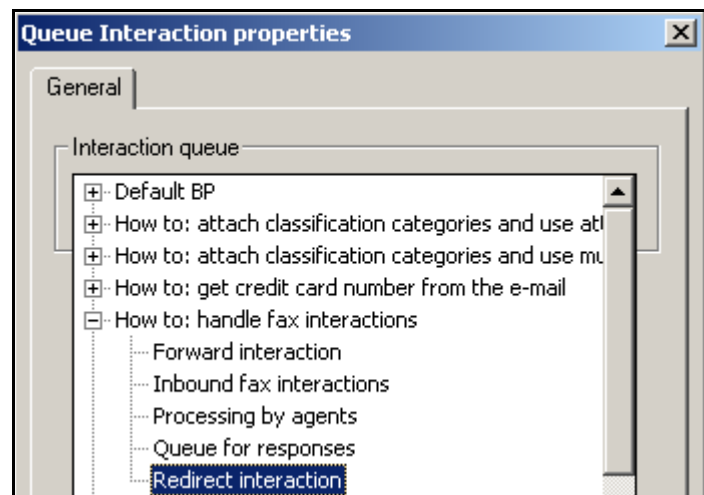


Figure 385: Queue Interaction Properties Dialog Boxes

All of the above interactions are faxes, which can be processed automatically.

Processing by Agents

Interactions not matching any of the previous Screening Rules cannot be processed automatically. These interactions go out the bottom port of the Multi-Screen object to an Acknowledgement object (see [Figure 386](#)).

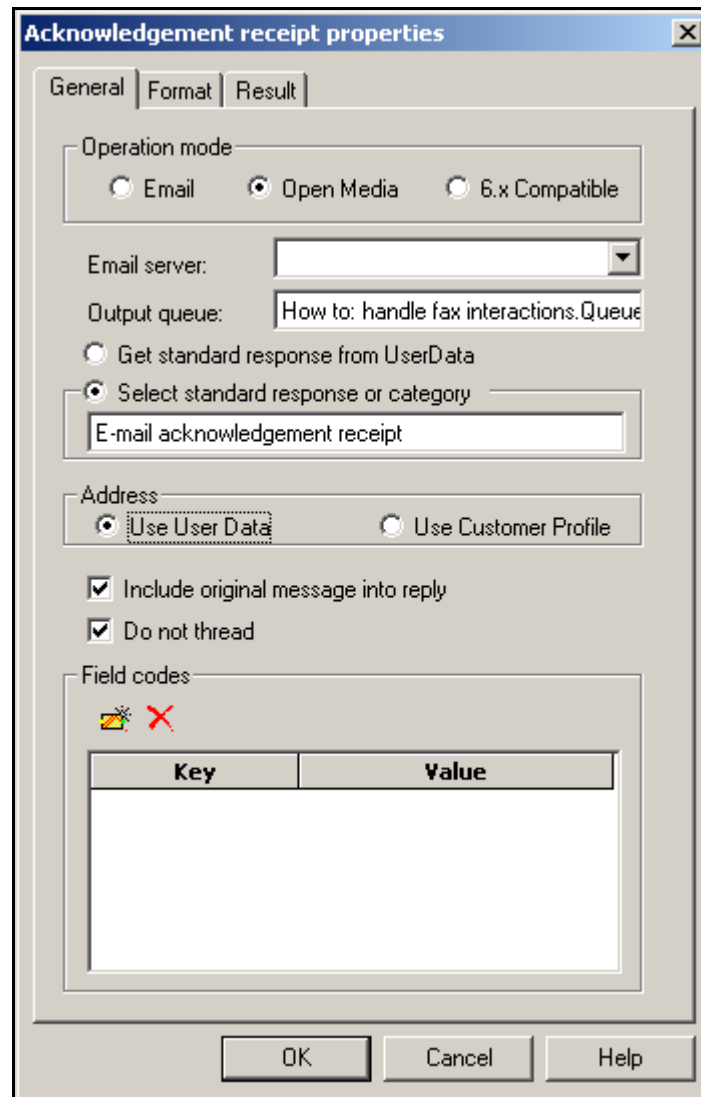


Figure 386: Acknowledgment Receipt Properties Dialog Box

After an acknowledgment e-mail is generated, the interaction is placed in a queue (Processing by Agents) for processing by agents (see [Figure 387](#)).

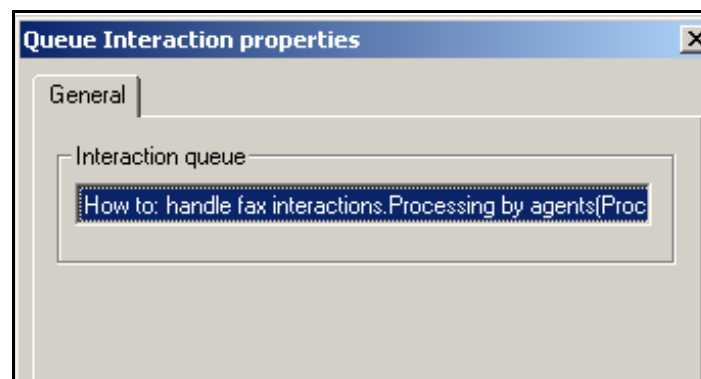


Figure 387: Queue Interaction Properties Dialog Box

How To: Identify Contact and Create Interaction in UCS

This business process, listed in Figure 327 on [page 373](#), demonstrates how to process an inbound interactions queue based on whether a customer contact exists or does not exist in the Universal Contact Server (UCS) Database.

The strategy checks to see if this is an existing contact. If the contact exists, the strategy creates an interaction for that customer in the UCS Database. If the contact does not exist, processing continues without the creation of an interaction in the UCS Database. [Figure 388](#) shows the business process.

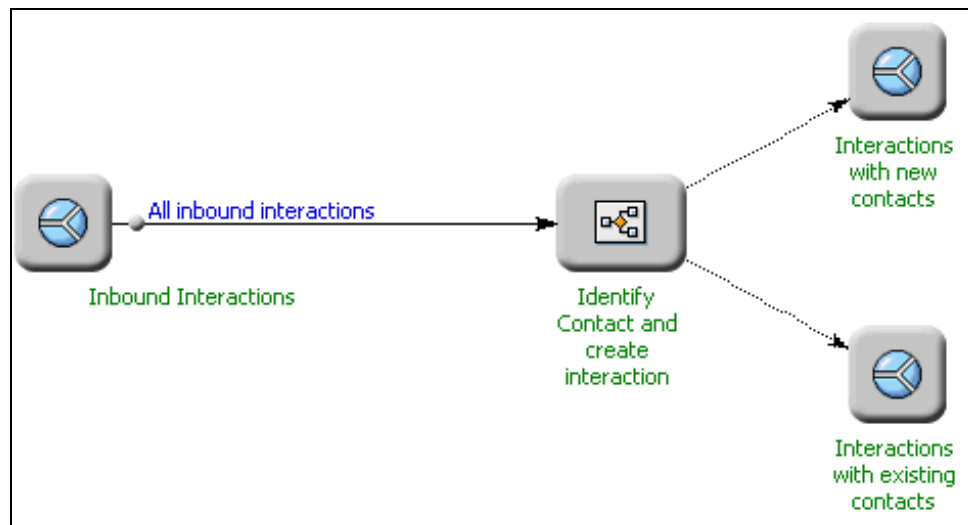


Figure 388: Identify Contact, Create Interaction in UCS Business Process

Processing Objects

This section describes the various objects in [Figure 388](#).

A view (ALL inbound interactions), that has no Conditions or Order By information, extracts interactions from an interaction queue that is called Inbound Interactions and submits them to the Identify Contact and create interaction strategy (see [Figure 389](#)).

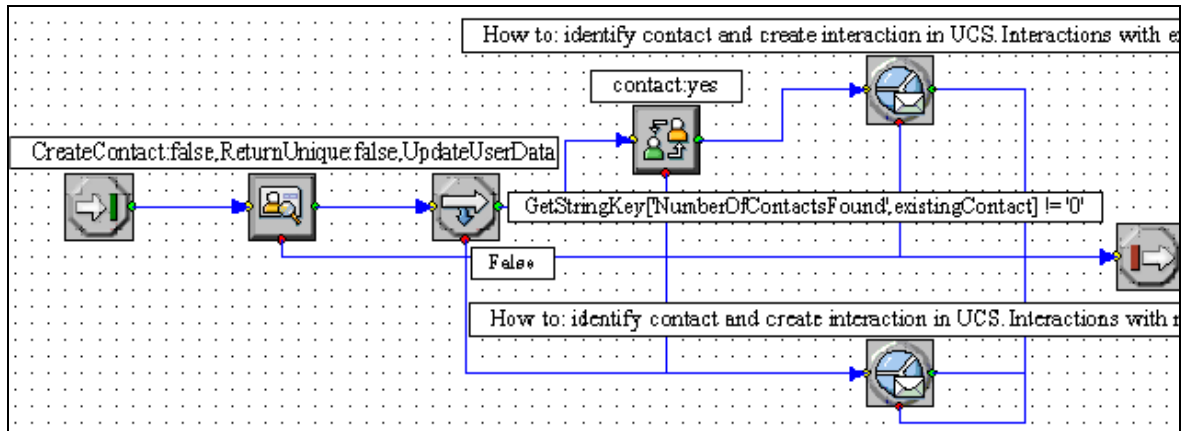


Figure 389: Identify Contact and Create Interaction Strategy

The second object in the strategy is Identify Contact (see [page 204](#)). [Figure 390](#) shows both tabs of its properties dialog box.

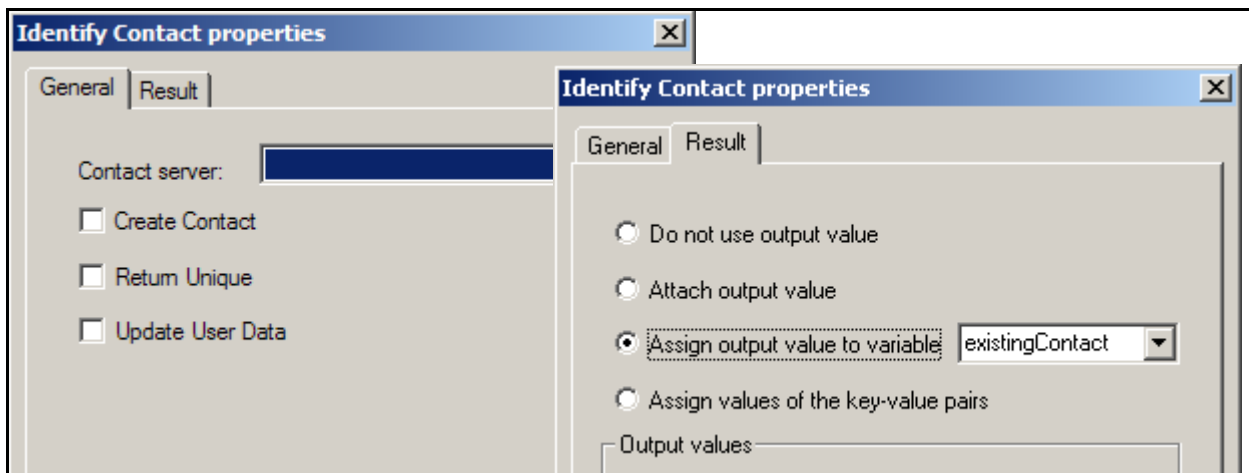


Figure 390: Identify Contact Properties Dialog Box

Note: The Contact server field in [Figure 380](#) is blank. If you do not specify a Contact server, URS finds all available servers and selects based on load balancing.

The Result tab instructs to write the content of an Interaction Data field, existingContact, to a variable, also called existingContact.

- If there is no existingContact field or if it is empty, the interaction goes out the bottom port to the default destination, an option configured in the URS Application object.
- If the existingContact variable contains a value, the interaction goes out the side port to an If object (see [Figure 391](#) on [page 443](#)), which is the third object in the strategy in [Figure 389](#).

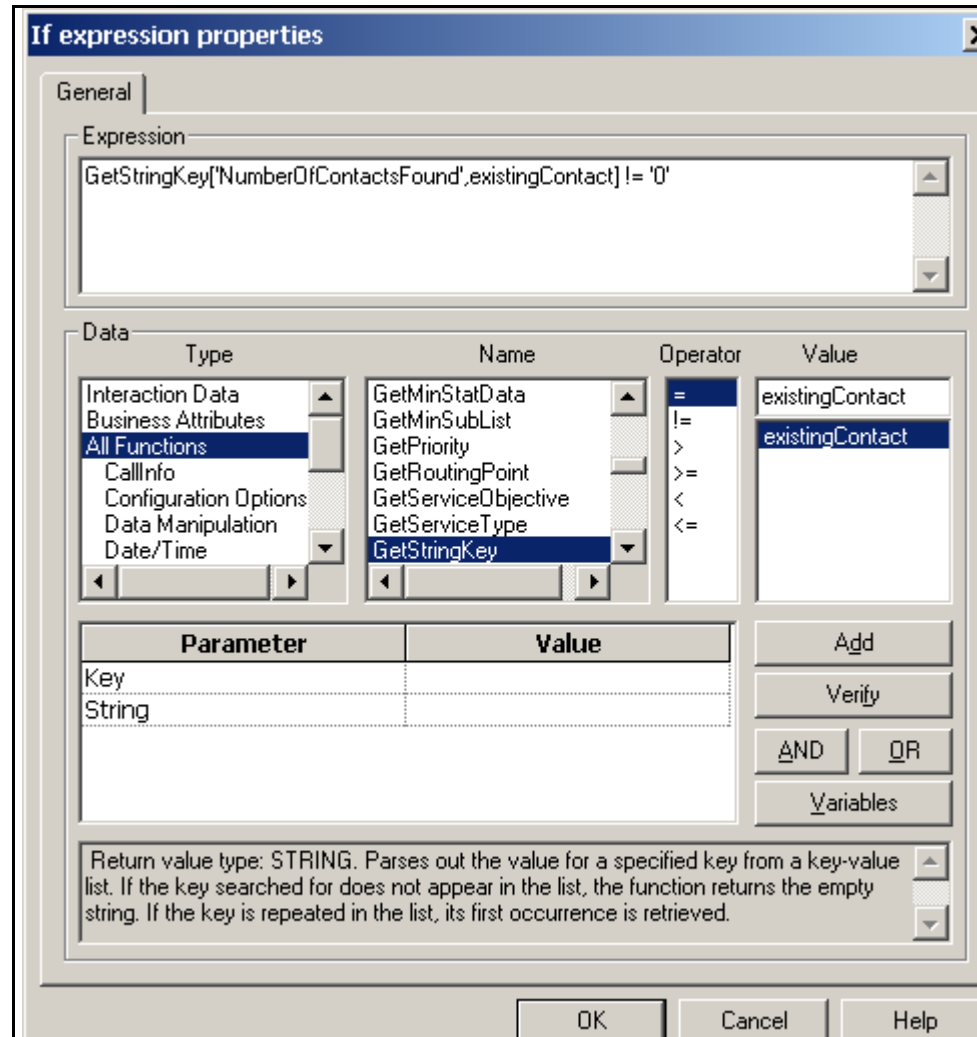


Figure 391: If Object Properties Dialog box

The If object calls a function called `GetStringKey`. This function parses out the value for a specified key. If the searched-for key does not appear in the list, the function returns an empty string.

The first parameter in the function call is the key, which is `NumberOfContactsFound`. The second parameter is the variable to contain the Interaction Data, which is `existingContact`.

- If the expression is false (`existingContact=0`), if the interaction is not from an existing contact, it goes out the bottom port to a Queue Interaction object specifying a queue for new contacts. [Figure 392](#) shows the Queue Interaction properties dialog box after clicking the down arrow to show the selected queue.

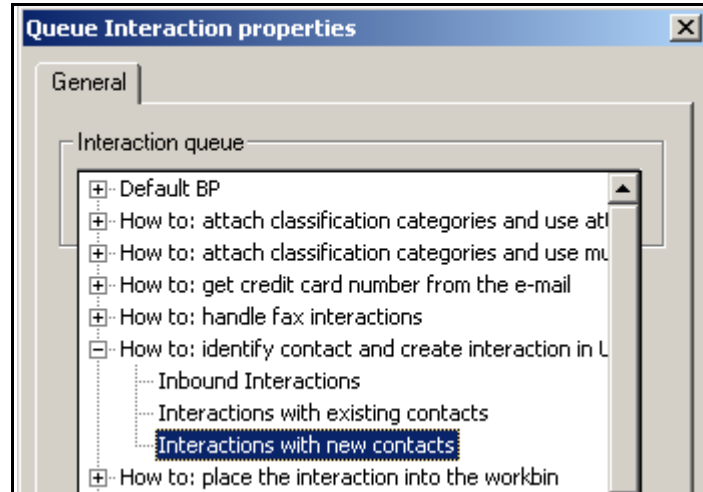


Figure 392: Queue Interaction Properties Dialog Box

- If the expression in Figure 391 on [page 443](#) is true (`existingContact=1`), if the interaction is from an existing contact, it goes out the side port to a Create Interaction object, which is the fourth object in the strategy in Figure 389 on [page 442](#). [Figure 393](#) shows the properties dialog box.

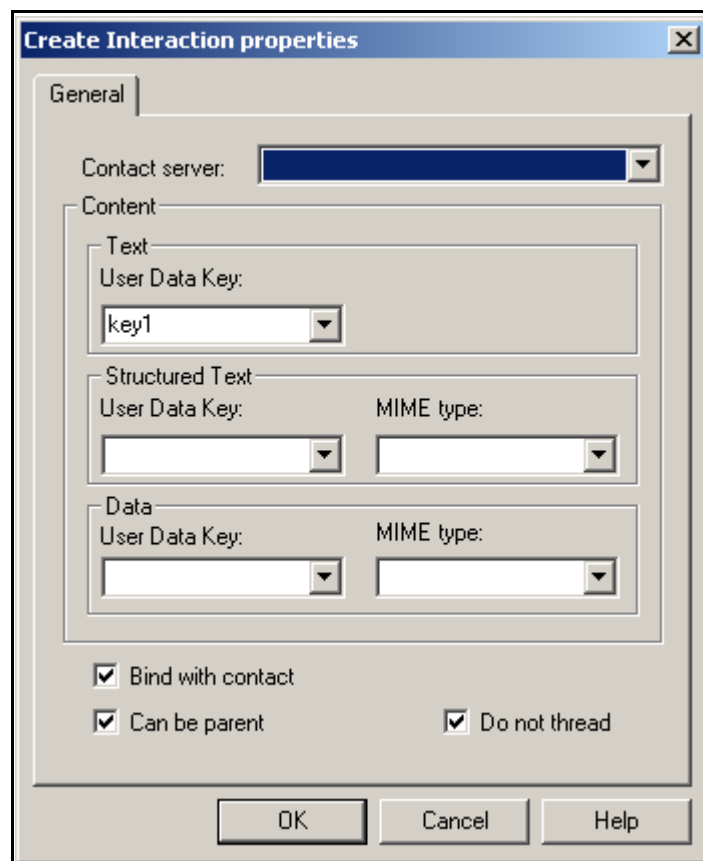


Figure 393: Create Interaction Properties Dialog Box

Again, the Contact server field in [Figure 380](#) is blank. If you do not specify a Contact server, URS finds all available servers and selects based on load balancing.

- If record creation is successful; the interaction goes out the side port to a queue for interactions for existing contacts. [Figure 394](#) shows the Queue Interaction Properties dialog box after clicking the down arrow to show the selected queue.

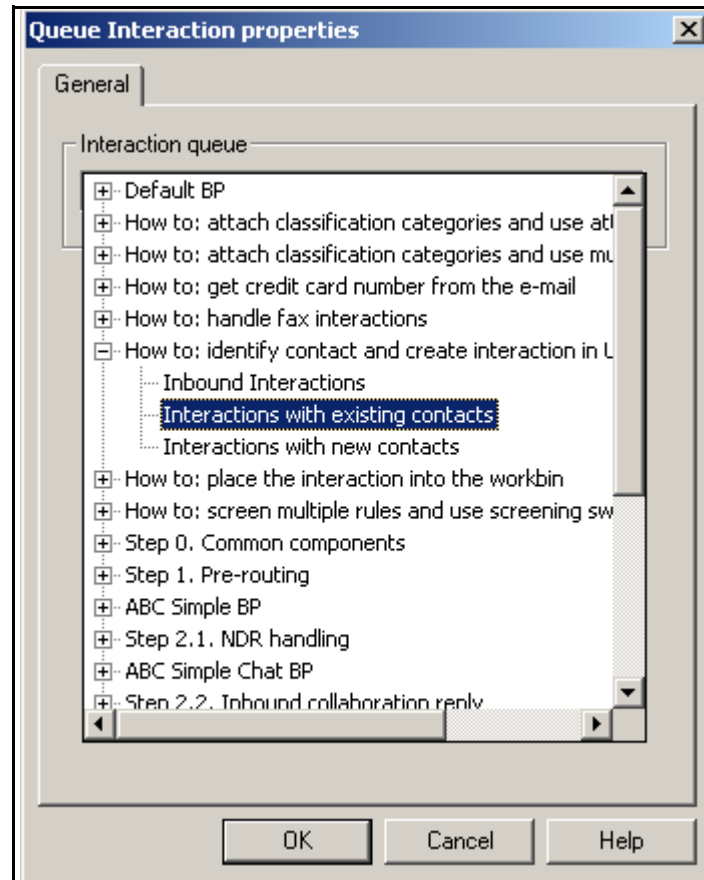


Figure 394: Queue Interaction Properties Dialog Box

- If record creation is unsuccessful, the interaction goes out the bottom port to the default destination.

How To: Place the Interaction Into the Workbin

This business process, listed in [Figure 327](#) on [page 373](#), demonstrates how to route an interaction to the agent that originally handled it. If the original agent is not immediately available, the strategy places the interaction in the original agent's workbin for later handling.

Note: If you need a review of workbins, see [page 33](#) of this guide.

[Figure 395](#) shows the Place the Interaction Into the Workbin business process.

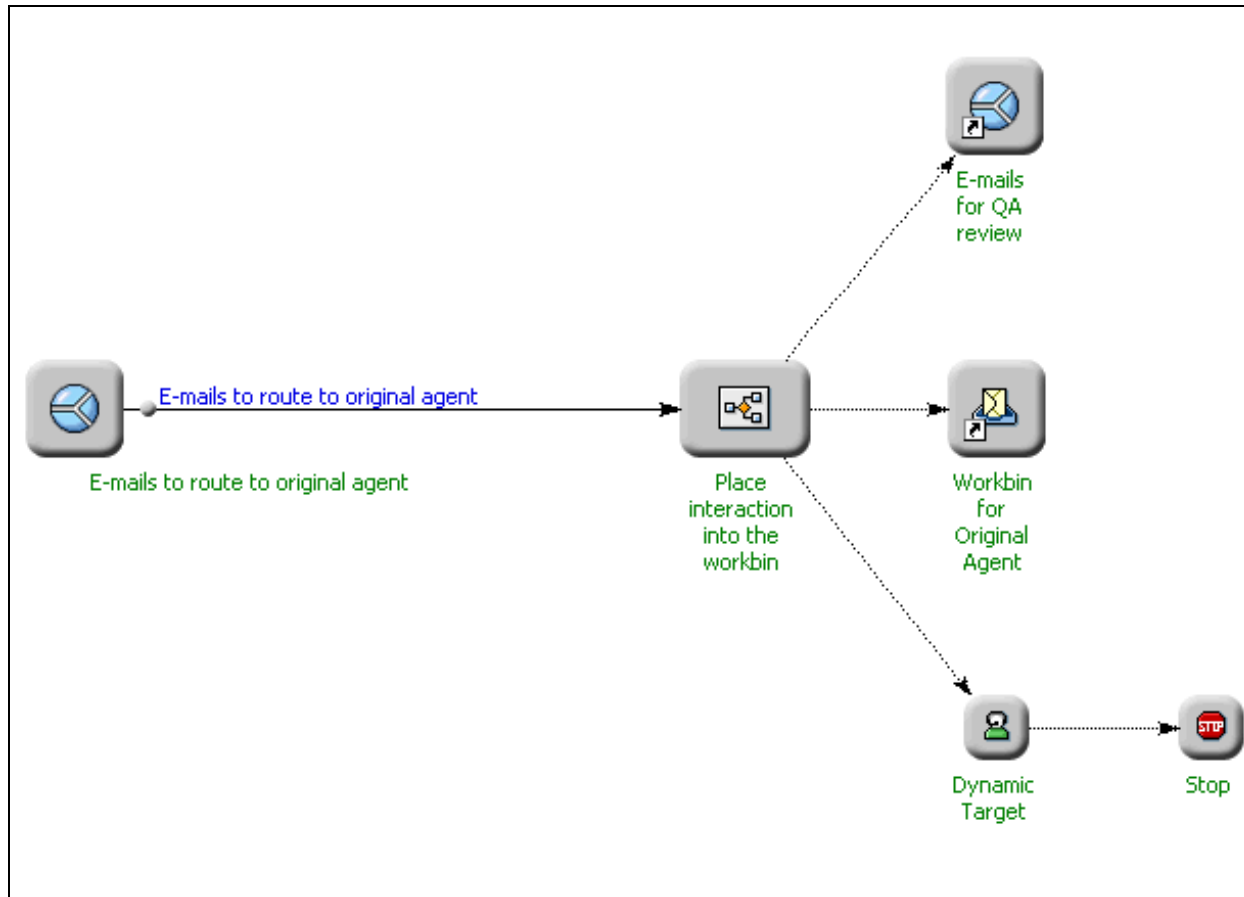


Figure 395: Place Interaction Into Workbin Business Process

Processing Objects

This section describes the various objects in [Figure 395](#).

A view (E-mails to route) that has no Conditions or Order by Information attached to a queue (E-mails to route to original agent) extracts interactions and sends them to the strategy Place Interaction into the workbin (see [Figure 396](#)).

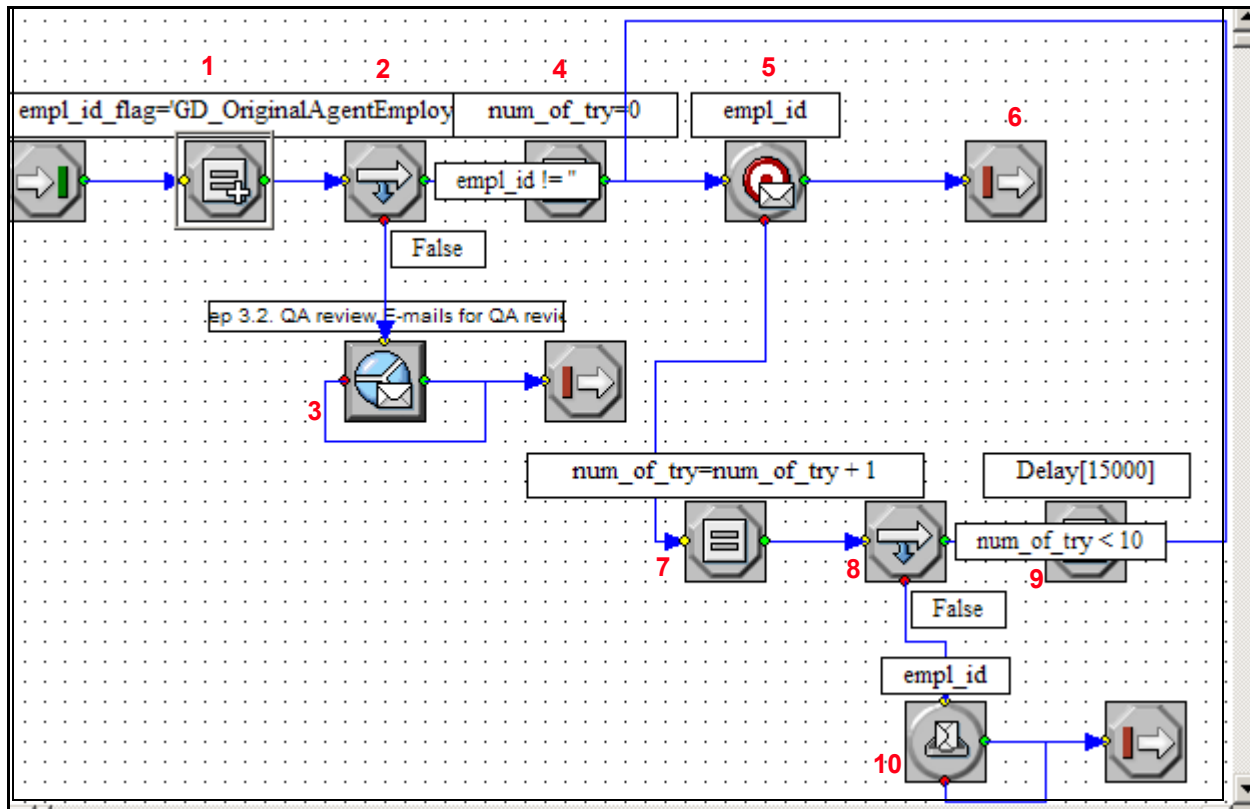


Figure 396: Place Interaction Into The Workbin Strategy

This strategy assumes the original agent employee ID is contained in the interaction attached data. It is very similar to the Route Interaction to original agent strategy documented in *Universal Routing 8.1 Strategy Samples*.

The general processing flow is as follows:

Note: The numbers in the IRD objects in [Figure 396](#) are keyed to the numbers below.

1. A Multi-Assign object assigns interaction attributes to three predefined variables (see [Table 33](#) on [page 448](#)).

Table 33: Place Interaction Into the Workbin Predefined Variables

Variable	Description
empl_id.	The Udata function attempts to get a value from the attached data key empl_id_flag and write it to this variable. If this key contains a value, it indicates that there is an original agent for routing.
empl_id_flag.	The original agent employee ID number. GD_OriginalAgentEmployeeID is an attached data key that may contain the identifier.
num_of_tries	is initialized to 0. It functions as a counter used to control the number of tries the strategy makes to route to the original agent.

- After setting the variables, an If object initializes the empl_id variable so it does not contain a value.
- If the expression in is true (if empl_id does not contain a value indicating there is no original agent), the e-mail, goes out the bottom port to a Queue E-mail object specifying the queue E-mails for QA review (strategy-linked node in Figure 395 on [page 446](#). This is used for a collaboration reply e-mail from one agent to another.
- If the expression is false (if there is an original agent), the e-mail goes out the side port of the If object to an Assign object, which sets a counter (variable num_of_try) to zero.
- A Route Interaction object attempts to route the interaction to the original agent contained in the empl_id variable. This target is represented by the Dynamic target strategy-linked node in Figure 395 on [page 446](#).
- If the routing is successful, the strategy has achieved its goal and an Exit object is connected to the side port of the Route Interaction object.
- If the agent cannot accept the interaction for some reason, the e-mail goes out the bottom port of the Route Interaction object to an Assign object, which increments the num_of_try counter.
- The e-mail goes out the side port of the Assign object to an If object, which is used to decide whether the number of processing cycles to determine the original agent is 10 or less.
- If the expression is true (number of tries to route to the original agent is less than 10), the interaction goes out the side port of the If object to a Function object to delay strategy execution.

Once the delay is established, the e-mail goes out the side port of the Function object back to the Route Interaction object to attempt to route to the original agent.

10. If the expression is false (number of tries is 10 or greater), the e-mail goes out the bottom port of the If object to a Workbin object (Workbin for original agent strategy-linked node in Figure 395 on [page 446](#)). This workbin is associated with the agent contained in the `empl_id` variable.

How To: Screen Multiple Rules and Use Screening Switch

This business process, listed in Figure 327 on [page 373](#), demonstrates how to screen incoming interactions using multiple Screening Rules by using the Multi-Screen object.

Note: Multi-Screen differs from Screen in that it supplies additional return options: Screening Rules only, classification Categories only, matched pairs only, or all three. It also does not require a conditional test to determine whether a match occurred.

The strategy also demonstrates how to segment interactions to take different paths based on Screening Rules.

[Figure 397](#) shows the Screen Multiple Rules and Use Screening Switch business process.

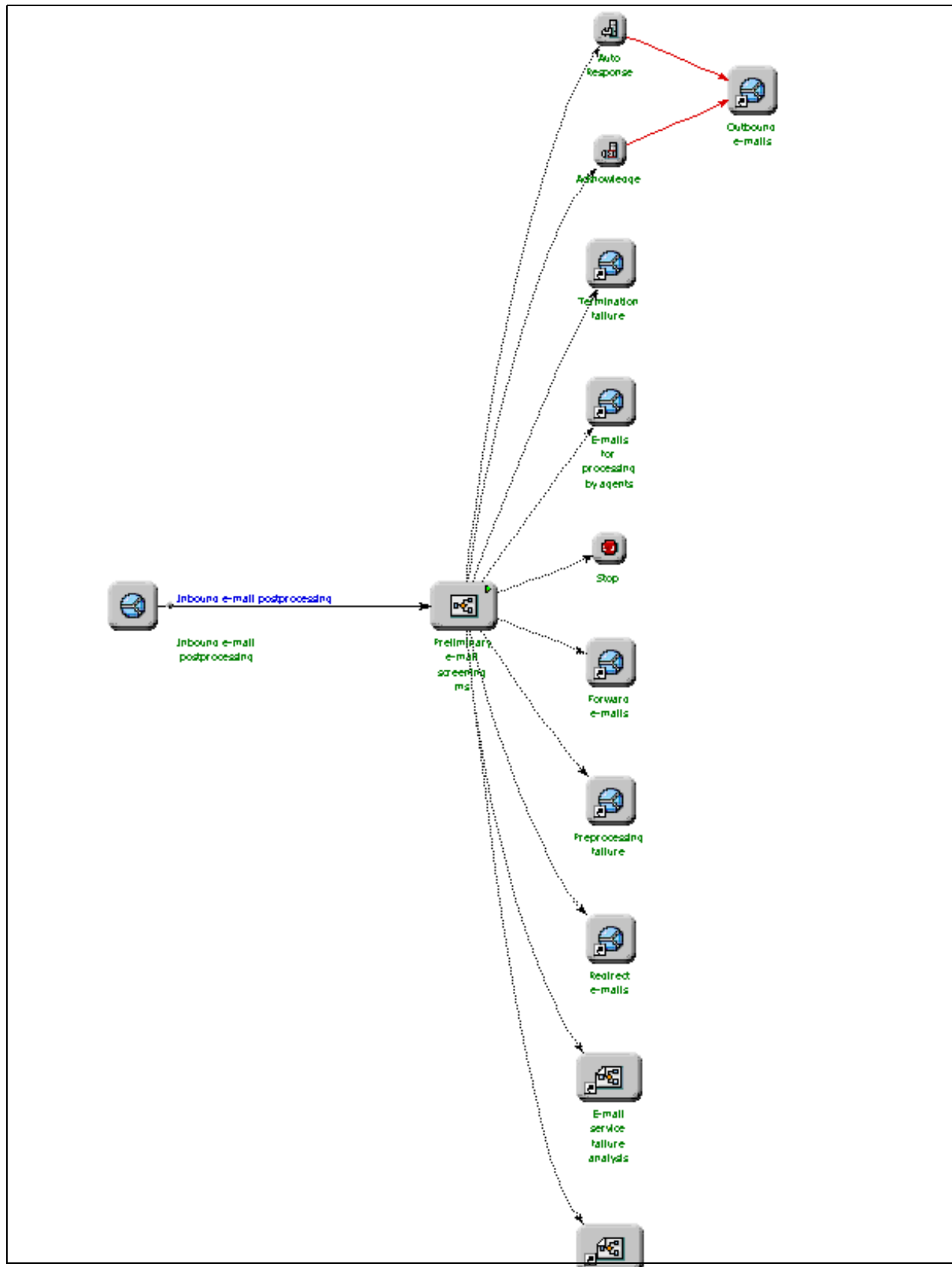


Figure 397: Screen Multiple Rules and Use Screening Switch BP

Processing Objects

This section describes the various objects in [Figure 397](#).

A view (Inbound e-mail postprocessing) that has no Conditions or Order by information attached to a queue (Inbound e-mail postprocessing) extracts interactions and sends them to the strategy Preliminary e-mail screening ms. [Figure 398](#) shows the top part of the strategy.

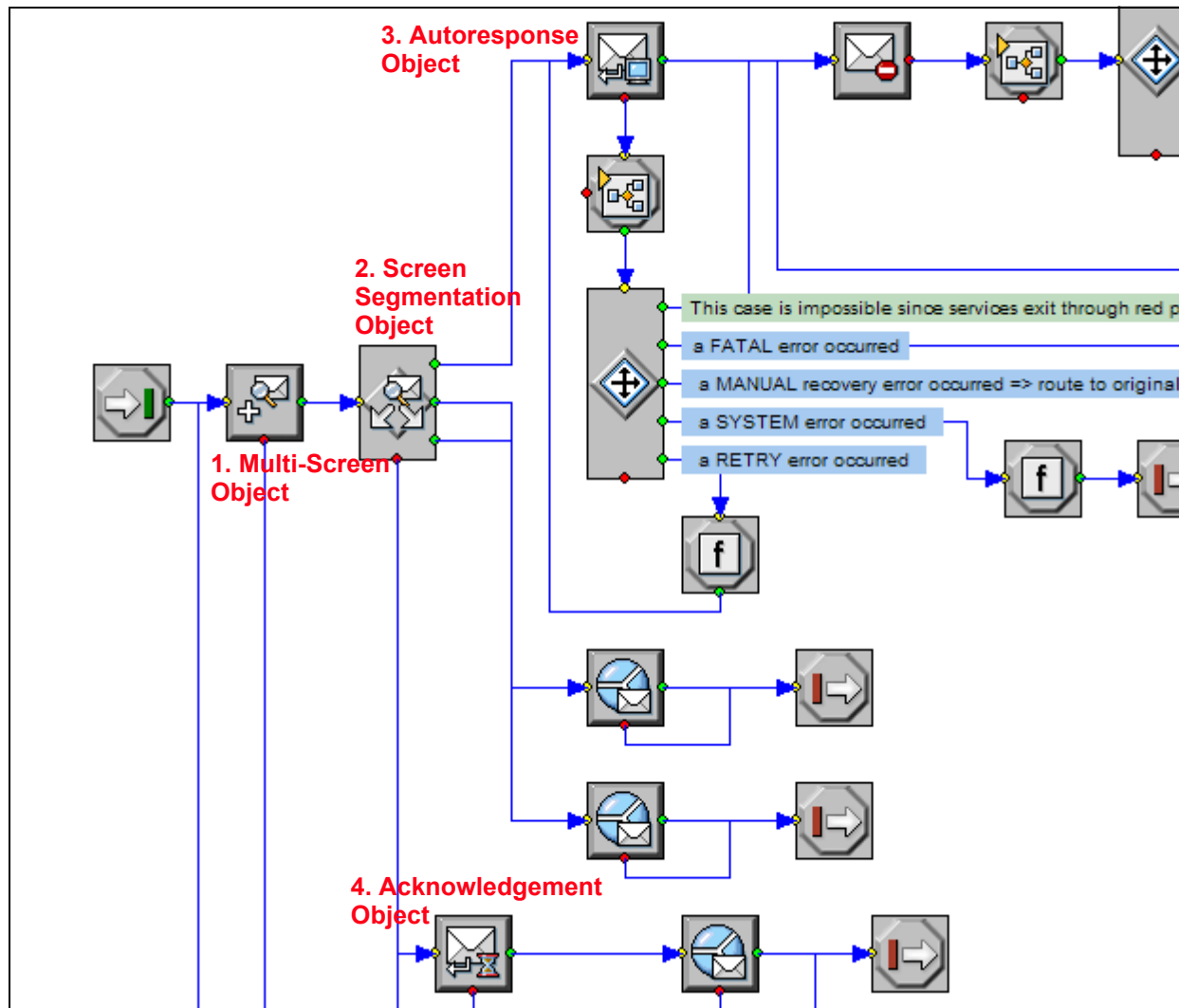


Figure 398: Preliminary E-mail Screening MS Strategy

Note: “MS” at the end of the strategy name stands for “Multi-Screen.”

1. This strategy uses the Multi-Screen object and three different Screening Rules (Auto Response Available, Warranty Problem, and Tech Support) to screen inbound interactions for words or word patterns.

2. A Screen Segmentation object connected to the green output port of the Multi-Screen object causes different screening results to take different paths in the strategy.

The purpose of the initial screening is determine whether the e-mail can be responded to with a Standard Response.

3. If yes, an Autoresponse object generates a Standard Response (see the Autoresponse strategy-linked node in Figure 397 on [page 450](#)). A Stop object (see Figure 333 on [page 378](#)) notifies Interaction Server that processing of this interaction is finished (see Stop strategy-linked node in Figure 397 on [page 450](#)).

If a Standard Response cannot be used, a second screening determines whether the e-mail contains text that indicating it is from a customer with a warranty problem and therefore should be placed in a queue for forwarding. If yes, the e-mail is placed in that queue (see the Forward e-mails queue in Figure 397 on [page 450](#)). A Stop object (see Figure 333 on [page 378](#)) notifies Interaction Server that processing of this interaction is finished (see Stop strategy-linked node in Figure 397 on [page 450](#)).

If the second screening indicates a warranty problem is not involved, the e-mail goes through a third screening to determine if it contains text indicating it is from a customer with a technical support problem and therefore should be placed in a queue for redirecting. If yes, the e-mail is placed in a queue for redirecting (see the Redirect e-mails queue in Figure 397 on [page 450](#)). A Stop object notifies Interaction Server that processing of this interaction is finished (see Stop strategy-linked node in Figure 397 on [page 450](#)).

4. If the third screening does not produce results, an Acknowledgement object generates an acknowledgement Standard Response. The e-mail then goes to a queue for processing by agents (see the E-mails for processing by agents queue in Figure 397 on [page 450](#)).

Error Handling

The following objects in Figure 397 on [page 450](#) are the result of error handling:

Preprocessing failure queue

E-mail service failure analysis subroutine

Terminate interaction subroutine

Termination failure queue

Multi-Screen Versus Screen

This strategy is the functional equivalent of the Preliminary e-mail screening strategy that is discussed in *Universal Routing 8.1 Strategy Samples*.

The difference between the two is as follows:

- Preliminary e-mail screening uses three separate Screen objects. After each screen object, the strategy uses an If object and performs a conditional test to determine whether a screening rule match occurred. This adds a level of complexity and generates additional code.

Figure 399 shows the three Screen objects and If objects in the strategy.

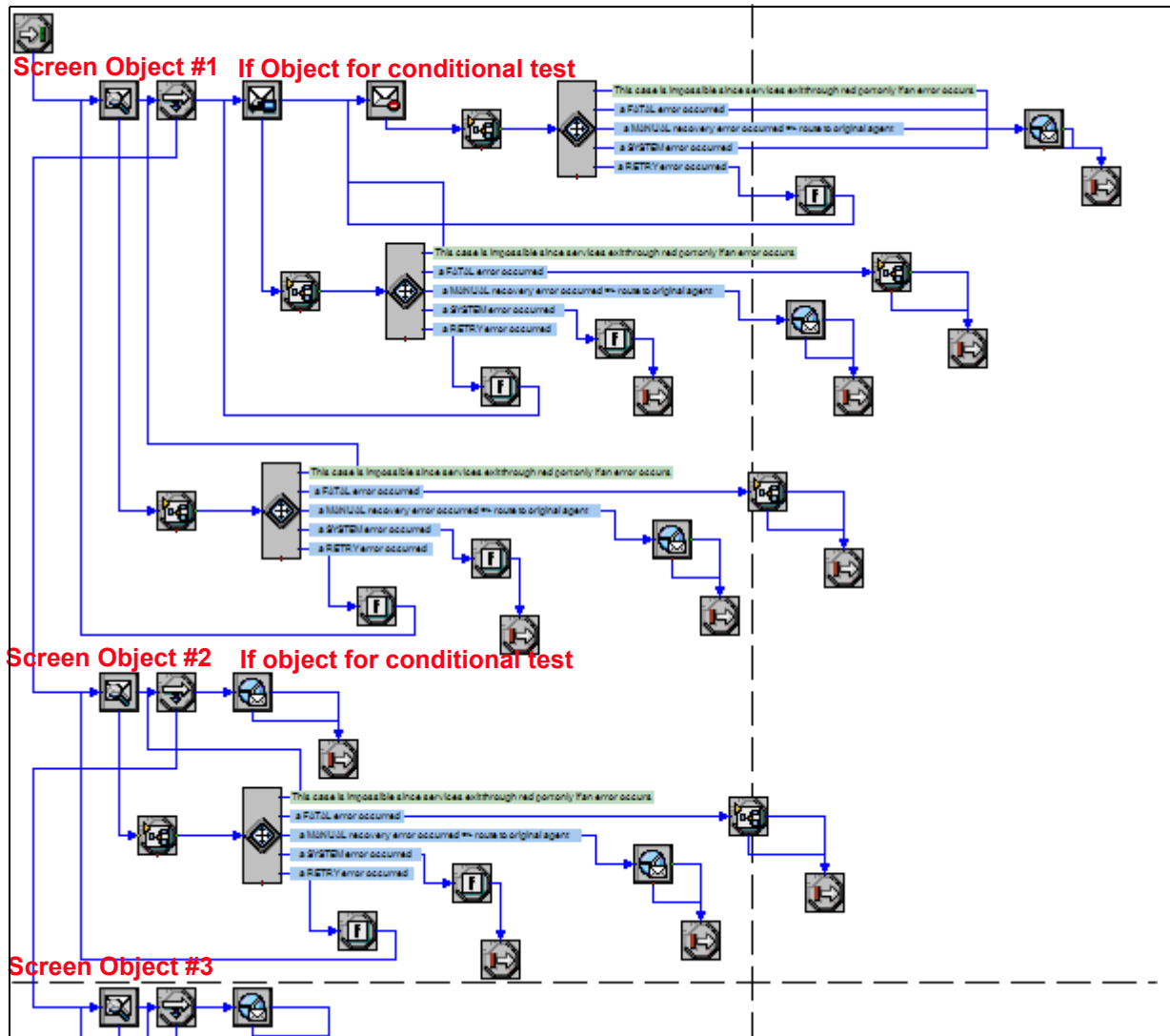


Figure 399: Multi-Screen Object Properties Dialog Box

- Compare the strategy in Figure 399 with the strategy Preliminary e-mail screening ms, shown in Figure 398 on page 451, which uses the Multi-Screen object. Complexity and the amount of byte code is reduced because a single object handles multiple rules and does not require a conditional test after each screening. Figure 400 on page 454 shows the properties dialog box for the Multi-Screen object in Preliminary e-mail screening ms.

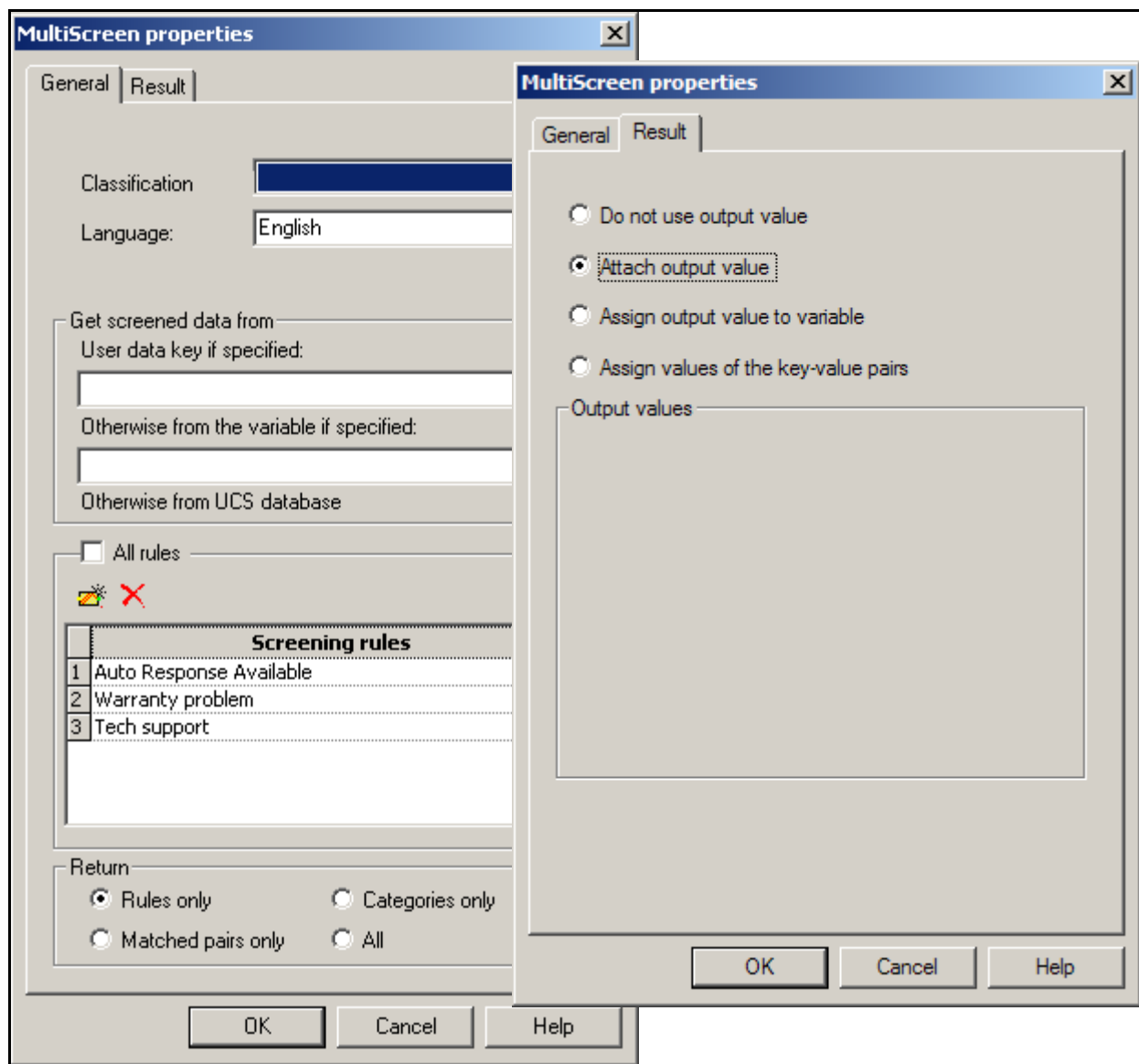


Figure 400: Screen Object Properties Dialog Box (Accepts One Rule)

Figure 401 shows the properties dialog box for the Screen Segmentation object attached to the Multi-Screen object.

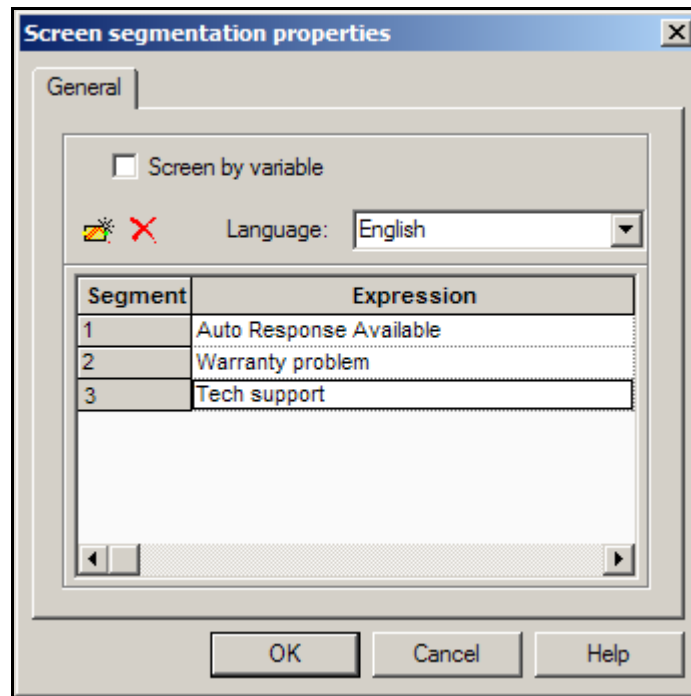


Figure 401: Screen Segmentation Properties Dialog Box

Each segment in [Figure 401](#) generates its own output port (see the Screen Segmentation object in [Figure 398](#) on [page 451](#)).

Related Documentation Resources

The following resources provide additional information that is relevant to this software. Consult these additional resources as necessary.

Universal Routing

- *Interaction Routing Designer 8.1 Help*, comprised of Routing Design Help and Interaction Workflow Design Help. The information contained in this help file duplicates some of the information contained in this guide, but presents it in a shorter, online format.
- *Universal Routing 8.1 Reference Manual*, which describes and defines routing strategies, IRD objects used in strategies, functions that can be called from strategies, Universal Routing Server and other server options, number translations, pegs, statistics used for routing decisions, and reporting on routing. You will want to consult this guide to get additional information about the IRD objects discussed in “Planning a Business Process” on [page 195](#) of this book.
- *Universal Routing 8.1 Deployment Guide*. The first part of the guide provides information you will need to get started: A high-level overview of Universal Routing features and functions, including product architecture, system availability, redundancy information and deployment-planning. The second part of the guide provides instructions for deploying Universal Routing components, and describes how to start and stop these components once you have configured and installed them.
- *Universal Routing 8.1 Strategy Samples*, which simplifies strategy configuration for first-time users of the strategy development tool, Interaction Routing Designer. To achieve this goal, this document supplies examples of routing strategies that can be used as general guides during the design stage.
- *Universal Routing 8.0 Routing Application Configuration Guide* (previously *Universal Routing 7.6 Routing Solutions Guide*), which contains information about the various types of routing solutions that can

be implemented, including skills-based routing, business-priority routing, share agent by service level agreement routing, and proactive routing. It also discusses Universal Routing support for a Genesys Instant Messaging Solution.

- *Universal Routing 7.6 Cost-Based Routing Configuration Guide*, which documents a solution where Universal Routing Server considers the cost of routing to a target, comprised of Infrastructure cost and/or Resource cost, as addition selection criteria when choosing the right target.
- *Genesys 7.6 Proactive Routing Solution Guide*, which documents a solution that enables you to proactively route outbound preview interactions to Genesys Agent Desktop, as well as to completely process Calling List and Do Not Call List records solely from the logic of a routing strategy without agent intervention.

eServices

- *eServices (Multimedia) 8.0 Deployment Guide*, which provides a high-level overview of features and functions of Genesys Multimedia with architecture information and deployment-planning materials. It also introduces you to some of the basic concepts and terminology used in this product.
- *eServices (Multimedia) 8.0 User's Guide*, which provides overall information and recommendations on the use and operation of the Genesys Multimedia components.
- *eServices (Multimedia) 8.0 Reference Manual*, which provides a reference listing of all configuration options and of Field Codes used in Standard Responses.
- *eServices (Multimedia) 8.0 Knowledge Manager Help*, which is an online guide to Knowledge Manager, the user interface for Genesys Knowledge Base. You use Knowledge Manager to create and manage the Category structure for Standard Responses, create and validate Field Codes, and to create and edit Screening Rules.
- “Multimedia Log Events” in *Framework 8.0 Combined Log Events Help*, which is a comprehensive list and description of all events that may be recorded in logs.

Genesys

- *Genesys Technical Publications Glossary*, which ships on the Genesys Documentation Library DVD and which provides a comprehensive list of the Genesys and computer-telephony integration (CTI) terminology and acronyms used in this document.

- *Genesys Migration Guide*, which ships on the Genesys Documentation Library DVD, and which provides documented migration strategies for Genesys product releases. Contact Genesys Technical Support for more information.
- Release Notes and Product Advisories for this product, which are available on the Genesys Technical Support website at <http://genesyslab.com/support>.

Information about supported hardware and third-party software is available on the Genesys Technical Support website in the following documents:

- *Genesys Supported Operating Environment Reference Manual*
- *Genesys Supported Media Interfaces Reference Manual*

Consult these additional resources as necessary:

- *Genesys Hardware Sizing Guide*, which provides information about Genesys hardware sizing guidelines.
- *Genesys Interoperability Guide*, which provides information about the compatibility of Genesys products with various Configuration Layer Environments; Interoperability of Reporting Templates and Solutions; and Gplus Adapters Interoperability.
- *Genesys Licensing Guide*, which introduces you to the concepts, terminology, and procedures relevant to the Genesys licensing system.
- *Genesys Database Sizing Estimator 8.0 Worksheets*, which provides a range of expected database sizes for various Genesys products.

For additional system-wide planning tools and information, see the release-specific listings of System Level Documents on the Genesys Technical Support website, accessible from the [system level documents by release](#) tab in the Knowledge Base Browse Documents Section.

Genesys product documentation is available on the:

- Genesys Technical Support website at <http://genesyslab.com/support>.
- Genesys Documentation Library DVD, which you can order by e-mail from Genesys Order Management at orderman@genesyslab.com.

Document Conventions

This document uses certain stylistic and typographical conventions—introduced here—that serve as shorthands for particular kinds of information.

Document Version Number

A version number appears at the bottom of the inside front cover of this document. Version numbers change as new information is added to this document. Here is a sample version number:

80fr_ref_06-2008_v8.0.001.00

You will need this number when you are talking with Genesys Technical Support about this product.

Screen Captures Used in This Document

Screen captures from the product graphical user interface (GUI), as used in this document, may sometimes contain minor spelling, capitalization, or grammatical errors. The text accompanying and explaining the screen captures corrects such errors *except* when such a correction would prevent you from installing, configuring, or successfully using the product. For example, if the name of an option contains a usage error, the name would be presented exactly as it appears in the product GUI; the error would not be corrected in any accompanying text.

Type Styles

[Table 34](#) describes and illustrates the type conventions that are used in this document.

Table 34: Type Styles

Type Style	Used For	Examples
Italic	<ul style="list-style-type: none"> Document titles Emphasis Definitions of (or first references to) unfamiliar terms Mathematical variables <p>Also used to indicate placeholder text within code samples or commands, in the special case where angle brackets are a required part of the syntax (see the note about angle brackets on page 461).</p>	<p>Please consult the <i>Genesys Migration Guide</i> for more information.</p> <p>Do <i>not</i> use this value for this option.</p> <p>A <i>customary and usual</i> practice is one that is widely accepted and used within a particular industry or profession.</p> <p>The formula, $x + 1 = 7$ where x stands for . . .</p>

Table 34: Type Styles (Continued)

Type Style	Used For	Examples
Monospace font (Looks like teletype or typewriter text)	<p>All programming identifiers and GUI elements. This convention includes:</p> <ul style="list-style-type: none"> The <i>names</i> of directories, files, folders, configuration objects, paths, scripts, dialog boxes, options, fields, text and list boxes, operational modes, all buttons (including radio buttons), check boxes, commands, tabs, CTI events, and error messages. The values of options. Logical arguments and command syntax. Code samples. <p>Also used for any text that users must manually enter during a configuration or installation procedure, or on a command line.</p>	<p>Select the Show variables on screen check box.</p> <p>In the Operand text box, enter your formula.</p> <p>Click OK to exit the Properties dialog box.</p> <p>T-Server distributes the error messages in EventError events.</p> <p>If you select true for the inbound-bsns-calls option, all established inbound calls on a local agent are considered business calls.</p> <p>Enter exit on the command line.</p>
Square brackets ([])	A particular parameter or value that is optional within a logical argument, a command, or some programming syntax. That is, the presence of the parameter or value is not required to resolve the argument, command, or block of code. The user decides whether to include this optional information.	smcp_server -host [/flags]
Angle brackets (< >)	<p>A placeholder for a value that the user must specify. This might be a DN or a port number specific to your enterprise.</p> <p>Note: In some cases, angle brackets are required characters in code syntax (for example, in XML schemas). In these cases, italic text is used for placeholder values.</p>	smcp_server -host <confighost>



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