Working with the iWD Business Process in IRD

intelligent Workload Distribution 8.5.0

1/6/2022

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Working with the IWD Business Process (IWDBP)

These topics describe how to work with and adapt the default iWD Business Process (IWDBP) that is supplied out-of-box with intelligent Workload Distribution.

Within this Business Process, from within a routing strategy, External Service Protocol (ESP) blocks are used to invoke methods that reside in Genesys Rules Engine (GRE) (previously these were part of the Business Context Management Service which is part of GRE in release 8.5.0). This approach is used to apply classification and prioritization rules to the interaction.

When a user goes to the Global Task List view in iWD Manager, to monitor the interactions that are in various states, this component communicates with Interaction Server to retrieve the list of interactions and their attributes.

This out-of-the-box Genesys iWD Business Process maps to the iWD state model, allowing you to use iWD-based reporting for other interaction types (for example, you might want to track Genesys e-mails along with other task types, under the same Department or Process).

The Genesys iWD Business Process is completely optional for iWD customers who are using Genesys E-mail, Genesys Chat, Genesys SMS, or even third-party e-mail, SMS, or chat. If the Genesys iWD Business Process is not used, iWD Data Mart and iWD Global Task List functionality may be limited.

For Genesys eServices customers, the Genesys iWD Business Process can be left unchanged if you want to use business rules only. In this scenario, the routing strategies would change. The strategies would use the ESP block to invoke the Genesys Rules Engine. This means that existing Genesys E-mail, Chat or SMS/MMS customers can use the business rules within iWD without having to change their Genesys Business Processes; or, to access some additional functionality, changes can be made to the Business Processes.

References to Genesys Interaction Routing Designer (IRD) can be understood to include parallel functionality in Genesys Composer, where appropriate. There is a summary of the differences between IRD and Composer here.

Introduction

Overview

These pages describe the default iWD business process (IWDBP) that is supplied in the iWD Setup Utility component.

Software Requirements

- The IWD Business Process that is described in this appendix requires Interaction Routing Designer 8.1.2 or higher.

Other Information Resources

- The **Universal Routing 8.1 Deployment Guide** describes how to have the Interaction Design shortcut bar appear in IRD, if it has not appeared automatically.
- The **Universal Routing 8.1 Business Process User's Guide** provides an in-depth discussion of business processes.

The **Universal Routing 8.1 Interaction Routing Designer Help Zip** describes how to create, save, import and export a business process, and how to load the strategies that comprise the business process.

> ### Important
> When Interaction Routing Designer (IRD) starts up, it checks for an eServices solution installed by the eServices Configuration Wizard. If none is found, the IRD main window does not contain an `Interaction Design` shortcut bar. You cannot navigate to the `Business Processes` list pane or open the `Interaction Design` window. To change the default, use the `Views` tab in `Routing Design Options`, which opens from the `Tools` menu. Clear the `default` check box and click `OK`.

Configuration of List Objects

Configuration of List Objects

The iWD Business Process (IWDBP) uses two Configuration Server List Objects (the List Object referring to BCMS in releaseses up to 8.1.1 is no longer required).

- The first List Object, `Iwd_Esp_List`, has two lists.
  - The first maps the iWD Solution ID to the name of the Genesys Rules Engine application in Configuration Server.
  - The second list maps the iWD Solution Runtime ID to the name of the Universal Contact Server (USCS) application. This is optional, and is used to allow the business logic in IWDBP to update the interaction record in the UCS database to mark the interaction as done (that is, the value of the `Status` column in the `Interaction` table will be set to 3) when it enters the `iWD_Completed`, `iWD_Rejected`, or `iWD_Canceled` queues.

- The second List Object, `Iwd_Package_List`, maps the iWD Solution ID to the rules package that will be evaluated when the Genesys Rules Engine is invoked from the IWDBP business process.

Both of these List Objects must be correctly configured for IWDBP to work.

One business process can serve several solutions under the same tenant. The iWD Setup Utility automatically creates these two List Objects for the Solution you indicate in the Setup Utility. In environments with only one solution, no further configuration needs to be done on the List Objects. If you have multiple solutions (or add one at a later time) these two List Objects need to be updated.

Iwd_Esp_List

GREServerList

The `GREServerList` list looks like a list of pairs:

`Solution_1`	`GREApplication_1`
`Solution_2`	`GREApplication_2`
`Solution_3`	`GREApplication_3`

Where the Solution ID is the key, and the name of the Genesys Rules Engine `Application` is the value.

ContactServerList

Since release 8.1.1, an additional list, `ContactServerList` is included. The `ContacServerList` list looks like a list of pairs:

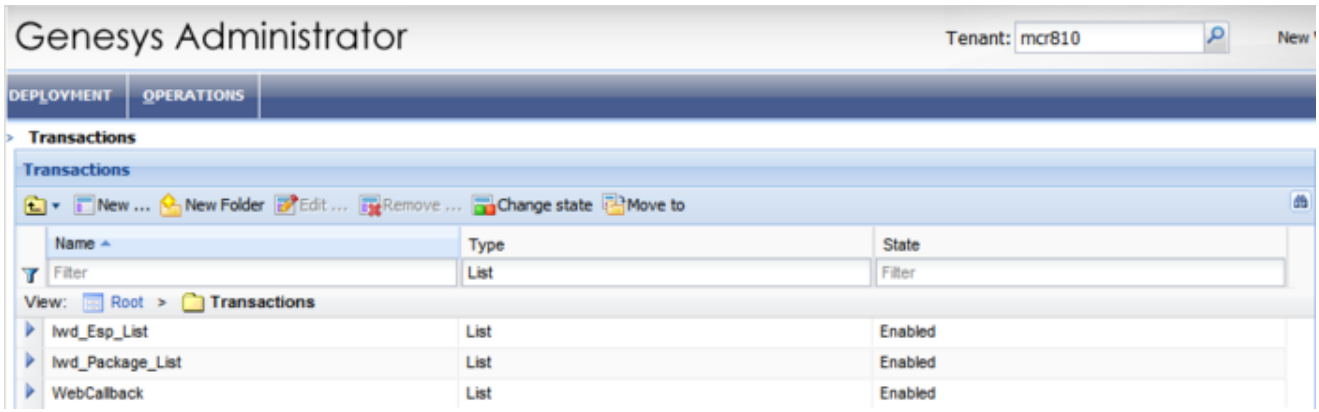
`iWD Solution Runtime_1`	`ContactServer_1`
`iWD Solution Runtime_2`	`ContactServer_2`
`iWD Solution Runtime_3`	`ContactServer_3`

Where iWD Solution Runtime ID is the key and the name of a Universal Contact Server associated with Interaction Server is the value.

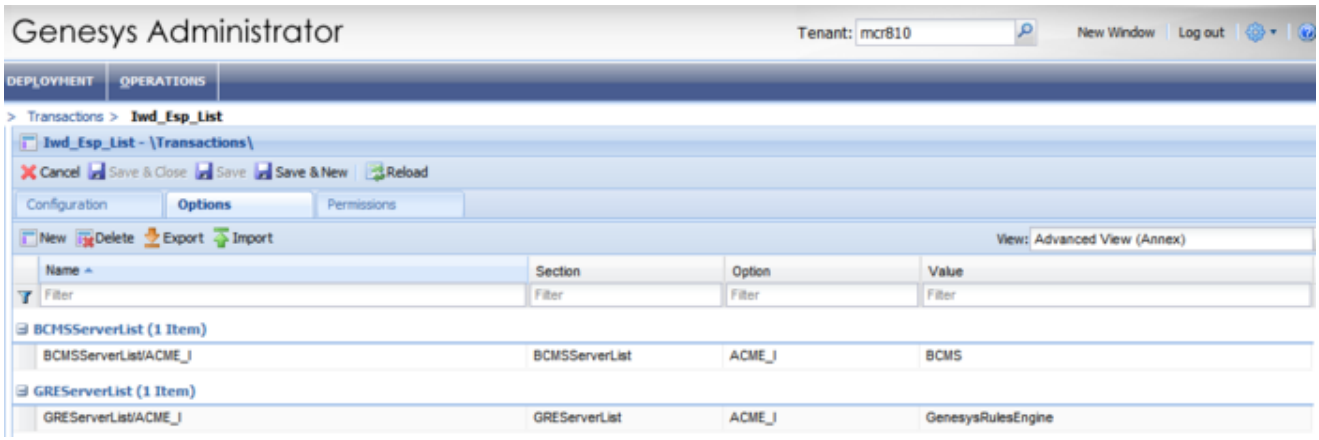
> **Important**
>
> It is very important that the pairs are set up correctly. If, for example, `Solution_1` is mapped to `ESPService_2` instead of to `ESPService_1`, business rules for `Solution_2` will be applied to all interactions which were submitted by Capture Points

> from `Solution_1`. Similar issues will occur if the Genesys Rules Engine application or the Universal Contact Server application are incorrectly mapped.

These key-value pairs in a List Object need to be set up only once per tenant, and can be configured in Interaction Routing Designer (IRD) or Genesys Administrator.



List Objects in IRD

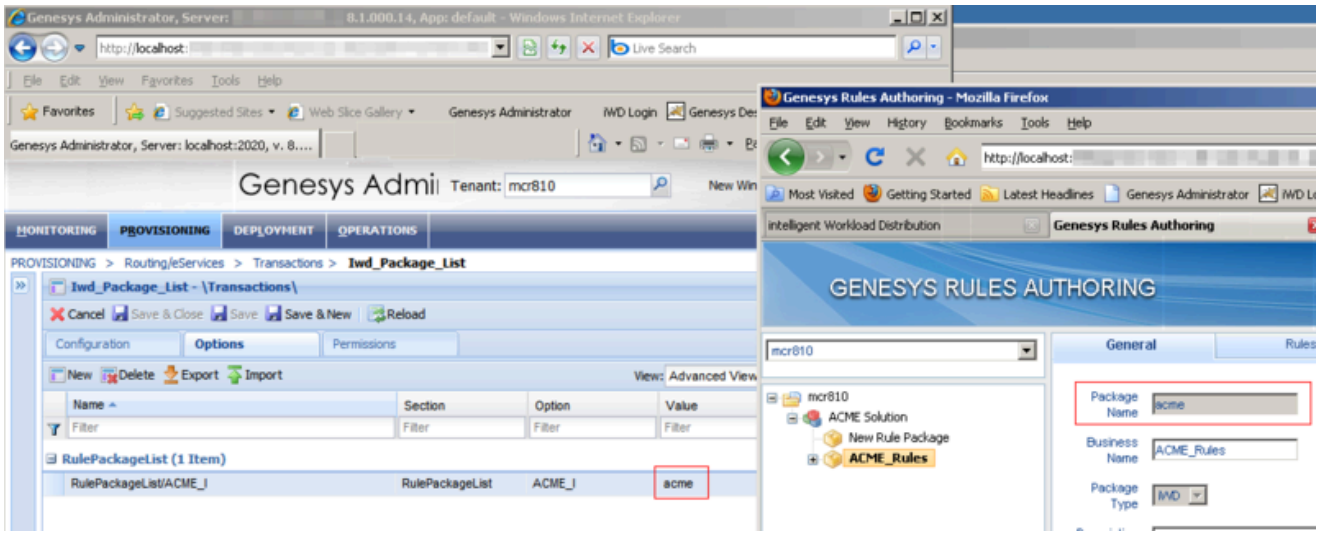


List Object Details

Iwd_Package_List

The `Iwd_Package_List` List Object is used to correlate the IWD Solution ID (`IWD_SolutionId`) to the name of the rule package that will be evaluated when requests are made to the Genesys Rules Engine from the IWDBP business process.

The `Iwd_Package_List` List Object contains a single list, `RulePackageList`. Create a new key/value pair for each iWD Solution that you have configured under your Configuration Server tenant, where the key or option is the IWD Solution ID and the value is the *Package Name* of the rules package.



iWD Package List

IWD Business Process

Contents

iWD Business Process

The iWD business process (`IWDBP`) contains the following strategies:

- `Classification`
- `Prioritization`
- `Distribution`
- `Mark Interaction as Done`
- `Removal`

The iWD business process contains the following subroutines:

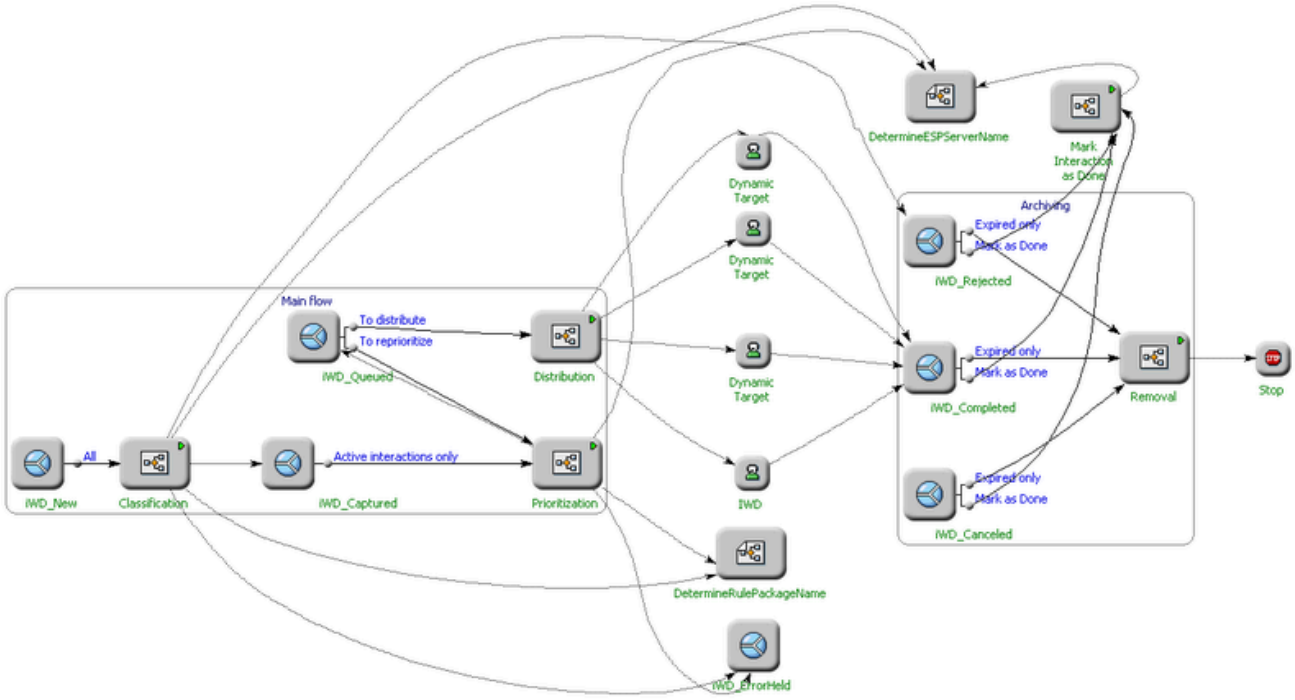
- `DetermineESPServerName`

- DetermineRulePackageName

The iWD business process contains the following queues:

- iWD_New
- iWD_Captured
- iWD_Queued
- iWD_Canceled
- iWD_Rejected
- iWD_Completed
- iWD_ErrorHeld

The Interaction Queues that are included in the out of the box IWDBP business process must be present, and the names should not be changed. The Global Task List looks for specific Interaction Queue names, as they appear in the business process (such as iWD_New and iWD_Queued). If you modify the business process to add additional queues or rename existing queues, the *interactions* display in the Global Task List with the status Queued.



IWDBP Main Process

The above screenshot shows the entire business process as it appears in the Interaction Design window of Interaction Routing Designer.

The group of objects on the left-hand side are part of the “Main Flow” of the business process. The group of objects on the right-hand side represent the “Archiving” section of the business process.

Modifying the iWD Business Process

Modifying the iWD Business Process

For most environments, the only modification that will need to be made to the iWD Business Process is to the `Distribution` strategy. The recommended approach to doing this is:

1. Add a new strategy into the iWD Business Process
2. Replace the connection from `iWD_Queued/All` view to the `Distribution` routing strategy with a connection from `iWD_Queued` to your own routing strategy where distribution logic is described.
3. Link your new distribution strategy to the out of the box `iWD_Completed` queue.

By modifying the business process in this way, rather than simply updating the provided Distribution strategy, you can easily import any new versions of the iWD Business Process that might be available in the future (the links will have to be reestablished to your own distribution strategy).

You can also add additional interaction queues into the IWDBP business process, based on your business requirements. However, keep the following points in mind:

- The `iWD_Queued` queue must be present for Data Mart to properly count interactions/tasks. You can add other queues to the business process, but only after interactions have passed through the `iWD_Queued` queue.
- Data Mart can properly determine when to consider a task as complete, only if the final queue in the business process is one of the following:
  - `iWD_Rejected`,
  - `iWD_Canceled`,
  - `iWD_Completed`

Adapting the IWD Business Process for the Genesys E-mail Channel

These pages describe how to adapt the iWD Business Process (IWDBP) to work with the e-mail channel, though any standard Genesys non-voice channels, such as social media, chat, SMS, Gplus Adapters, or custom integrations built with Open Media, can be adapted using this approach.

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Adding Required Properties to Interactions=

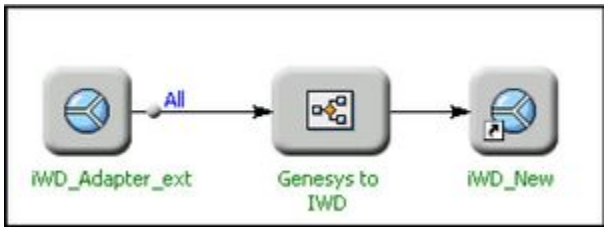
Adding Required Properties to Interactions

Key-Value Pairs

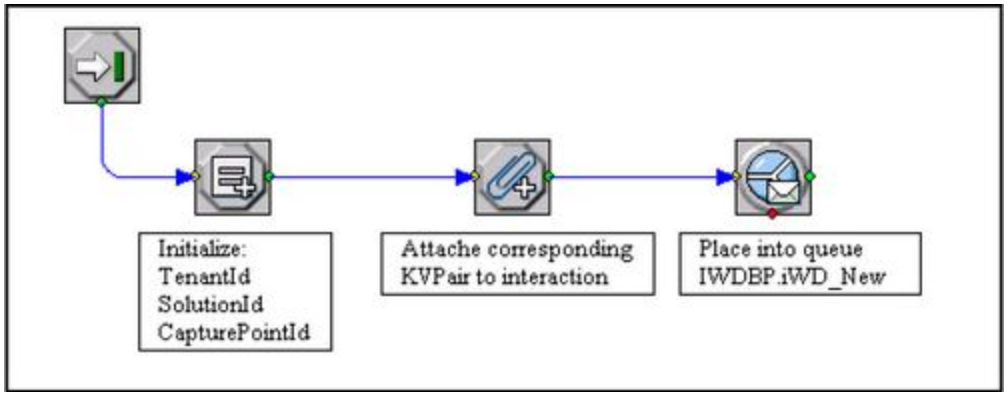
In order to keep Data Mart functionality intact and to make Genesys standard channel interactions visible in iWD Manager, some key-value pairs need to be added to the user data of these interactions. The interactions should only be placed into the input queue for the default iWD business process (`iWD_New`) only after these key-value pairs have been added. The key-value pairs are:

- `IWD_tenantId`
- `IWD_solutionId`
- `IWD_capturePointId`

To make the process easier, the iWD Setup Utility includes an additional business process, `Standard Genesys to IWD adapter` . This business process attaches the required key-value pairs to an interaction and places it into the input queue of the default business process `IWDBP`.



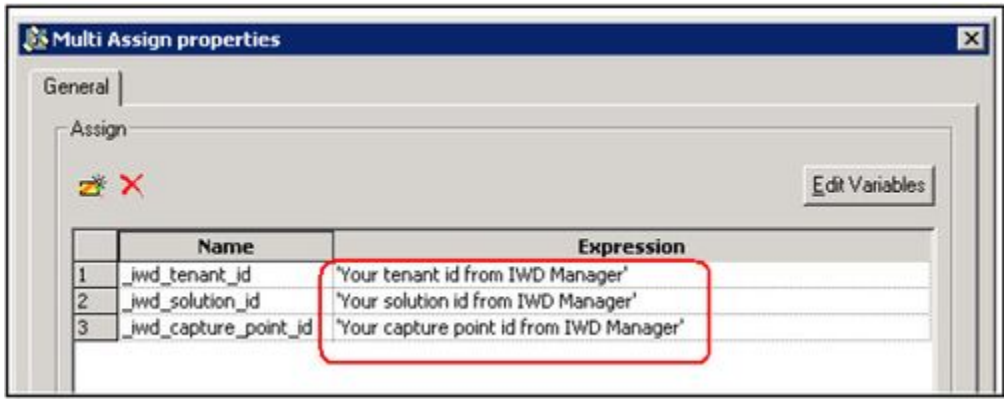
Standard Genesys to IWD Adapter Process



Standard Genesys to IWD Strategy

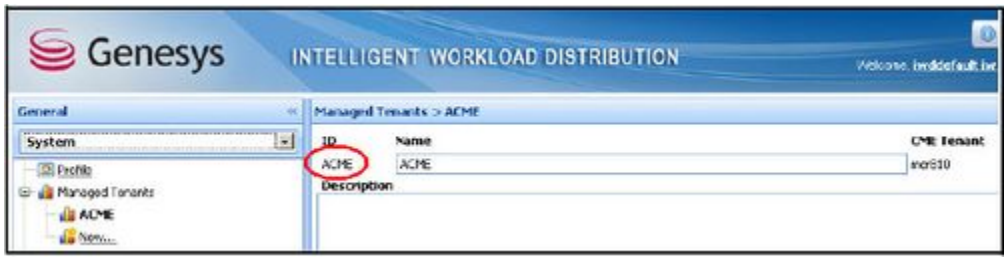
Assign Variables

In the `Multi Assign` object, you have to initialize all variables, as shown below.

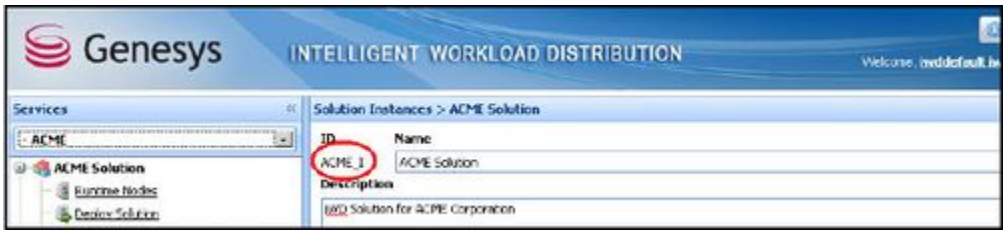


Assign Variables

The IDs are taken from iWD Manager.



Tenant ID



Solution ID

To get an ID for a capture point, you have to configure a Generic Capture Point service. The ID of the Generic Capture Point service must be populated in the `iWD_CapturePointId` user data key in the `Genesys to iWD` routing strategy that was described earlier. It will represent a Genesys standard server (in our example, the Genesys E-mail Server).

|-| Adding E-mail Server=

Adding E-mail Server

A Genesys E-mail Server must be added to the `Standard Genesys to IWD Adapter` business process. You can add the E-Mail Server in two ways:

In Configuration Manager or Genesys Administrator, you can update the E-Mail Server application options to specify `iWD_Adapter_ext` as an output queue.

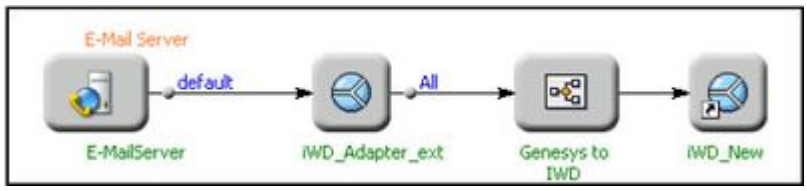
1. Add a section called `endpoint:[YourTenantDBID]`.
2. In this section, add a new option `default`.
3. Set the value of `default` to `iWD_Adapter_ext`, as shown below.

Updating E-mail Server for Standard Genesys to iWD Adapter BP

4. Refresh in IRD and E-mail Server will be added to the business process with the `iWD_Adapter_ext` queue.

The second way to add E-mail Server is to do so explicitly in IRD.

1. Add E-mail server from `Media Servers` to the `Standard Genesys to IWD Adapter` business process.
2. Make a connection to the `iWD_Adapter_ext` queue. In this method, IRD will update the corresponding option and section in the E-Mail Server application. The screenshot below shows how the `Standard Genesys to IWD Adapter` business process will look after these modifications.



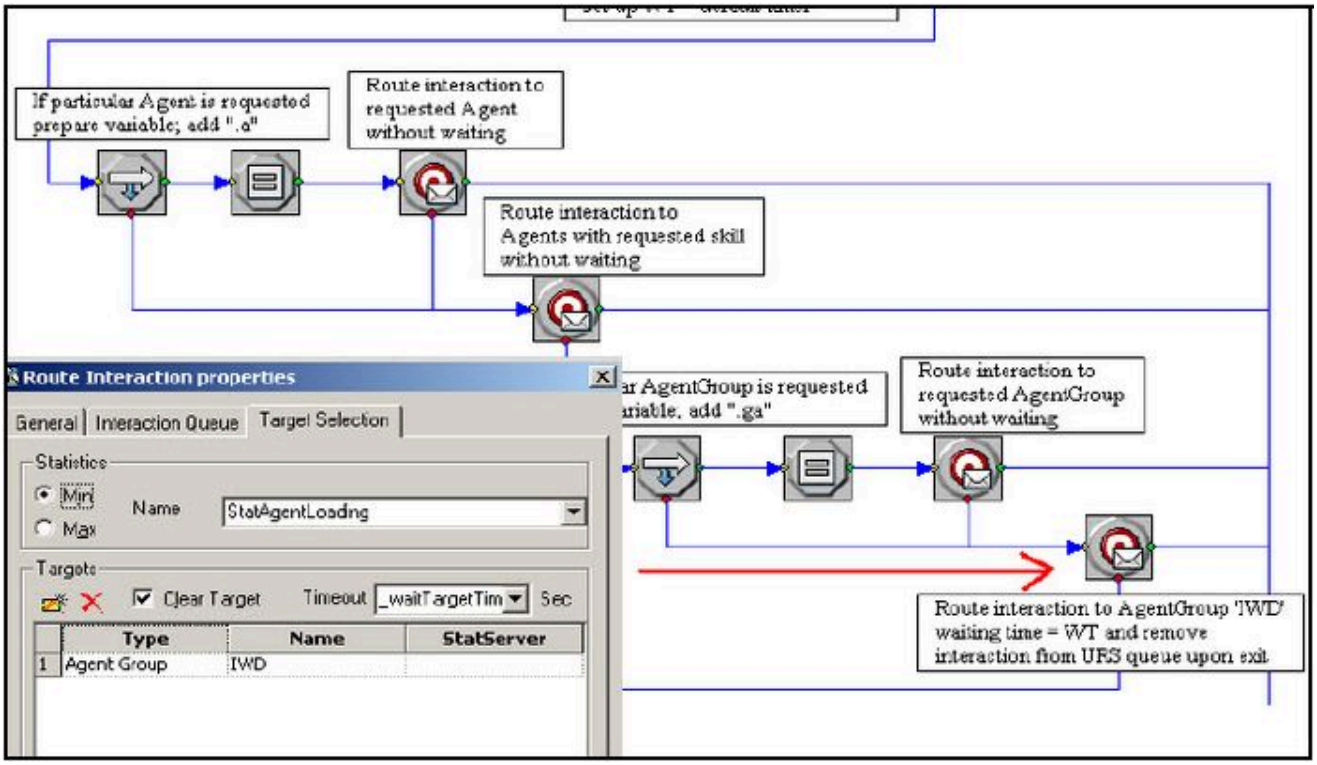
Standard Genesys to iWD Adapter Business Process After Modifications

|-| Modify the Distribution Strategy=

Modify the Distribution Strategy

In IRD, open the `IWDBP` business process. Open the `Distribution` strategy. Since there are business actions `Request Agent`, `Request Agent Group`, and `Request Skill`, the default business process has to take three into consideration. That is why there are four objects of type `Route Interaction`.

If you have only one Stat Server listed in the `Connections` tab of Interaction Server, you can skip this step. If not, for the object `Route interaction to AgentGroup IWD` in the `Target Selection` tab, change the Genesys Stat Server application name and target according to your configuration. If you want to change the length of time URS has to wait for the next available agent (by default it is set to 60 seconds), you can do so by changing the initial value of the `variable _default_target_timeout` in the first `MultiSelect` block in the routing strategy.



Update Route Interaction to Agent Group IWD

You might want to check all of the provided `Route Interaction` objects (by double-clicking on them) to see if they satisfy your business logic. Pay attention only to what statistics are used for `Skill` and `AgentGroup` routing.

Allowing Agents to Send Replies to Inbound E-mails

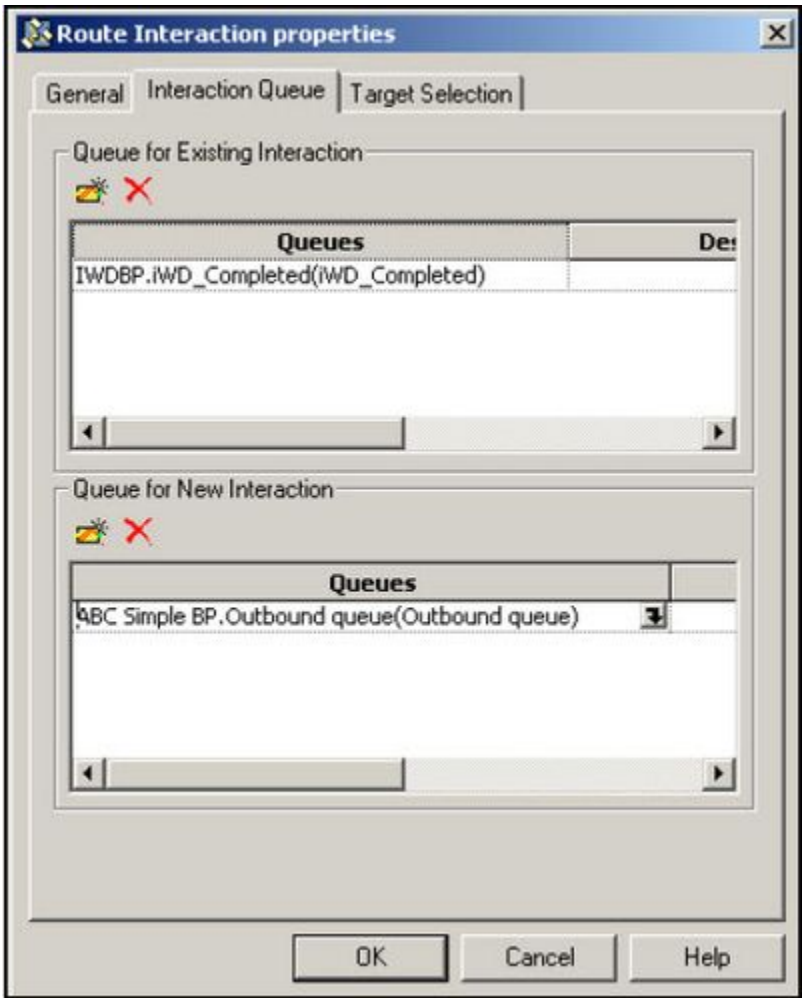
There are two ways to allow agents to send replies to inbound e-mails:

- Create a new queue and a new strategy in the `IWDBP`.
- Use a business process that already exists.

In this example an existing business process will be used to illustrate how other business processes can be used from the iWD business process.

1. Choose a business process to handle agent's replies and outbound e-mails.
2. Specify the queue into which the agent's reply will be placed.
3. Specify the business process and queue for single outbound e-mails from agents.

In this example the `ABC Simple` business process will process agent's replies (with the `Outbound` queue). Also, agents will be given the ability to place interactions into the`iWD_Completed` queue. All of this will be done in the `Distribution` strategy. The properties on the **Interaction Queue** tabs of all the Route Interaction blocks in the strategy must be as shown below.



Route Interaction Object for Distribution Strategy

|-| Examples Preamble=

Examples Preamble

In these examples we assume that the default iWD Business Process (`IWDBP`) provides all necessary steps for e-mail processing—namely classification, prioritization, and distribution. The purpose of these examples is to show what needs to be done in order to use `IWDBP` and standard iWD and Genesys Rules System functionality (such as classification and prioritization rules) for e-mail processing.

> **Important**
>
> The following examples are presented as guidelines. Some of the strategies and objects in the business processes might not be exactly as shown in the following examples.

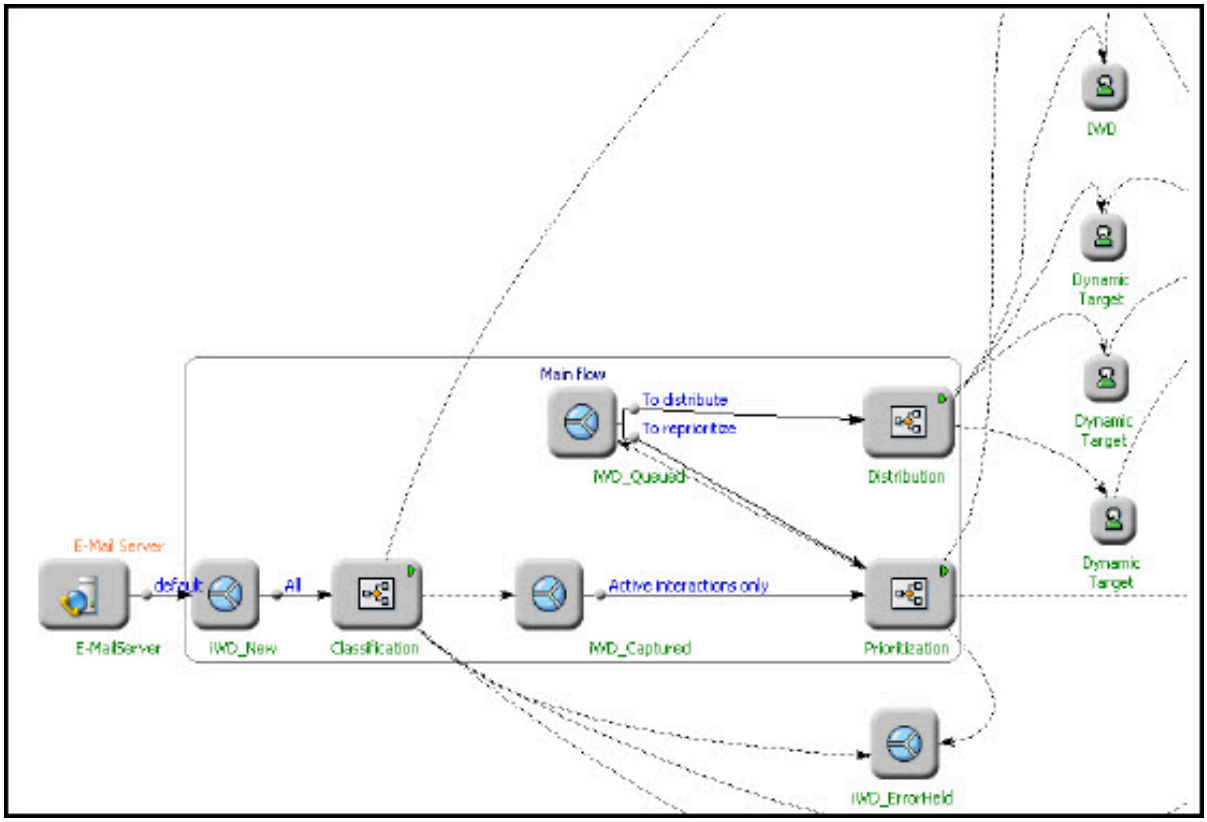
Requirements

- A Genesys E-mail solution must be installed
- An iWD solution must be installed, which includes the Genesys Rules System

Assumptions

Only one iWD solution will be served by IWDBP. The default iWD business process will process interactions with any media type (the interaction will pass through the business process and be delivered to an agent), but business rules created in these examples will be applicable to e-mails only. We have only one Agent Group to which the interactions will be assigned.

For all examples, the main flow of `IWDBP` is as shown here:



IWDBP Main Process

|-| Example 1 - Using Business Rules=

Example 1—Using Business Rules

This is a simple example of how business rules can be used. In this example, the default iWD business process will be used for processing Genesys e-mails.

Use Case

In this example, the following scenario/use case is used:

- For all interactions with `MediaType = email`, the property `ServiceType` will be set to `ChangeAddress`.
- The property `priority` will be set to `100` for all e-mail interactions.
- Interactions of any `MediaType` should be delivered to the Agent Group `IWD` (interactions with the highest priority have to be delivered first).

- E-mail interactions have to be reprioritized every 2 hours.
- After each reprioritization the priority must be increased by 5.

Genesys Configuration

To prepare the Genesys configuration:

1. Add Agents into the `IWD` Agent Group.
2. If it has not already been done, set up a connection between Interaction Server and both the Business Context Management Service `Application`, and the Genesys Rules System `Application`.
3. Set the proper outbound queue for E-mail Server. Interactions that are submitted by E-mail Server have to reach the iWD business process in some way. In order to do that we need to change the outbound queue for the E-mail Server application to `iWD_New` in the `endpoints` section (refer to the first method of adding E-mail Server to the business process on See In Configuration Manager or Genesys Administrator, you can update the E-Mail Server application options to specify iWD_New as an output queue.
4. Add a section called endpoint:[YourTenantDBID].
5. In this section, add a new option `default`.
6. Set the value of `default` to `iWD_New`.
7. Refresh in IRD, and E-mail Server will be added to the business process with the `iWD_New` queue. for details). Now your E-mail Server will submit interactions into the `iWD_New` queue, which is the entry point for the default iWD business process.

iWD Configuration

> **Important**
>
> It is recommended to give meaningful names for iWD services and objects. The following format could be useful:
>
> <iWDTenantName><iWDSolutionName><ServiceTypeServiceName> or
>
> <iWDTenantName><iWDSolutionName><ParentObjectNameObjectName>.

To prepare the iWD configuration:

1. Login into iWD Manger by using the `default` person account.
2. Create a new iWD tenant. From the drop-down list choose the corresponding Genesys Tenant. It is recommended to give the new iWD tenant the same name as the Genesys tenant. In this example the iWD tenant name will be `MCR` (with ID also set to `MCR`).
3. On the `MCR` tenant's `Profile` page, configure the URL for the Genesys Rules Authoring Tool.

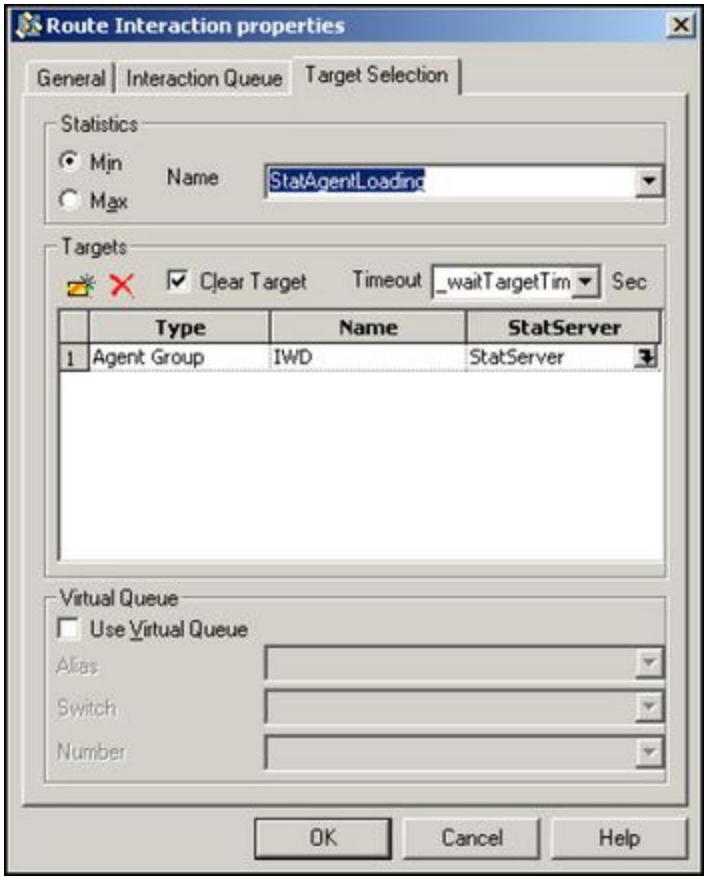
4. Under iWD tenant MCR create a new solution and name it MCR Solution with ID = MCR_SLT.
5. Under iWD tenant MCR create a new Role under Security Policy and give some permissions.
6. Under the new solution create the following iWD configuration objects:
   - iWD Runtime Node. For Context URL use the directory name iwd_node provided during installation (by default it should be http://localhost:8080/iwd_node/). For the Application property, use the iWD Runtime Node application as configured in Configuration Manager or Genesys Administrator.
   - iWD Logging service
   - iWD Configuration Server Connector service
   - iWD Interaction Server Connector service
   - iWD Business Context Management service. For the Application property, use the iWD Business Context Management Service application as configured in Configuration Manager or Genesys Administrator.
7. Once your services are all created, you will need to do two more things:
   - Push the business structure changes to the Genesys Rules System.
   - Deploy your iWD Solution to your application server.

You should see two notifications on the top of the iWD Manager screen informing you of these two tasks. You can select each of the hyperlinks to take you to the screen where the task needs to be performed.

IWDBP Preparation

To prepare the iWD business process:

1. In IRD open IWDBP.
2. Open the Distribution strategy.
3. Double-click on the fourth RouteInteraction block (the one that is used to route to the IWD agent group). In the Target Selection tab, change the Genesys Stat Server application name and target according to your configuration.



Create Rules

1. Modify the Standard Rules Template

For simplicity, in this example conditions will be added to the Standard Rules Template, which is used for all iWD tenants.

1. Launch the Genesys Rules Development Tool (GRDT) and import the `iWD Standard Rules Template` project if it is not already there. If the template has not already been imported into GRDT, you can find the `iWD Standard Rules Template` in the directory where iWD Manager supporting files were installed.
2. Expand `Conditions` and add four new rule conditions, entering the `Language Expression` and `Rule Language Mapping` according to the information in Conditions.
3. Click Save.
4. Right-click the `iWD Standard Rules Template` and select `Publish.` It will be published to the `Genesys Rules System` rules repository.

Conditions

Language Expression	Rule Language Mapping
Reprioritization was not set up	`eval(!$data.containsKey("IWD_reprioritizeDateTime"))` Note: The `Standard Rules Template` contains a standard rule condition called “`Is first prioritization`” that does the same thing as “`Reprioritization was not set up`”, but “`Reprioritization was not set up`” is included in this example to give you another working example of how to achieve the same result in a business rule.
Reprioritization was set up and in the past	`eval( $data.containsKey("IWD_reprioritizeDateTime") && (getDTValue("IWD_reprioritizeDateTime", $data) < (getCurrentDT()) ))`
KVPair “`{k}`” is “`{v}`”	`eval( getStringValue('{k}', $data).equals('{v}'))` Note: The `Standard Rules Template` contains a standard rule condition called “`String “{attribute}” equals “{stringValue}”` that does the same thing as `KVPair “{k}” is “{v}”`. `KVPair “{k}” is “{v}”` is included in this example to give you another working example of how to achieve the same result in business rules.
KVPair “`{k}`” is not “`{v}`”	`eval( !getStringValue('{k}', $data).equals('{v}'))` Note: You will also need to add two new parameters to the `Standard Rules Template` —`"k" and "v"`, which should both be of type `Input Value` with `Value Type=String`.

2. Create a Classification Rule

Create a classification rule. For simplicity Global Rules (at the rule package level) are used in this example.

1. Log into iWD Manager and launch the Genesys Rules Authoring Tool.
2. Select your iWD tenant.
3. Expand your Solution (`MCR Solution`) and select `New Package`.
4. Give the rule package a `Package Name` (`mcr`) and a `Business Name` (for example, `MCR Rules`).
5. Select `Package Type iWD`.
6. Under `Templates`, select the `iWD Standard Rules Template` and click `Save`.
7. From the navigation tree, select your rule package (`MCR Rules`).
8. Click the `Rules` tab.
9. Select `New Linear Rule`.
10. Give the rule a `Name` and, as the rule phase, select `classification`.
11. Click `Add Condition`.
12. Select the `Media type is` rule condition.
13. In the condition, from the drop-down list of media types, select `email`.
14. Click `Add Action`
15. Select `Set Priority` and set the priority value to `100`.
16. Click `Add Action`.
17. Select `Set String` and set the `ServiceType` string equal to the value `ChangeAddress`.
18. Click `Add Action`.

19. Select `Reprioritize` and, for the reprioritization interval, enter `2 hours`.
20. Click Save.

3. Create a Prioritization Rule

Create a prioritization rule. For simplicity, Global Rules (at the rules package level) are used in this example, but these prioritization rules could also be created at the Department or Process level. In this case, you would first need to add a rule back at the Global Rules or level with the rule action `Assign iWD process`, to assign the interaction to an iWD Process.

1. Click `New Linear Rule`.
2. Select `prioritization` as the `Phase`.
3. Click `Add Condition` and select `Media type is`.
4. From the media-types drop-down list, select `email`.
5. Select `Add Condition` and select `Reprioritization was set up and in the past`.
6. Click `Add Action`, and select `Increase priority`.
7. For the amount the priority should be increased by, enter `5`.
8. Click `Add Action`, and select `Reprioritize after`.
9. For the time at which to reprioritize the interaction, enter `2 hours` .
10. Click Save.

4. Deploy Modifications

After new rules are created the rule package has to be deployed before the rules will have an affect on your business process.

1. Click on the `Deploy Rules` node in the Genesys Rules Authoring Tool (GRAT) navigation tree.
2. Select `Deploy Now.`
3. You will receive a notification if the deployment was successful.

> **Important**
>
> There are two List Objects used in the IWDBP. One contains two lists and the other contains one list. All three lists must be properly configured for the IWDBP to work properly for your iWD Solution and your rule package.

Notes on the iWD Business Process

The following are some important things to note about the iWD business process:

- Behavior of the `iWD_Captured` queue and `Active interactions only` view—If the interaction does not have a key-value pair with the key `IWD_activationDateTime` it will be processed immediately; otherwise the interaction will be delayed according to the time stamp in the key-value pair.
- Behavior of `iWD_Queued` queue and `To reprioritize` view—Interactions will only be taken through this view with the key `IWD_reprioritizeDateTime` is in the past. This key-value pair is set up by a prioritization business rule.

Path of E-mail Interactions in IWDBP

- All business rules will **only** affect interactions with a `MediaType` equal to `email`. The following are the steps which the interaction will pass through:

1. The interaction is submitted by E-mail Server and is placed into the `iWD_New` queue.
2. The interaction is processed by the `Classification` strategy. As a result, the classification business rules will be applied to interaction. In this example, `ServiceType` will be set to `ChangeAddress`. Also, the initial `Priority` will be set to `100` and the initial `Reprioritization` time will be set to `in 2 hours`.
3. The interaction is placed into the `iWD_Captured` queue.
4. The interaction is processed by the `Prioritization` strategy. As a result, the prioritization business rules will be applied to interaction. In this example we have set the initial priority in classification rules, so prioritization rules will be used on the reprioritization step.

5. The interaction is placed into the iWD_Queued queue.

In this example, if no available agents are found, the e-mail interaction will be reprioritized every 2 hours. Its priority will be increased by 5 each time.

|-| Example 2 - Departments and Processes=

Example 2 - Departments and Processes

In this example more iWD business objects will be added. This example will show how one flow of interactions can be divided into three streams, and how different business rules can be applied to each stream. In this example the default iWD business process is used for processing Genesys e-mails.

Use Case

In this example the following scenario is used:

- All interactions with MediaType = email should be divided into three groups based on Subject: NewAccount, Support, and all others.
- All interactions will be delivered to one Agent Group (IWD), but interactions with Subject = NewAccount will have highest priority and will be reprioritized the most frequently. Interactions with Subject = Support will have lower priority and all other interactions will have the lowest priority and will be reprioritized less frequently.

Creating Rules

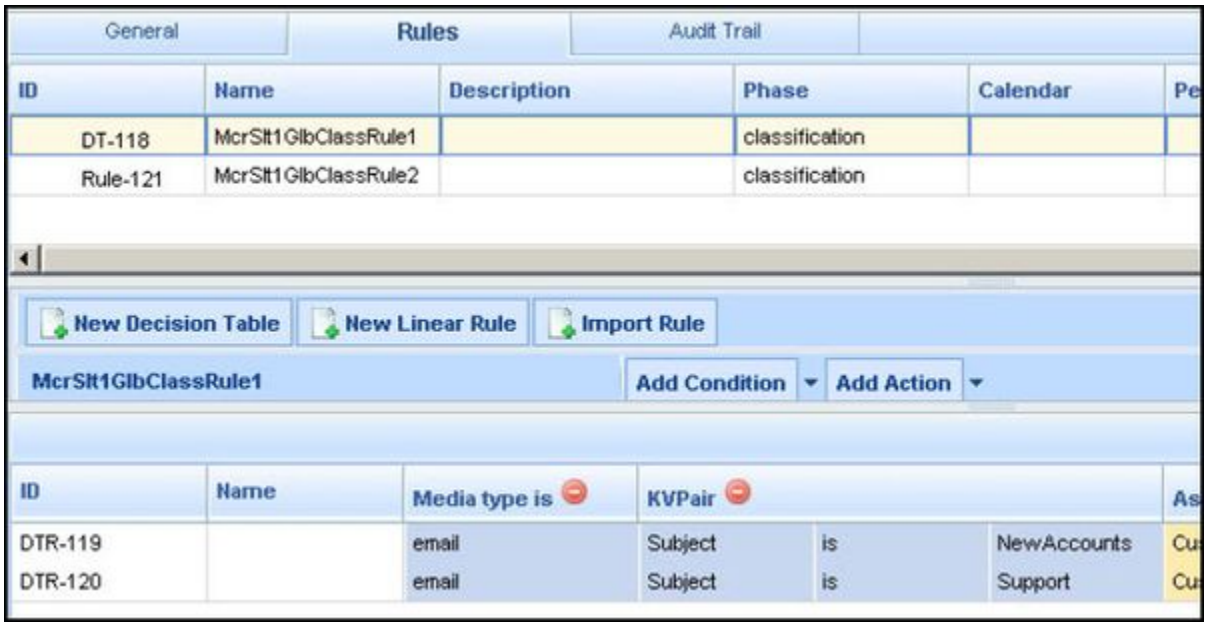
1. Create a Department and Processes in iWD

1. Create the Department and Processes in iWD Manager.
2. Select Departments & Processes.
3. Select your iWD tenant.
4. Select New Department.
5. Enter a name for the new department (in this example, Customer Service).
6. Click Save.
7. Expand the new Department, you named in Step 5.
8. Create the following three new Processes under the Customer Service Department: Sales, Support, and Other, clicking Save after each one is created.

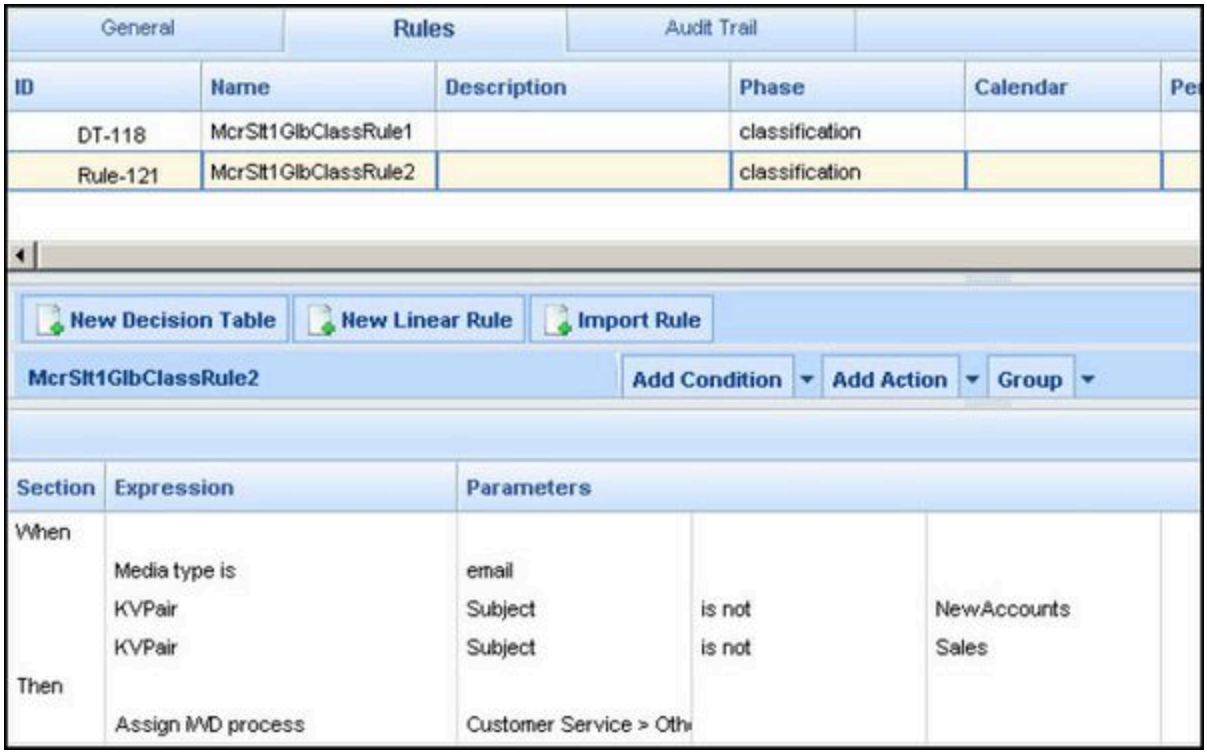
9. Redeploy your iWD Solution
10. Push the business structure changes to the Genesys Rules System.

2. Create Global Classification Rules

Create new Global classification rules as shown below. Remember to save each rule. The first example below shows a Decision Table rule.



Decision Table Rule



Linear Rule

3. Create Classification Rules for each Process

Create a new classification rule for each process (see the screenshot below for an example).

- For the `Sales` process: Action `Set Priority 100`
- For the `Support` process: Action `Set Priority 50`
- For the `Others` process: Action `Set Priority 10`

Classification Rule

4. Create Prioritization Rules for the Processes

Create prioritization rules for your processes.

For the `Sales` process, create the rules outlined in the table below:

Sales Process Prioritization Rules

Rule Name	Conditions	Actions
McrSlt1Prior1Sales	If Reprioritization was not set up	Reprioritize after 1 hour
McrSlt1Prior2Sales	If Reprioritization was set up and in the past	Reprioritize after 1 hour Increase priority 10

For the `Support` process, create the rules outlined in the table below.

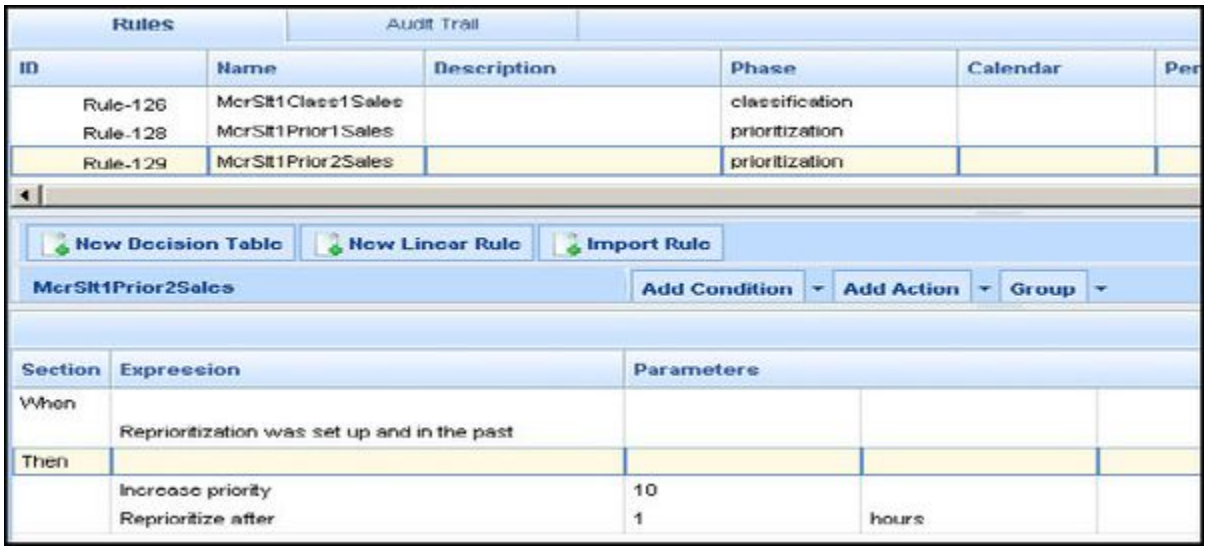
Support Process Prioritization Rules

Rule Name	Conditions	Actions
McrSlt1Prior1Support	If Reprioritization was not set up	Reprioritize after 2 hours
McrSlt1Prior2Support	If Reprioritization was set up and in the past	Reprioritize after 2 hours Increase priority 5

For the `Others` process, create the rules outlined in the table below.

Others Process Prioritization Rules

Rule Name	Conditions	Actions
McrSlt1Prior1Others	If Reprioritization was not set up	Reprioritize after 3 hours
McrSlt1Prior2Others	If Reprioritization was set up and in the past	Reprioritize after 3 hours Increase priority 1



Prioritization Rule

5. Deploy Changes

Deploy your rule package.

Path of E-mail Interactions in IWDBP

All business rules will **only** affect interactions with a `MediaType` equal to `email`.

The following are the steps which the interaction will pass through:

1. The interaction is submitted by E-mail server and is placed into the `iWD_New` queue.
2. The interaction is processed by the `Classification` strategy. As a result, the classification business rules will be applied to the interaction. In this example, interaction will be assigned to one of the iWD processes depending on `Subject`.
3. Classification rules from the assigned process will be applied. As a result, the initial `Priority` will be set—`100` for the `Sales` process, `50` for the `Support` process, and `10` for the `Others` process.
4. The interaction is placed into the `iWD_Captured` queue.
5. The interaction is processed by the `Prioritization` strategy. As a result, prioritization business rules from the previously assigned process will be applied to the interaction. In this example it means that the interaction will be scheduled for reprioritization (each hour for the `Sales` process, every 2 hours for the `Support` process, and every 3 hours for the `Others` process).
6. The interaction is placed into the `iWD_Queued` queue.
7. In this example, if no available agents are found, the interaction will be passed into the `Prioritization` strategy based on the schedule that was set up earlier, and the `Priority` will be increased based on the assigned process.

How to Modify IWDBP to Allow Agents to Reply to Inbound E-mails and Send Single Outbound E-mails

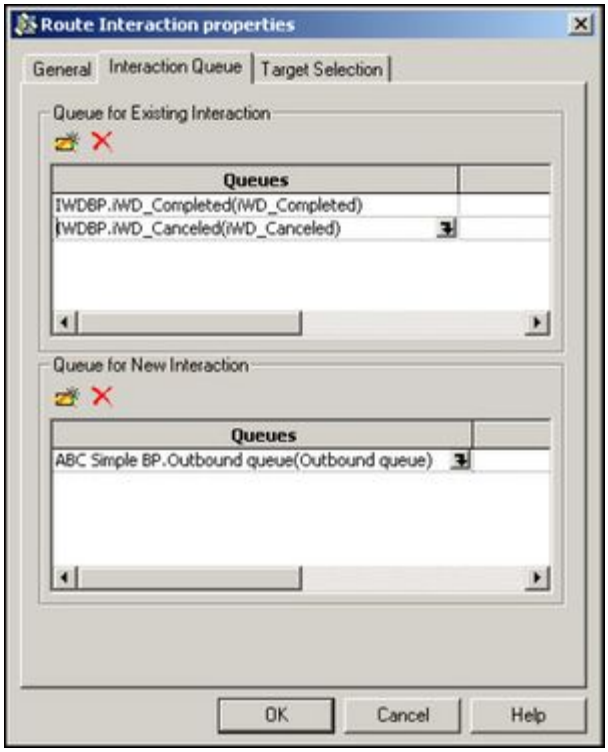
This section describes how to modify the iWD business process to allow agents to send replies to inbound e-mails, and to send single outbound e-mails. There are 2 options:

- Create a new queue and a new strategy in `IWDBP`
- Use an existing business process.

In this example an existing business process will be used to illustrate how other business processes can be used from the iWD business process.

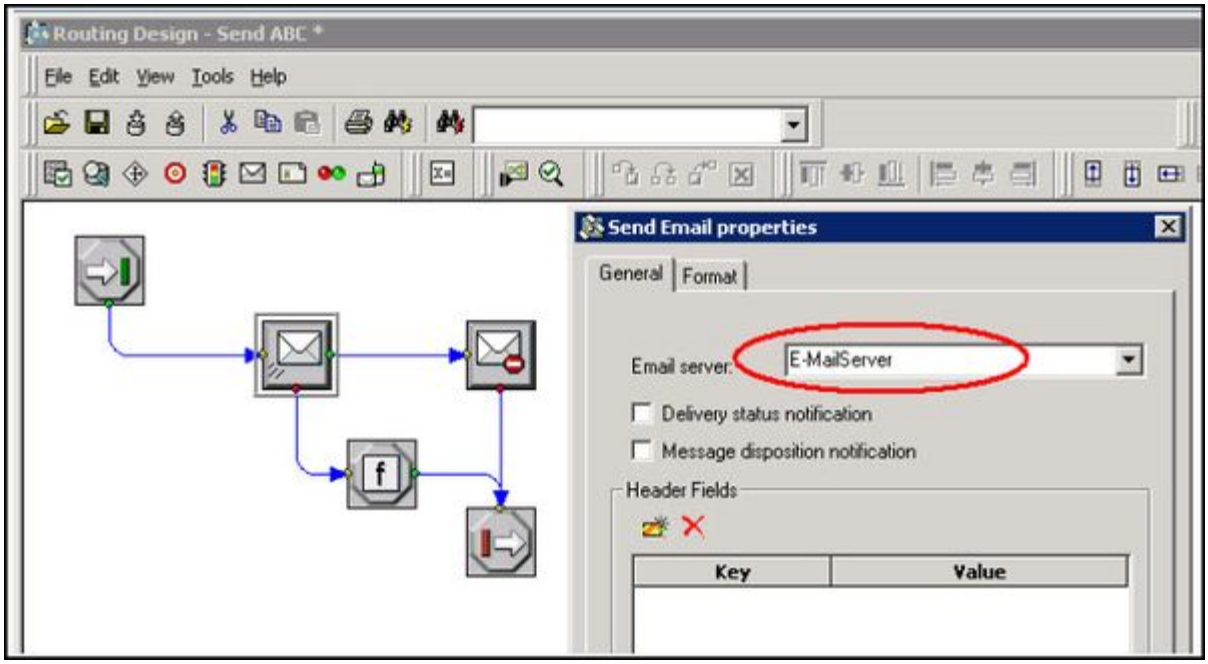
1. Choose a business process to handle agent's replies and outbound e-mails.
2. Specify the queue into which the agent's reply will be placed.
3. Specify the business process and queue for single outbound e-mails from agents.

   In this example the `ABC Simple` business process will process agent's replies (with the `Outbound` queue). Also agents will be given the ability to place interactions into the following queues in `IWDBP`: `iWD_Completed` and `iWD_Canceled`. All of this will be done in the `Distribution` strategy. The Route Interaction properties in the strategy must be as shown below.



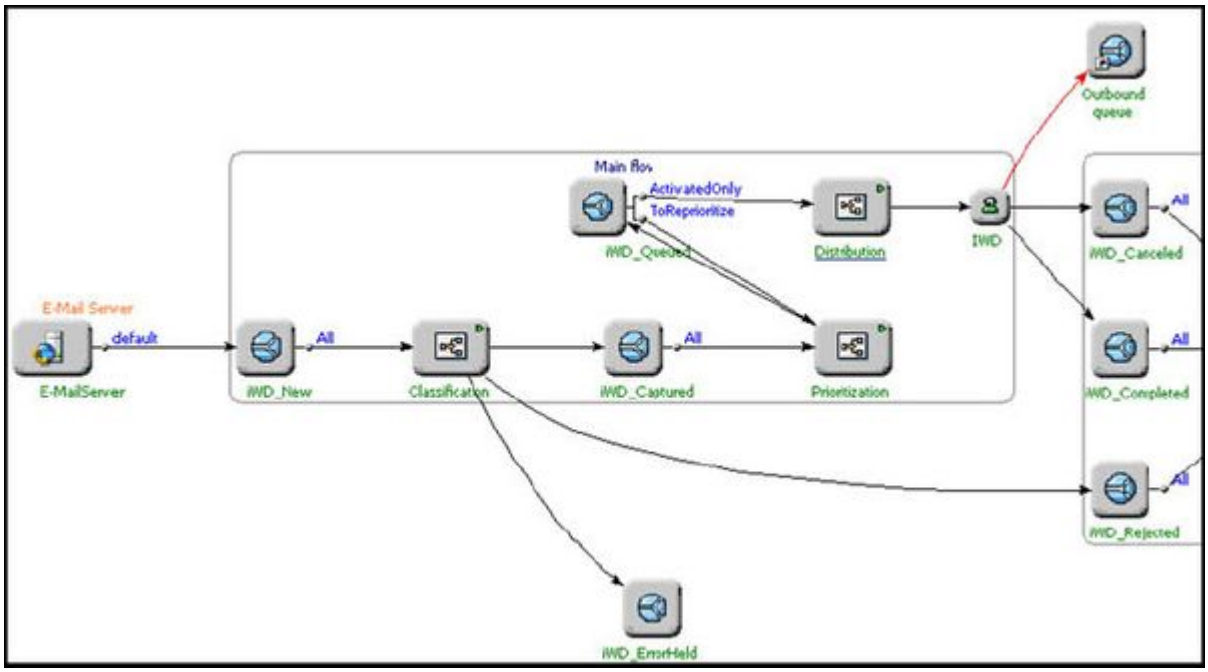
Route Interaction Properties Dialog

4. Assign the E-mail Server that will process the outbound e-mail interactions. To do this in the `ABC Simple` business process, open the `Send ABC` strategy.
5. In the Send Email property, select the E-mail Server (see below).



Select E-mail Server

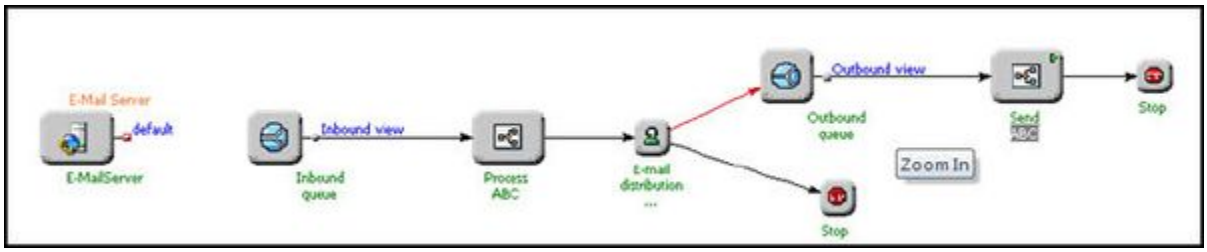
After these modifications the iWD business process should look approximately like this:



Modified Business Process

6. Save all modifications and run all participating strategies.

See the ABC Simple example in the screenshot below.



ABC Simple Business Process

> **Important**
>
> In this example only one endpoint is configured for E-mail Server, so there is no connection between E-mail Server and the Inbound queue in the `ABC Simple` business process.

iWD Rules and Existing Business Processes

These pages topic explain how to use iWD business rules functionality with existing business processes. It explains the modifications that are required to use iWD business rules within existing business processes.

<tabber>

Requirements, Assumptions and Use Case=

Requirements, Assumptions and Use Case

The requirements, assumptions, and examples in this section provide information about how to use iWD Rules in existing Business Processes.

Requirements

- A Genesys E-mail solution or any other Genesys eServices solution is installed. (An e-mail solution is used in the example.
- Modifications will be the same for any other type of media).
- An iWD solution, including the Genesys Rules System, is installed.

Assumptions

There is only one iWD solution per business process. If you want to use a business process in several iWD solutions, you must:

For iWD native interactions (which always have `IWD_solutionId`):

- Change the `Iwd_Esp_List` and `Iwd_Package_List`
- List Objects accordingly.

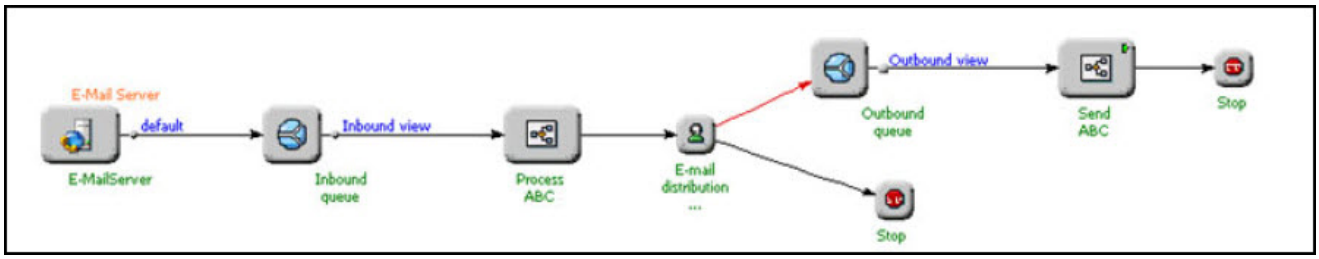
> **Important**
>
> “Native interactions” refers to interactions captured by an iWD capture adapter. Interactions going through the iWD Business Process that do not come through an iWD capture adapter (that is, interactions coming into the system from a standard Genesys media server, through a Gplus Adapter, or through an integration built with the Genesys Open Media SDK) are referred to as “non-native” or “foreign” interactions.

For non-native interactions (which do not have `IWD_solutionId`):

- Change the logic for assigning `solutionId`, based on an interaction's property, in the `IWD_BusinessRules_Ext` strategy (`Assign Properties` block with comment `solutionId` = 'Your_solution_id'). iWD Business Rules Ext Strategy shows the strategy.

Interactions with `MediaType = email` are the only interactions that come as input into existing business processes. If you expect interactions of several media types as input, you must adjust the classification rules in your rule package accordingly (add the condition "`Media type is`").

There is only one Agent Group to which the interactions can be assigned. If you want to use several Agent Groups you must modify the target selection in the `Process ABC` strategy, which is part of the `ABC Simple BP` business process that comes with the eServices Interaction Workflow installation.



ABC Simple Business Process

The example uses the ABC Simple BP business process that comes with the eServices Interaction Workflow installation.

Use Case

This is a simple example that shows how a business process can be modified to use iWD rules. In this scenario, there is a working business process, and you want to deliver interactions to agents based on priority. Priority should be assigned based on e-mail subject.

All incoming interactions (in this example they all have `MediaType = email`) should be divided into three groups based on `Subject`: `NewAccount`, `Support`, and all others. All interactions will be delivered to one Agent Group (`IWD`), but interactions with `Subject = NewAccount` will have the highest priority and will be reprioritized more frequently. Interactions with `Subject = Support` will have lower priority and all other interactions will have the lowest priority and will have the least frequent reprioritization.

|-| Modify the Existing Business Process=

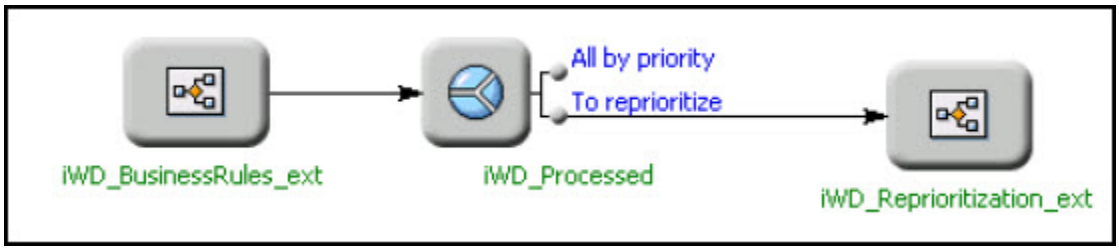
Modify the Existing Business Process

Modify the existing business process. This involves:

- Adding one more strategy, which will invoke the iWD Business Content Management Service (BCMS) to prepare the interaction user data for rule evaluation, followed by the Genesys Rules Engine to apply business rules.
- Adding one queue to the business process. This queue will provide the mechanism for reprioritization and delivering interactions to an agent based on priority.

Context

The iWD Setup Utility includes a sample business process (`ABC IWD Simple BP`) that contains a couple of strategies and a queue.



ABC IWD Simple Business Process

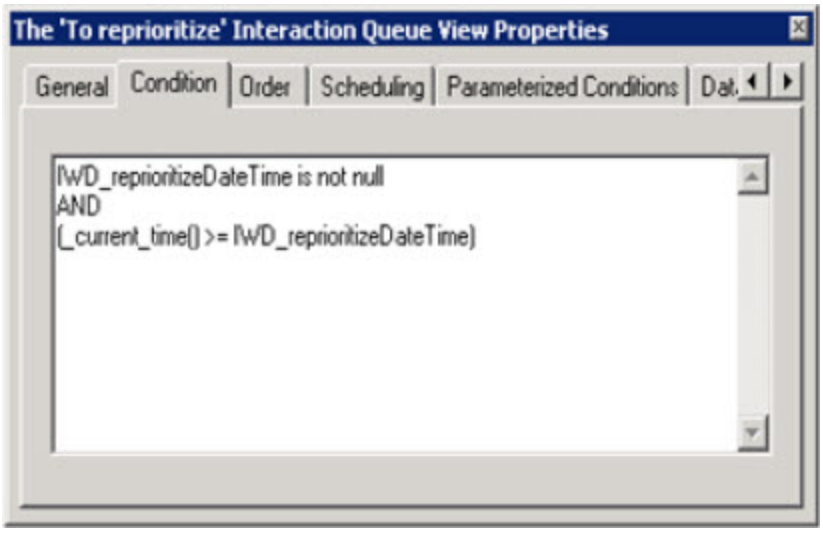
> **Important**
>
> The `iWD_BusinessRules_ext` and `iWD_Reprioritization_ext` routing strategies use the two List Objects described in Configuration of List Objects.

In this business process, the property of the `All by priority` view is configured as shown in the ABC IWD Simple BP shown above (the `Conditions` tab is empty). Thus, interactions from this queue and through this view will be taken by priority. The interaction with the highest priority will be taken first.

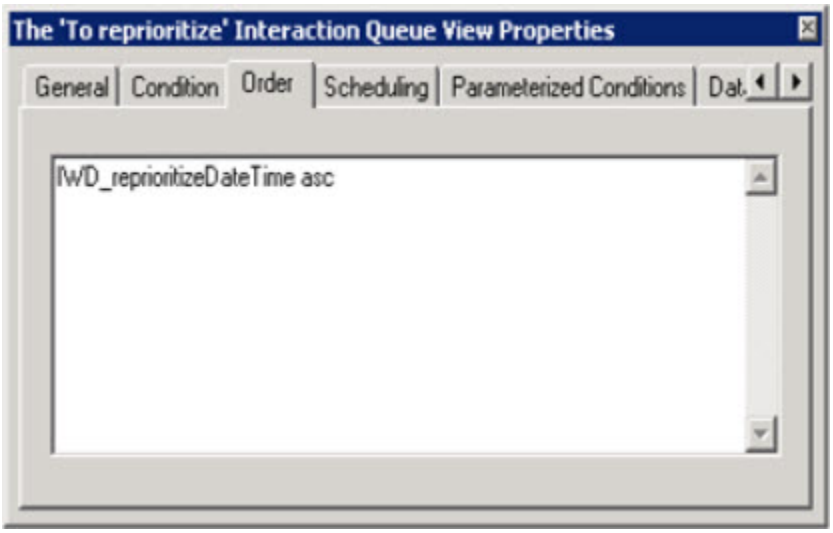
[[File:iwdBPRules4.jpg|]]

All by Priority Interaction Queue View Properties

Properties of the `To reprioritize` view are configured as in 'To Reprioritize' Properties—Condition Tab and 'To Reprioritize' Properties—Order Tab. Thus, interactions from this queue and through this view will be taken sorted by `IWD_reprioritizeDateTime`; and only if `IWD_reprioritizeDateTime` was set and has expired.

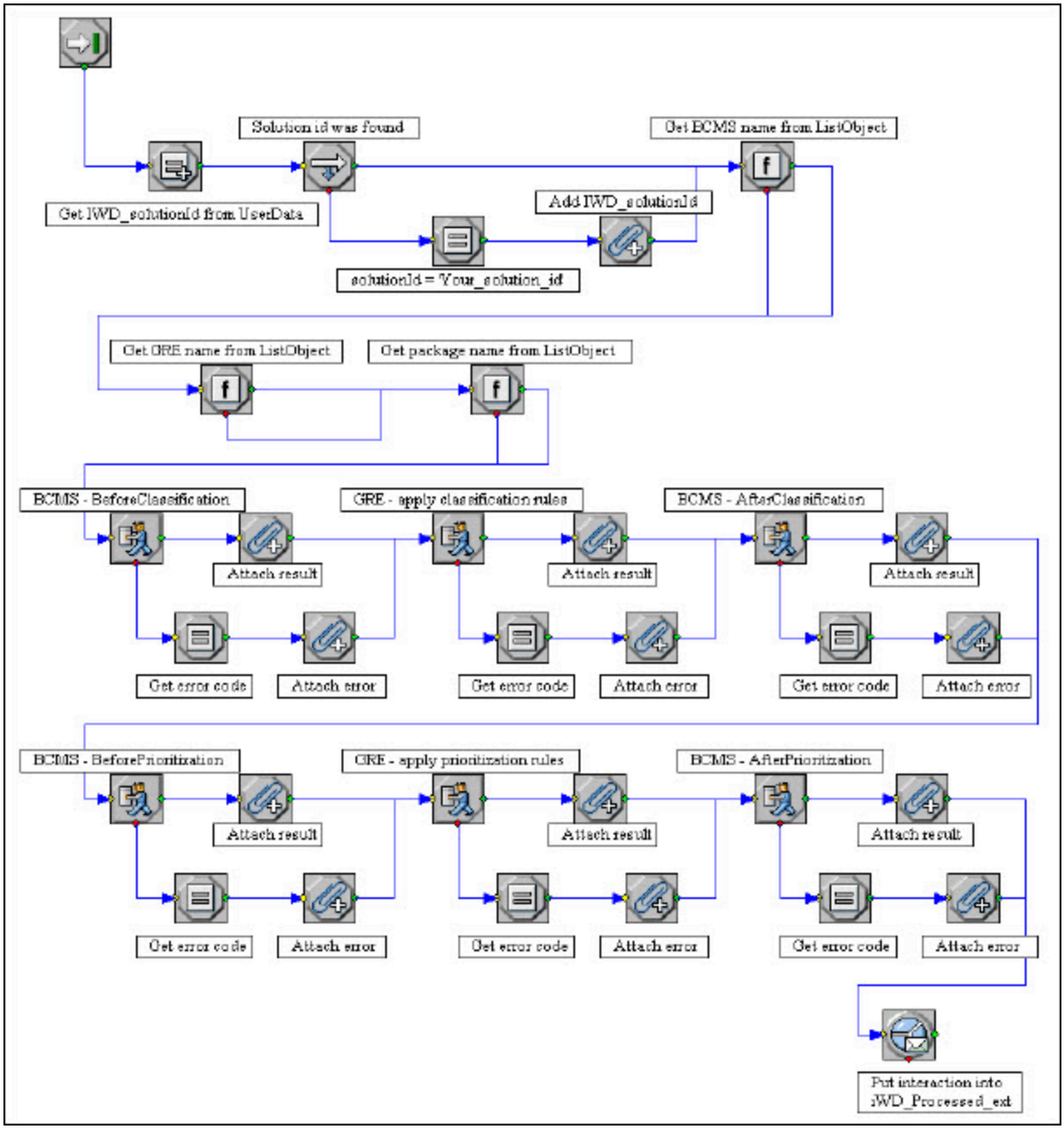


'To Reprioritize' Properties—Condition Tab



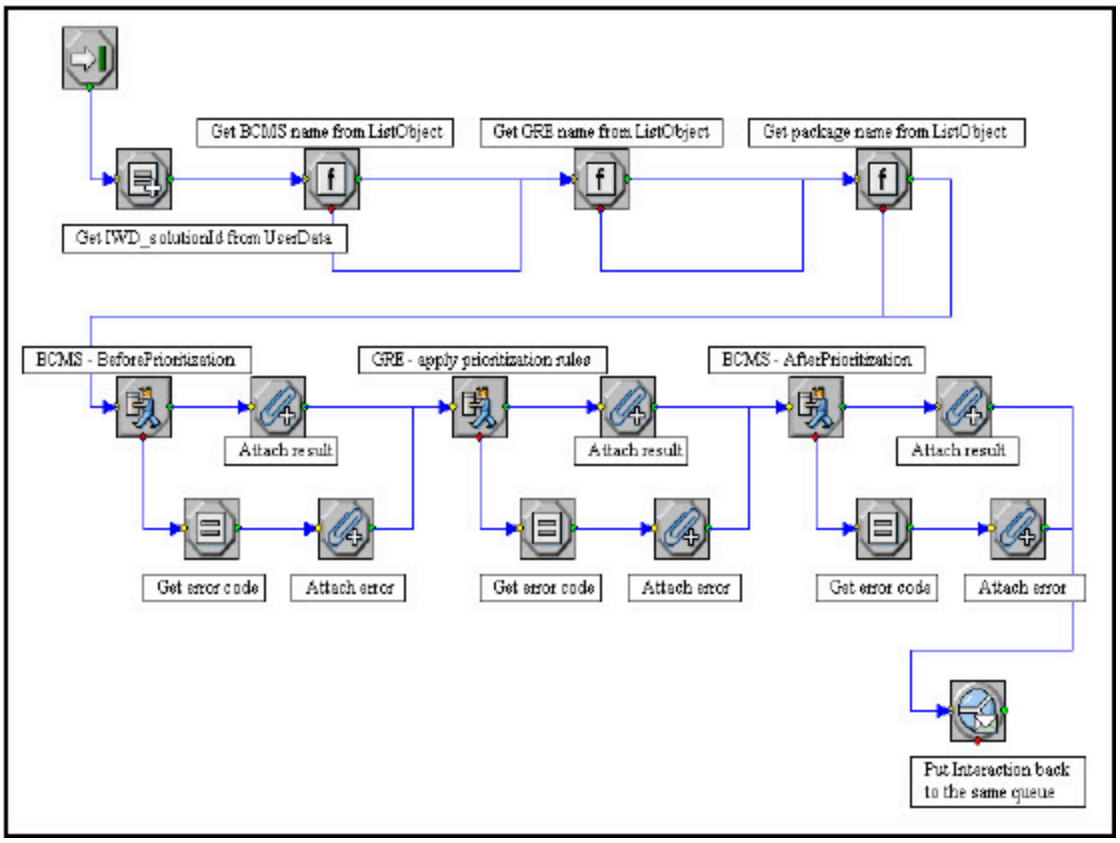
'To Reprioritize' Properties—Order Tab

The next screenshot shows the `iWD Business Rules Ext` strategy.



iWD Business Rules Ext Strategy

The screenshot below shows the `iWD_Reprioritization_Ext` strategy.

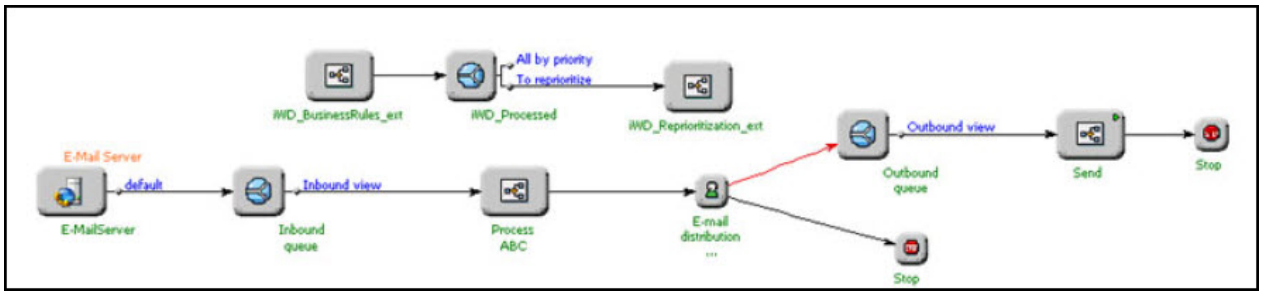


iWD Reprioritization Ext Strategy

The key-value pair `IWD_solutionId` will always be attached after the `IWD_BusinessRules_Ext` strategy. This is why no check is made for the presence of that key-value pair in the strategy.

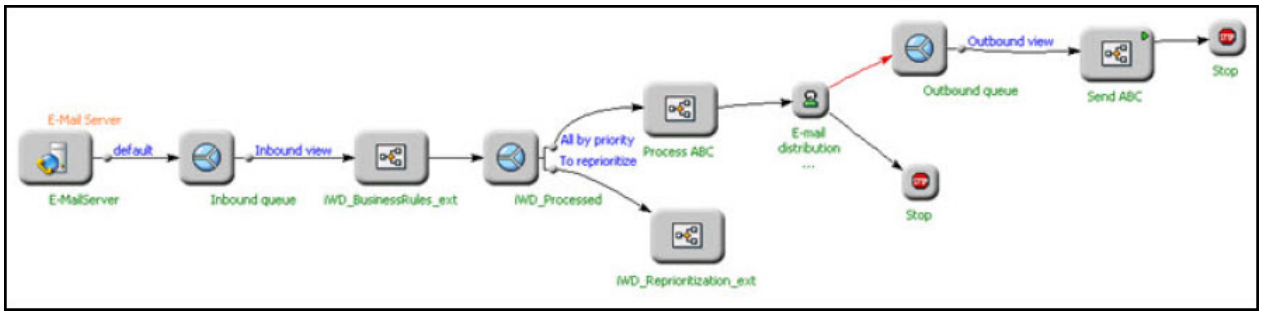
Actions

1. Move the `iWD_Processed` queue, as well as the `iWD_BusinessRules_Ext` and `iWD_Reprioritization_Ext` strategies from the `ABC IWD Simple BP` business process to the `ABC Simple BP` business process. The screenshot below shows how the `ABC Simple BP` will look at this point.



ABC Simple BP with Queue and Strategies Added

2. Insert the added group between `Inbound queue` and `Process ABC`. Teh screenshot below shows how the `ABC Simple BP` business process will look at this point.



ABC Simple BP with Group Added

The existing business process is now updated.

3. Create business rules in iWD.

|-| Create Business Rules=

Create Business Rules

1. Open Genesys Rules Development Tool and modify the Standard Rules Template as described in Example 1 of Adapting the IWD Business Process. Assume that all incoming interactions have `MediaType = email`, so you only need to add the four new Actions.
2. Create an iWD Tenant and an iWD Solution, as described in as described in Example 1 of Adapting the IWD Business Process.
3. Create a department and processes as described in as described in Example 2 of Adapting the IWD Business Process.
4. In Genesys Rules Authoring Tool, create a rule package and add the iWD Standard Rules Template to the rule package. Create new (package-level) classification rules as described in as described in Example 2 of Adapting the IWD Business Process (in this example we do not check media type, assuming that all

interactions have `MediaType = email`).

5. Create prioritization rules for your processes as described in Example 2 of Adapting the IWD Business Process.
6. Deploy your iWD rule package and your iWD Solution.

|-| Path of E-mail Interactions=

Path of E-mail Interactions

The interaction will pass through the following steps:

1. The interaction is submitted by the Genesys E-mail server and is placed into the `Inbound` queue.
2. The interaction is processed by the `IWD_BusinessRules_Ext` strategy.
    a. The BMCS service is invoked by using the Method `BeforeClassification`, to ensure the integrity of the interaction user data prior to the Genesys Rules Engine being invoked.
    b. The Genesys Rules Engine is invoked.
        i. The Genesys Rules Engine is called and the global (package-level) classification rules are applied. As a result, the interaction will be assigned to one of iWD processes depending on `Subject`.
        ii. Immediately after global classification rules are applied, classification rules of the assigned Department and Process will be applied. As a result, the initial `Priority` will be set—`100` for the `Sales` process, `50` for the `Support` process, and `10` for the `Others` process.
        iii. The BMCS service is invoked with the Method `AfterClassification`, to ensure the integrity of the interaction user data after the Genesys Rules Engine was invoked.
    c. The BMCS service is invoked with the Method `BeforePrioritization`, to ensure the integrity of the interaction user data prior to the Genesys Rules Engine being invoked.
    d. The Genesys Rules Engine is invoked again, to evaluate the prioritization rules.
        i. As a result, prioritization business rules from the previously assigned process will be applied to the interaction. In this example, that means that the interaction will be scheduled for reprioritization (each hour for the `Sales` process, every 2 hours for the `Support` process, and every 3 hours for the `Others` process).
        ii. Finally, the BMCS service is invoked with the Method `AfterPrioritization`, to ensure the integrity of the interaction user data after the Genesys Rules Engine was invoked.
3. The `IWD_BusinessRules_Ext` strategy is completed and the interaction is placed into the `iWD_Processed` queue.
4. In this example, if no available agents are found, the interaction will be passed to the `IWD_Reprioritization_Ext` strategy based on the schedule that was set up earlier. Priority will be increased, based on the prioritization rules specified in the assigned process. Interaction will be rescheduled for reprioritization and placed back into the `iWD_Processed` queue.