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Scenario Setup

System Console

1. Stop Retriever process

UCCE

1. Ensure wait nodes in UCCE EIM script are set to at least 60 minutes so the email can be handled in the next scenario.

Agent PC

1. Send an email from customer@eim.lab to support@eim.lab

Throughout the life of the mail, use the below query to follow the activity:

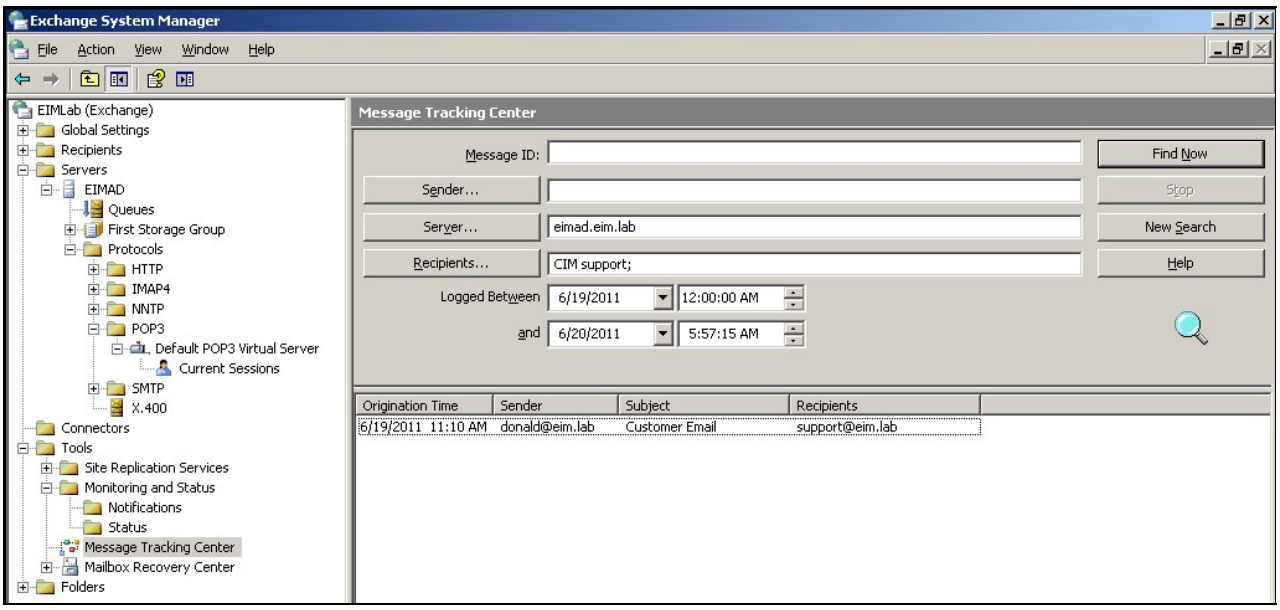
```
select top(10) egpl_routing_queue.queue_name, * from egpl_casemgmt_activity LEFT OUTER JOIN egpl_r
```

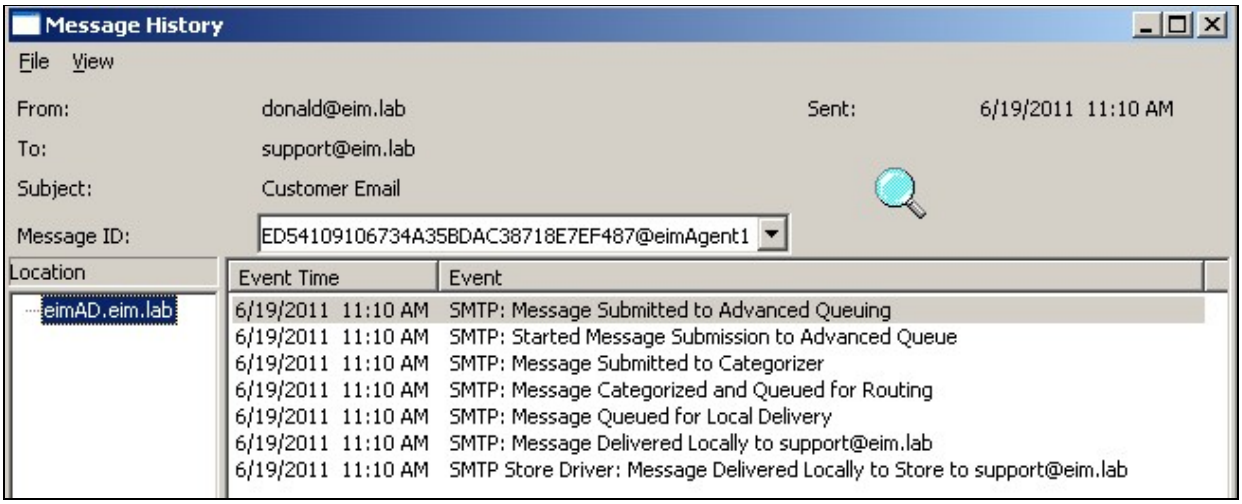
Problem Statement

Emails are not being retrieved from the mail server. Need to understand how they get to EIM.

Client to Mail Server

Once your email has been sent, it will go to the mail server. You can use Exchange's Message Tracking Center to search for it.





Mail Server to Retriever

The Retriever polls the mail server every 30 seconds by default.

```
2011-05-11 11:09:20.006 GMT-0400 <@> INFO <@> [67:RxInstance id : 999] <@> ProcessId:3984 <@> PID:
2011-05-11 11:09:20.199 GMT-0400 <@> INFO <@> [67:RxInstance id : 999] <@> ProcessId:3984 <@> PID:
2011-05-11 11:09:50.205 GMT-0400 <@> INFO <@> [67:RxInstance id : 999] <@> ProcessId:3984 <@> PID:
2011-05-11 11:09:50.409 GMT-0400 <@> INFO <@> [67:RxInstance id : 999] <@> ProcessId:3984 <@> PID:
2011-05-11 11:10:20.275 GMT-0400 <@> INFO <@> [67:RxInstance id : 999] <@> ProcessId:3984 <@> PID:
```

This setting cannot be modified from the UI. It is a global setting only accessible from the eGActiveDB:

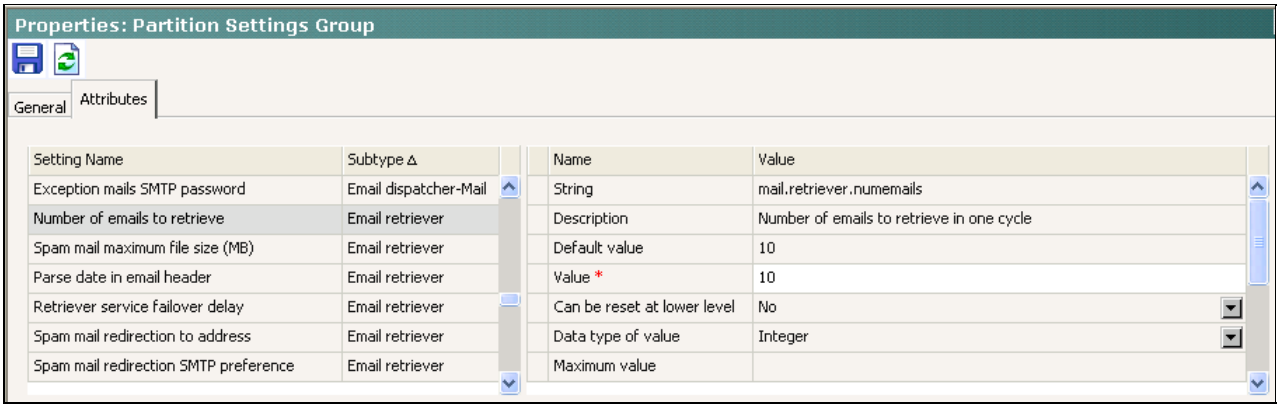
```
select * from egpl_pref_globalsettings where setting_name like 'mail.retriever.servicedelay'
```

Results | Messages

	SETTING_ID	LEVEL_ID	SETTING_NAME	SETTING_ACT_VAL	SETTING_DEF_VAL	SETTING_TYPE	MODIFIER_ID	MODIFIED_DATE	IS_PREFERENCE	IS_USERDEFINED	IS_DEPARTMENT	TYPE	IS_READ_ONLY	IS_VISIBLE
1	2012	1003	mail.retriever.servicedelay	30	30	Integer	1	2010-07-15 18:37:13.083	n	n	n	global	y	n

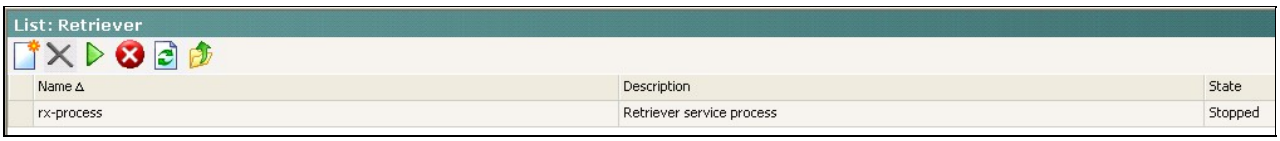
The retriever will connect to the email server and retrieve emails from each alias. Once it completes one cycle, it will wait for 30 seconds before connecting again. This can be useful if a customer wants to delay this interval for some reason (i.e. Intrusion Detection Systems governing the amount of connections allowed over a certain time period).

With each poll, it retrieves a set number of emails. By default, this is 10. This field is also in EGPL_PREF_GLOBALSETTINGS, but it's available from the UI so no need to go to the database.



Retriever Is Not Polling

If you don't see the Retriever polling the mail server every 30 seconds, there may be an issue with the Retriever process itself. Is it running? Check in the system console to ensure that the process **and** instance are running.



If the process and instance are not running, start them. You should now see the retriever polling the mail server and downloading the messages for the configured alias.

Retriever Downloads Message

With DEBUG-level Retriever logs, we can see the message being pulled from the mail server and parsed for insertion into the database. Note that it is the Retriever that assigns the email an activity_id.

```
2011-06-22 11:29:20.615 GMT-0400 <@> INFO <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID:
2011-06-22 11:29:21.271 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:21.271 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:21.271 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:21.271 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:21.458 GMT-0400 <@> WARN <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID:
2011-06-22 11:29:21.458 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:21.458 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:21.458 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:21.458 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:21.458 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
```

```
2011-06-22 11:29:21.458 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:21.458 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:21.458 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:21.661 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
Received: from [10.77.30.8] ([10.77.30.8]) by dslab.cisco.com ; Wed, 22 Jun 2011 11:29:12 -0400
Message-ID: <4E5D5104.8020307@dslab.cisco.com>
Date: Wed, 22 Jun 2011 11:29:12 -0400
From: eim <eim@dslab.cisco.com>
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.9.2.4) Gecko/20100608 Thunderbird
MIME-Version: 1.0
To: eim@dslab.cisco.com
Subject: Customer Email
Content-Type: text/plain; charset=ISO-8859-1; format=flowed
Content-Transfer-Encoding: 7bit
 <@>
2011-06-22 11:29:21.865 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:21.865 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:21.865 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:22.052 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
 <@>
2011-06-22 11:29:22.052 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:22.052 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
 <@>
2011-06-22 11:29:22.052 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:22.255 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
2011-06-22 11:29:22.318 GMT-0400 <@> DEBUG <@> [72:RxInstance id : 999] <@> ProcessId:3880 <@> PID
```

Retriever to eGActiveDB

Once the Retriever pulls the email from the mail server, it makes insertions into the following database tables:

1. egml_email ? pk email_id
2. egml_email_data ? pk email_id
3. egml_email_address
4. egpl_casemgmt_activity (activity ID)
5. egpl_casemgmt_case (case_id)
6. egml_email_attachment (foreign key to email_id) - link to attachment located on the file server
7. egpl_event_history_case_mgmt (moved to egpl_event_hist_case_mgmt_arch once activity is older than 7 days)

In the egpl_casemgmt_activity table, the activity will be entered with activity_status 3000 and activity_sub_status 3100 (*"Ready for Inbound Workflow"*) to be picked up by the Rules process and sent through a workflow.

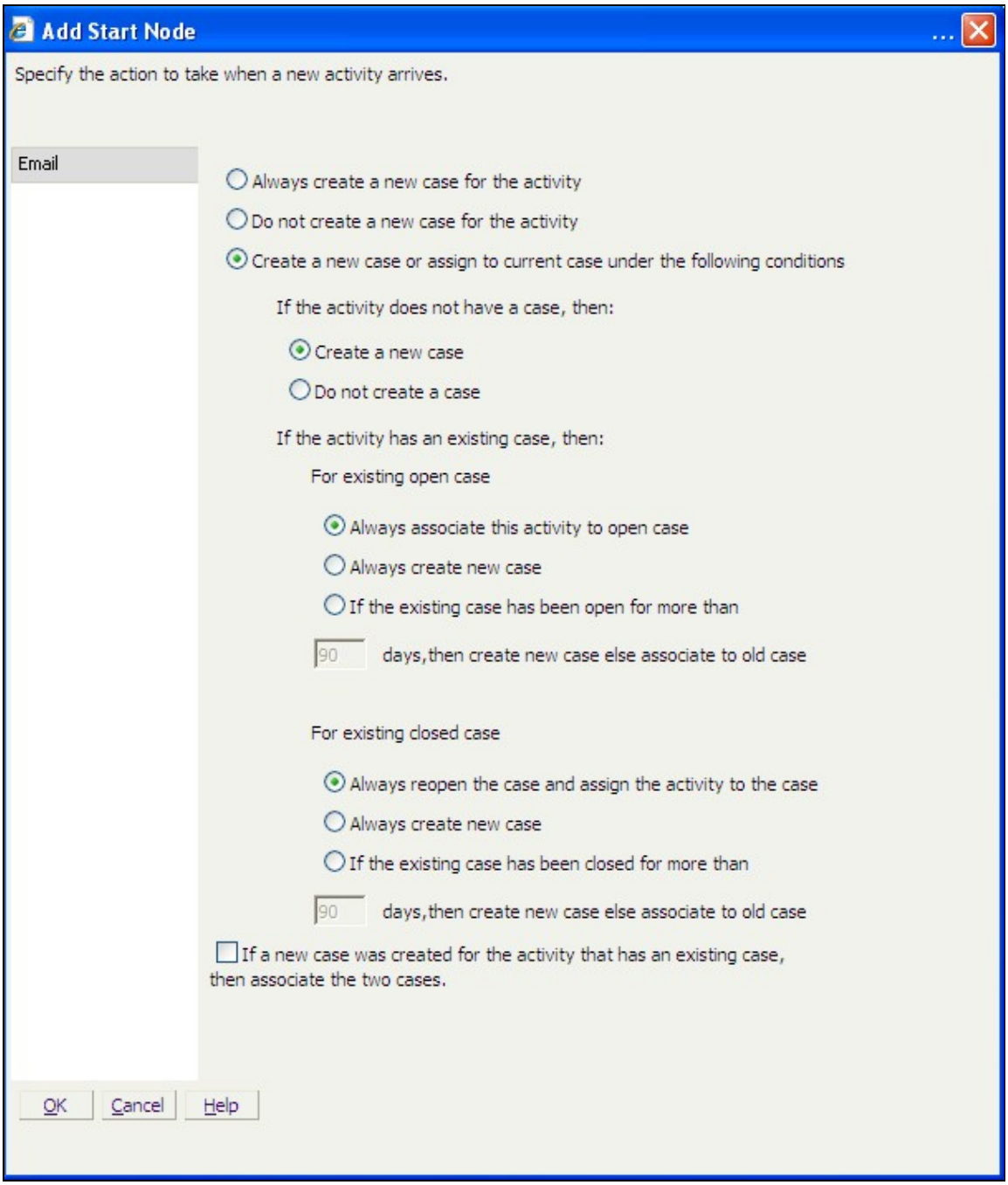
Results | Messages

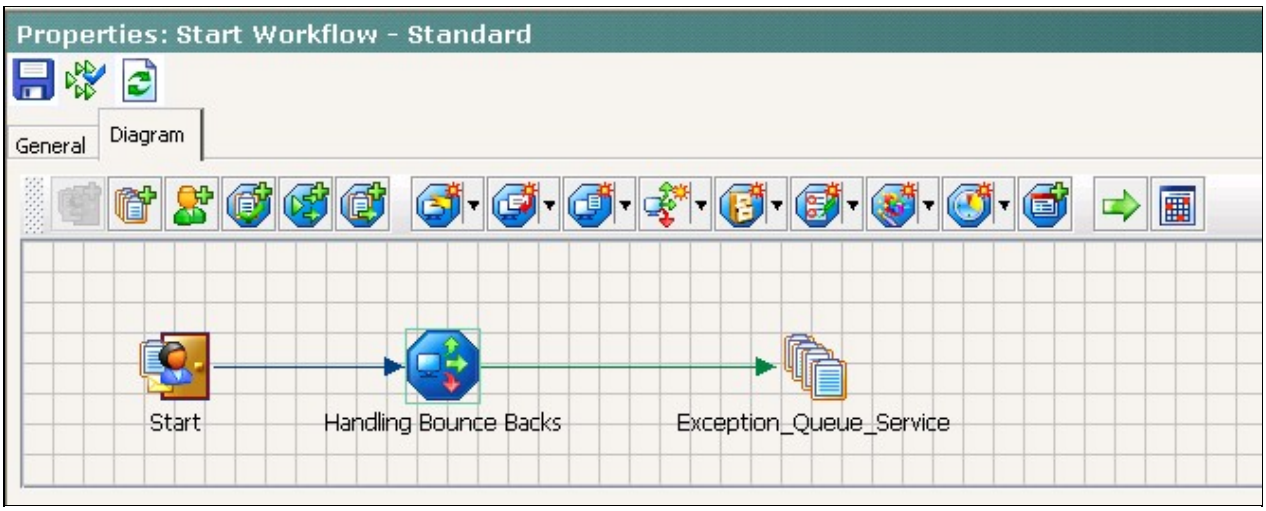
	ACTIVITY_ID	CASE_ID	DEPARTMENT_ID	ACTIVITY_MODE	ACTIVITY_TYPE	ACTIVITY_SUB_TYPE	ACTIVITY_STATUS	ACTIVITY_SUB_STATUS
1	1073	-1	999	100	1	1	3000	3100

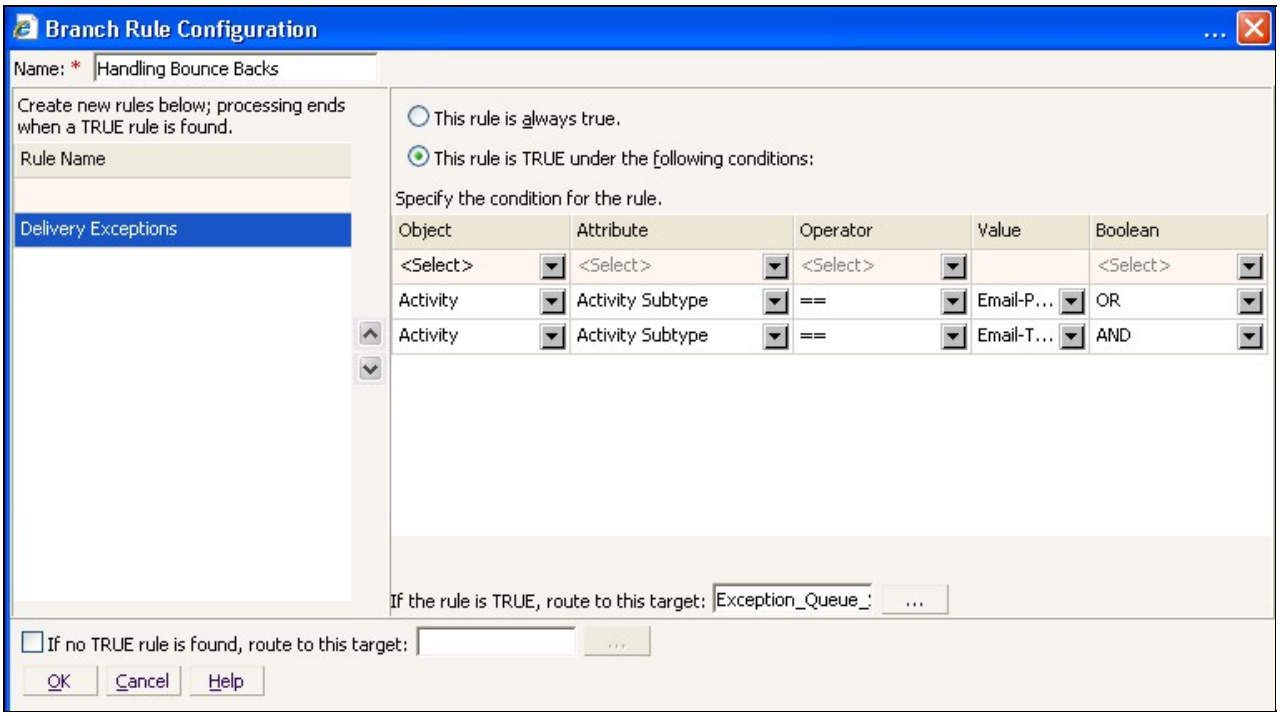
Rules process (Workflows)

Start Workflow - Standard

Before any user-defined workflows are processed, a system-defined Standard workflow runs that checks for Delivery Exceptions. If a Delivery Exception is matched, the email is sent to the Exception Queue. If not, then activity processing continues. Depending on the properties of this workflow's START node (found by double-clicking the node), case creation/association occurs.







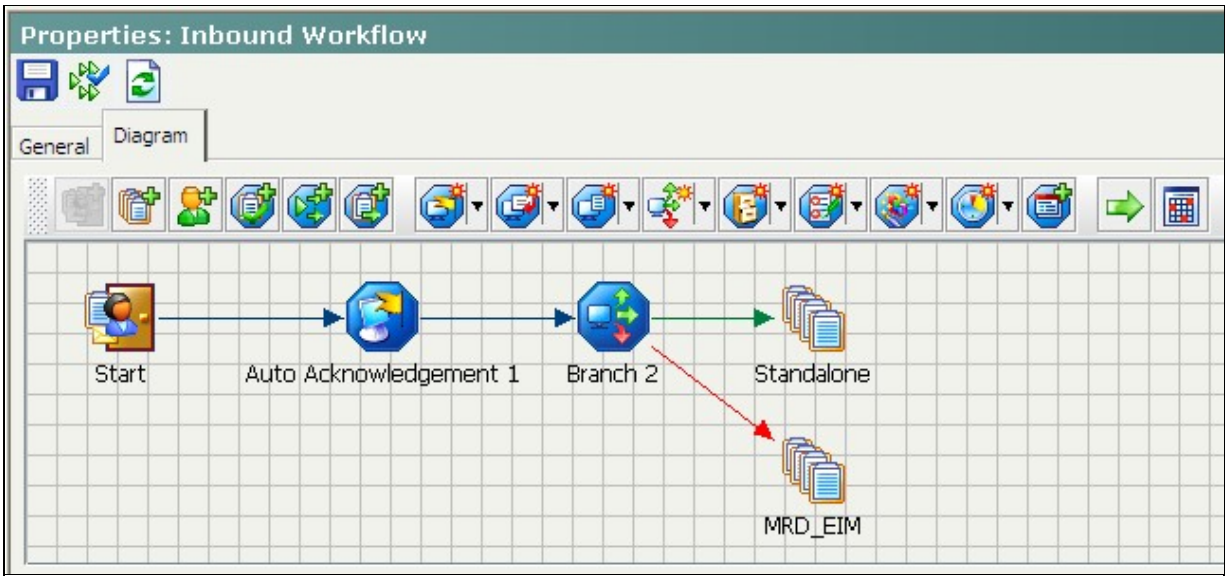
The rules-process logs at INFO level give detailed information as an activity passes through each node and associated rule within the workflow. Note that Case Creation is not seen with INFO level; for this example it is obtained with DEBUG.

```
2011-06-22 11:29:21.687 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.703 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.703 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.703 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.703 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.703 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.703 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.703 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.710 GMT-0400 <@> DEBUG <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@
2011-06-22 11:29:21.718 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
```

```
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
```

Active Inbound Workflow

If no Delivery Exception is matched, the active inbound workflow for that particular alias is then processed.




```
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
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2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
2011-06-22 11:29:21.734 GMT-0400 <@> INFO <@> [68:BPRulesInstance id : 996] <@> ProcessId:2192 <@>
```

Activity_status is set to 4000 and activity_sub_status is set to 4100. **Note that both standalone and integrated activities go through activity_sub_status=4100.** Integrated activities will typically change to 4105 relatively quickly.

Results | Messages

	ACTIVITY_ID	CASE_ID	DEPARTMENT_ID	ACTIVITY_MODE	ACTIVITY_TYPE	ACTIVITY_SUB_TYPE	ACTIVITY_STATUS	ACTIVITY_SUB_STATUS
1	1073	1048	999	100	1	1	4000	4105

Resolution

- The Retriever connects to the mail server and "retrieves" email messages for the associated aliases.
- Messages are inserted into the database and processed through workflows.
- Workflows filter out delivery exceptions, associate activities to cases, and route activities to queues.