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## Scenario Setup

### Exchange Server

1. Stop POP3 Service

### System Console

1. Stop Retriever process

### Administration Console

1. Change Partition Setting Maximum Email Size to 1 byte
2. Change Partition Setting Maximum Body Size to 1 byte

### Agent PC

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

## Problem Statement

Exchange administrators say emails are sitting on the server and not being retrieved by EIM.

## Isolation

First, we need to isolate where the problem lies. Is there something wrong with the email server? The EIM Servers? Or network connectivity between any of them?

**Are new activities being created in the eGActiveDB?** Use the following query to check for these new emails.

## Customer\_Emails\_Not\_Being\_Retrieved

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

In our scenario, no. The mail is never being inserted into the eGActiveDB. This means that we need to move on to our remaining possibilities:

1. Retriever Process
2. Network
3. Email server

## What process is responsible for "retrieving" mails?

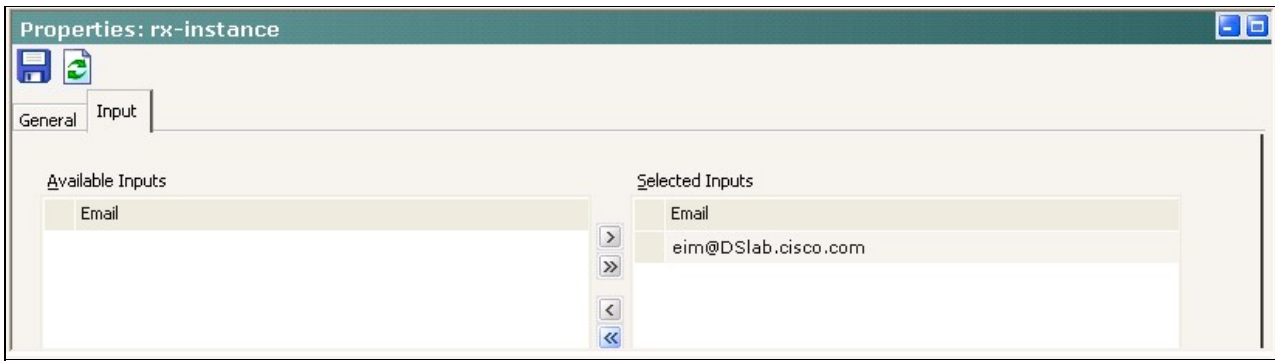
Retriever process "retrieves" mails from the mail server. Confirm in the System Console that both process and instance are running.

Then check the retriever logs, where you will likely see some errors about the aliases you have configured:

```
2011-05-17 17:24:23.357 GMT-0400 <@> ERROR <@> [73:RxInstance id : 999] <@> ProcessId:4664 <@> PID
javax.mail.MessagingException: Connect failed;
  nested exception is:
    java.net.ConnectException: Connection refused: connect
      at com.sun.mail.pop3.POP3Store.protocolConnect (POP3Store.java:161)
      at javax.mail.Service.connect (Service.java:288)
      at javax.mail.Service.connect (Service.java:169)
      at com.egain.mail.module.retriever.service.RxProcess.connectToServer (RxProcess.java:2831)
      at com.egain.mail.module.retriever.service.RxProcess.retrieveMailsForHost (RxProcess.java:1
      at com.egain.mail.module.retriever.service.RxProcess.retrieveMails (RxProcess.java:1386)
      at com.egain.mail.module.retriever.service.RxInstance.startInstance (RxInstance.java:114)
      at com.egain.platform.framework.dsm.common.ThreadPool$PoolThread.run (ThreadPool.java:112)
Caused by: java.net.ConnectException: Connection refused: connect
  at java.net.PlainSocketImpl.socketConnect (Native Method)
  at java.net.PlainSocketImpl.doConnect (PlainSocketImpl.java:333)
  at java.net.PlainSocketImpl.connectToAddress (PlainSocketImpl.java:195)
  at java.net.PlainSocketImpl.connect (PlainSocketImpl.java:182)
  at java.net.SocksSocketImpl.connect (SocksSocketImpl.java:367)
  at java.net.Socket.connect (Socket.java:524)
  at com.sun.mail.util.SocketFetcher.createSocket (SocketFetcher.java:231)
  at com.sun.mail.util.SocketFetcher.getSocket (SocketFetcher.java:189)
  at com.sun.mail.pop3.Protocol.<init> (Protocol.java:94)
  at com.sun.mail.pop3.POP3Store.getPort (POP3Store.java:214)
  at com.sun.mail.pop3.POP3Store.protocolConnect (POP3Store.java:157)
  ... 7 more
```

## EIM is not even getting the emails. Is it configured properly?

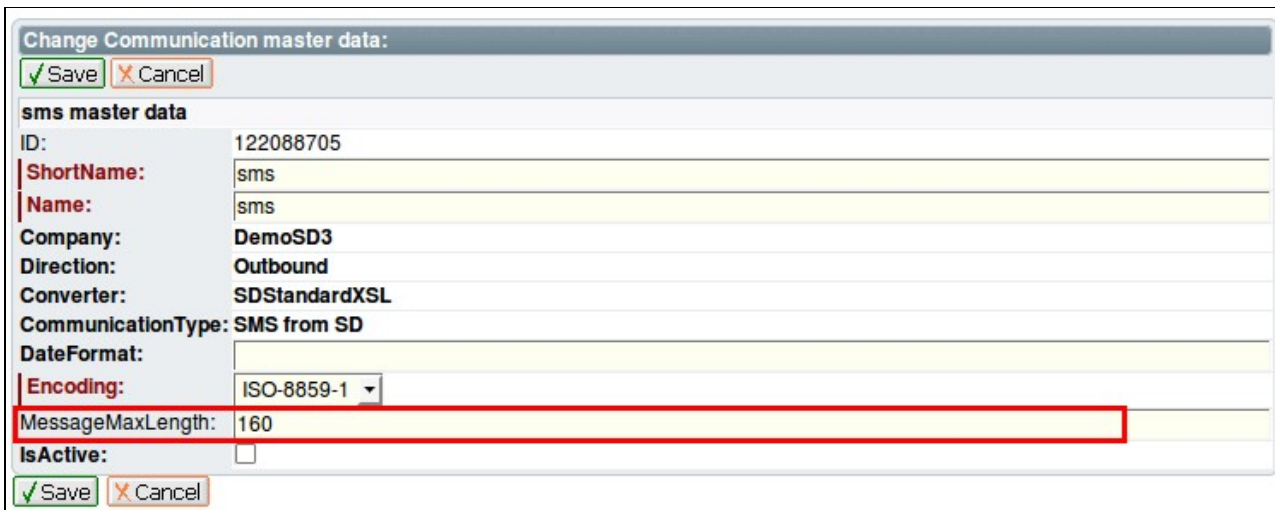
Each "alias" in EIM must be associated with a Retriever instance. This is how the Retriever knows what emails to pull when it connects to the mail server. Ensure that your alias is associated through the Administration Console. Note that any changes made here will require a restart of the Retriever instance.



## Network Connectivity with Mail Server

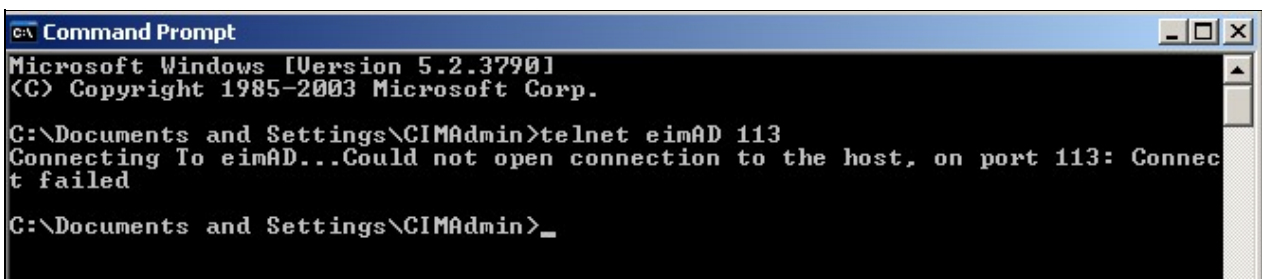
### Ping

Let's first try the obvious: can you ping the mail server? Since the Retriever process runs on the Services Server, run the ping from there.



### Telnet 113

Basic network connectivity is fine. What about port 113? Try to telnet to it from the Services Server.

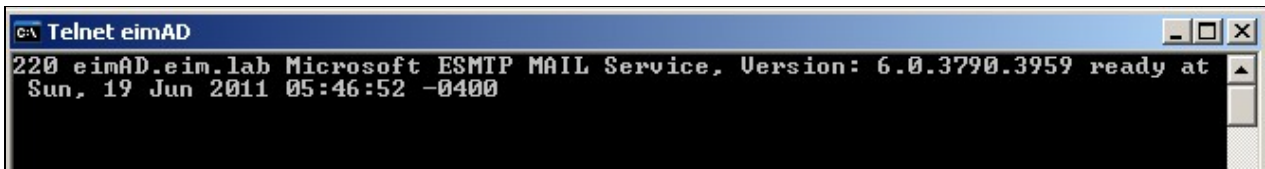


### Telnet 25

Something is wrong with port 113. Can you reach port 25?

EIM is not even getting the emails. Is it configured properly?

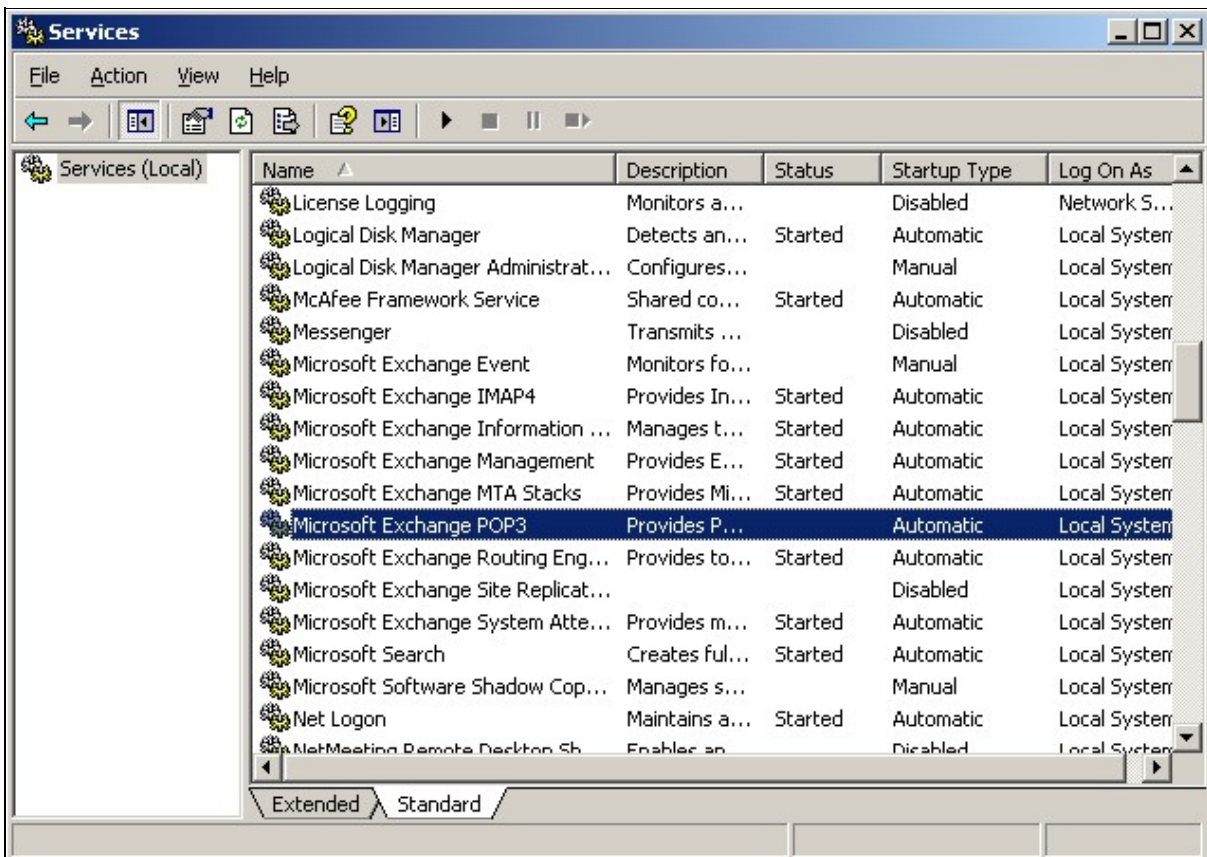
## Customer\_Emails\_Not\_Being\_Retrieved



Something is wrong with the POP3 server on port 113. (Note: This is assuming you've verified that the customer is using POP3 and not IMAP, which would typically be port 143).

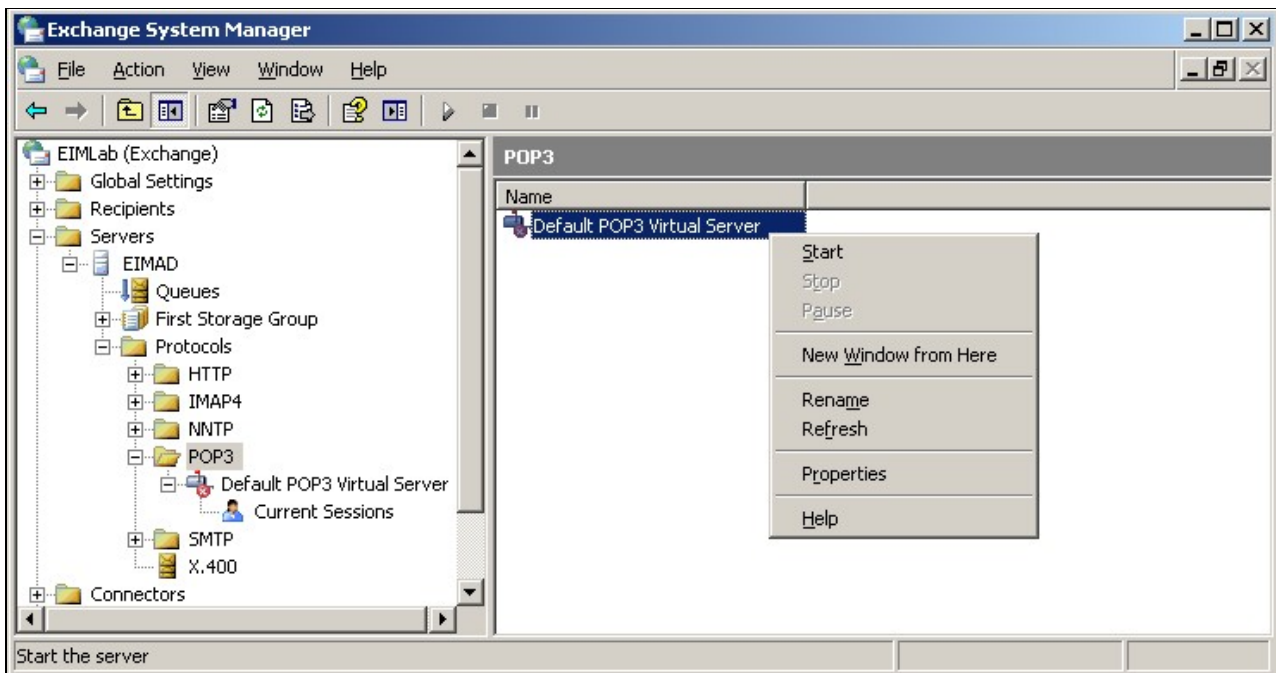
### Email Server Config

Check the status of your POP3 Service: is it running?



This can also be seen from the Exchange System Manager and started from there.

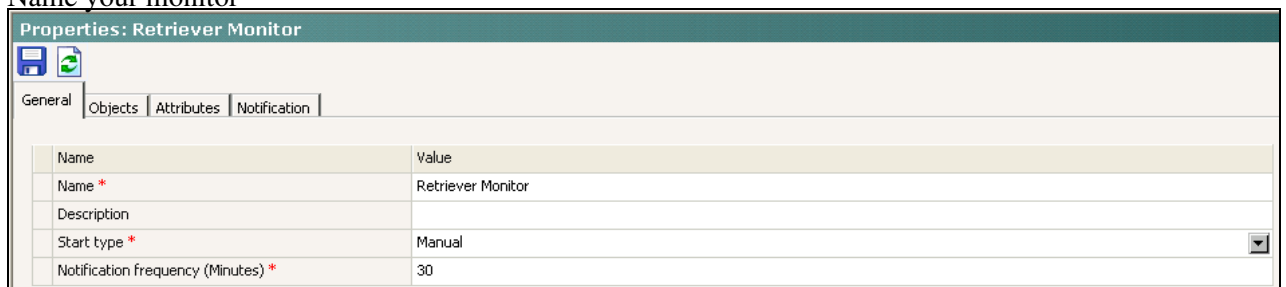
## Customer\_Emails\_Not\_Being\_Retrieved



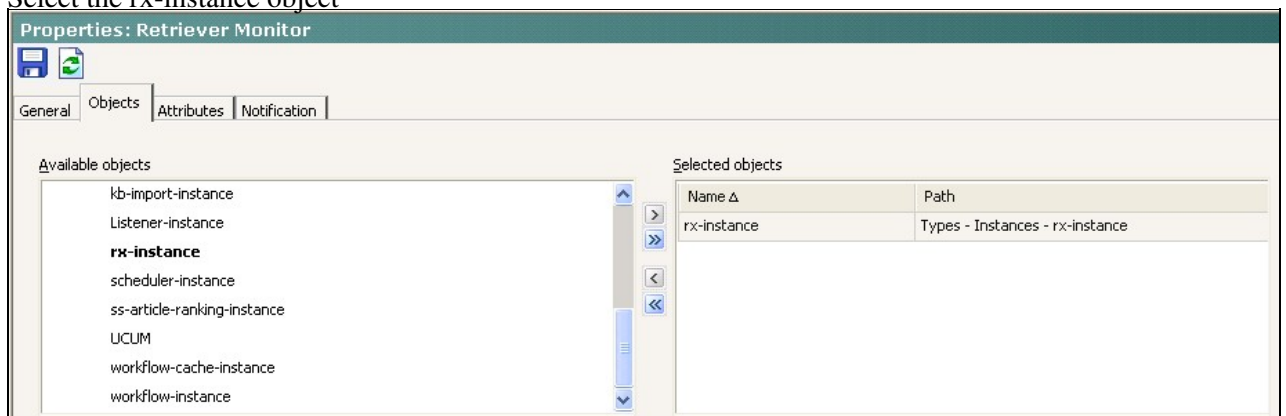
### Still no emails?

Your POP3 server is fixed and running, but the emails are still not entering the database and being routed to agents. What is the Retriever doing? Log in as PA and set up a System Monitor for the Retriever Process from the System Console.

#### 1. Name your monitor



#### 2. Select the rx-instance object

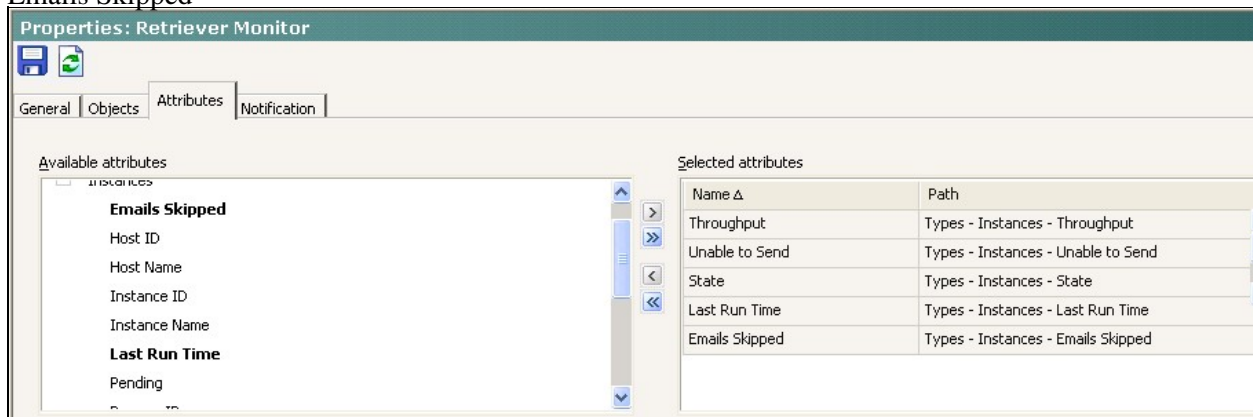


#### 3. Select the attributes:

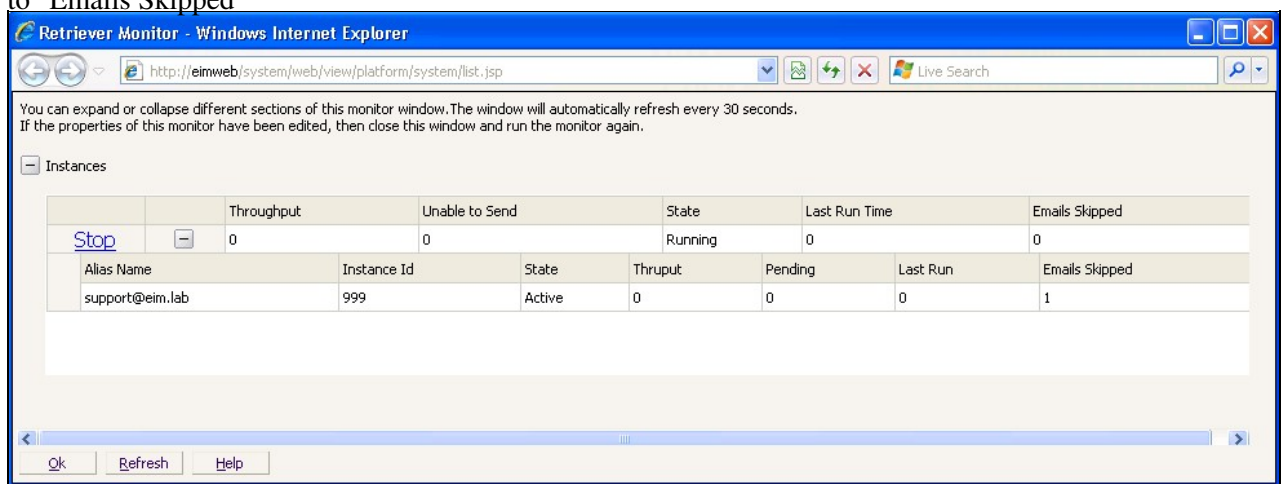
1. Throughput
2. Unable to Send

## Customer\_Emails\_Not\_Being\_Retrieved

3. State
4. Last Run Time
5. Emails Skipped



4. Save, then Run your monitor. You see the mail initially pegged under "Pending" before transitioning to "Emails Skipped"



## Why is the Retriever skipping the email?

The logs bring clarity to this condition. The Retriever sees the email but considers it a "Large Email."

```
2011-07-13 16:35:45.514 GMT-0400 <&> INFO <&> [75:RxInstance id : 999] <&> ProcessId:7108 <&> PID:
2011-07-13 16:35:45.514 GMT-0400 <&> INFO <&> [75:RxInstance id : 999] <&> ProcessId:7108 <&> PID:
2011-07-13 16:35:45.530 GMT-0400 <&> INFO <&> [75:RxInstance id : 999] <&> ProcessId:7108 <&> PID:
2011-07-13 16:35:48.295 GMT-0400 <&> INFO <&> [75:RxInstance id : 999] <&> ProcessId:7108 <&> PID:
2011-07-13 16:35:48.295 GMT-0400 <&> INFO <&> [75:RxInstance id : 999] <&> ProcessId:7108 <&> PID:
2011-07-13 16:35:49.077 GMT-0400 <&> WARN <&> [75:RxInstance id : 999] <&> ProcessId:7108 <&> PID:
2011-07-13 16:35:49.077 GMT-0400 <&> WARN <&> [75:RxInstance id : 999] <&> ProcessId:7108 <&> PID:
2011-07-13 16:35:49.092 GMT-0400 <&> INFO <&> [75:RxInstance id : 999] <&> ProcessId:7108 <&> PID:
```

## Mail Criteria - Size

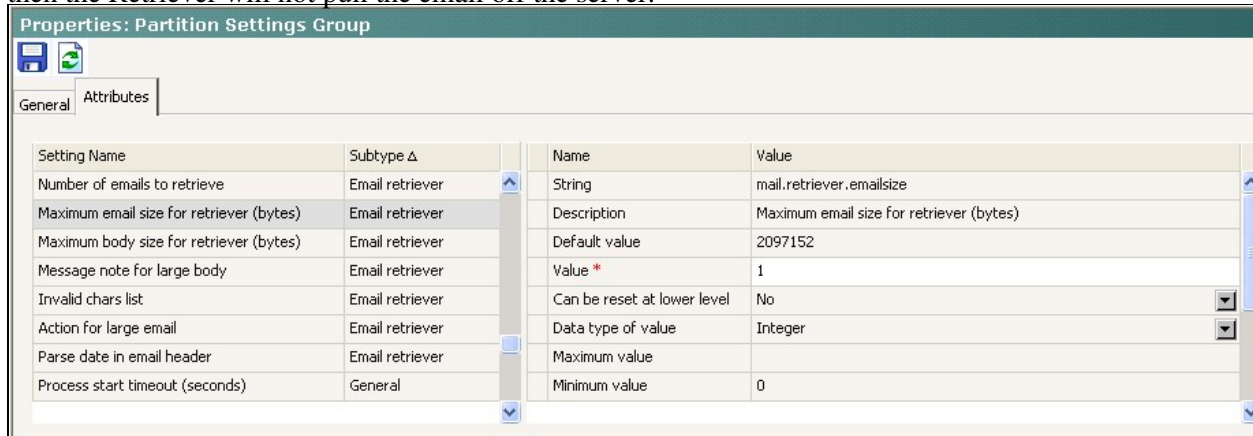
One restriction placed on emails coming in to the system is size. Administrators can configure the maximum email and body size of emails being processed. **Note: The Retriever Instance must be restarted for these changes to take effect.**

- "Maximum email size for retriever (bytes)" **WILL** prevent an email from arriving. Emails exceeding this limit will not be retrieved from the mail server.

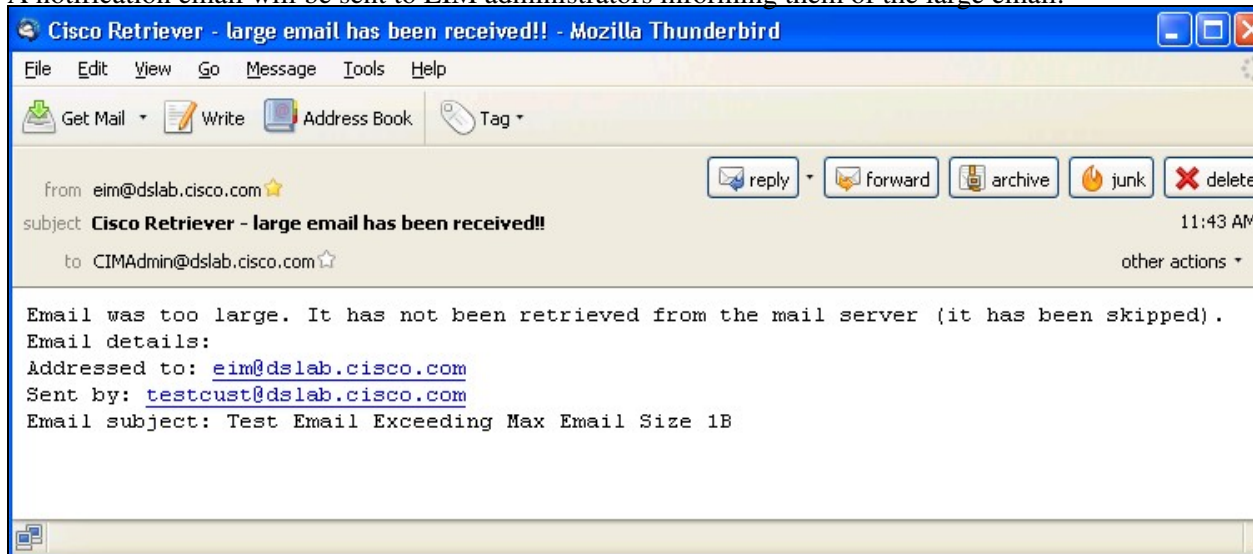
Still no emails?

## Customer\_Emails\_Not\_Being\_Retrieved

- ◆ For example, if a 5MB email is on the server, and the Maximum Email Size is set to 2MB, then the Retriever will not pull the email off the server.



A notification email will be sent to EIM administrators informing them of the large email.



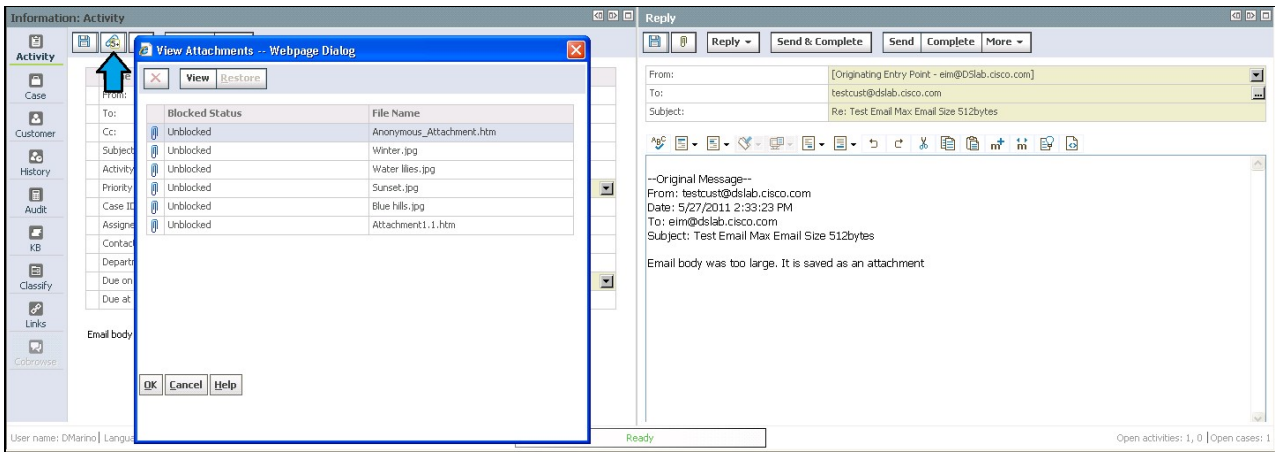
- In this scenario, we can see that our "Maximum email size for retriever" is incorrectly set to 1 byte. Log in as PA to reset this to a more reasonable value such as the default of 2097152 bytes, and restart the Retriever Instance.
- **Log in as an agent and go ready for other channels to receive your email.**

## Email Arrives at Agent without a body!

Emails are finally being pulled off the mail server, but the body appears to agents as "Email body was too large. It is saved as an attachment." Agents must click the "View Attachments" button to open the email in a new window.



## Customer\_Emails\_Not\_Being\_Retrieved

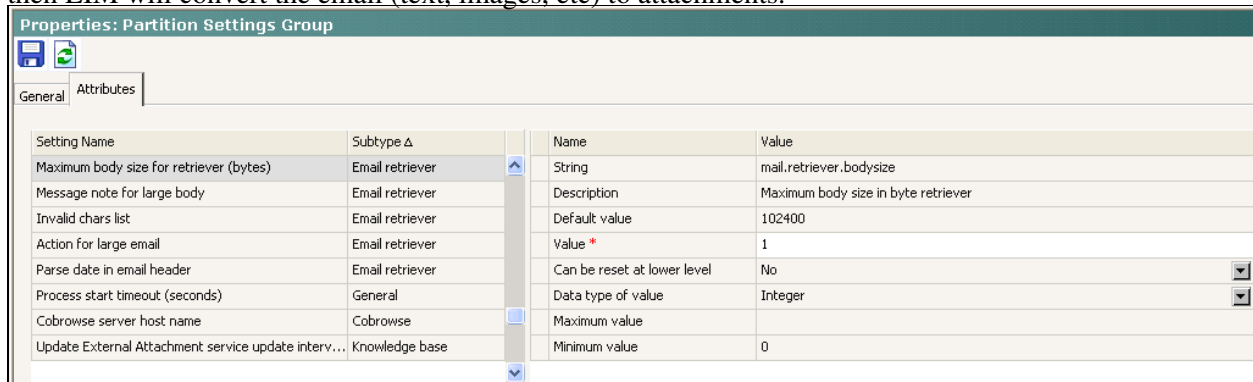


The Retriever logs show a different warning message, this time stating that the content is too large:

```
2011-07-13 16:43:12.353 GMT-0400 <> WARN <> [75:RxInstance id : 999] <> ProcessId:7108 <> PID:
```

We have another configuration item to check.

- "Maximum body size for retriever (bytes)" will **NOT** prevent an email from arriving. It will simply take a large-body email and convert it to an attachment.
  - ◆ For example, if a 100KB email comes in, and the Maximum Body Size is set to 512 bytes, then EIM will convert the email (text, images, etc) to attachments.



- In this scenario, we can see that our "Maximum body size for retriever" is incorrectly set to 1 byte. Log in as PA to increase this (default 102400 bytes) to allow email bodies to show in the reply pane, and restart the Retriever Instance.

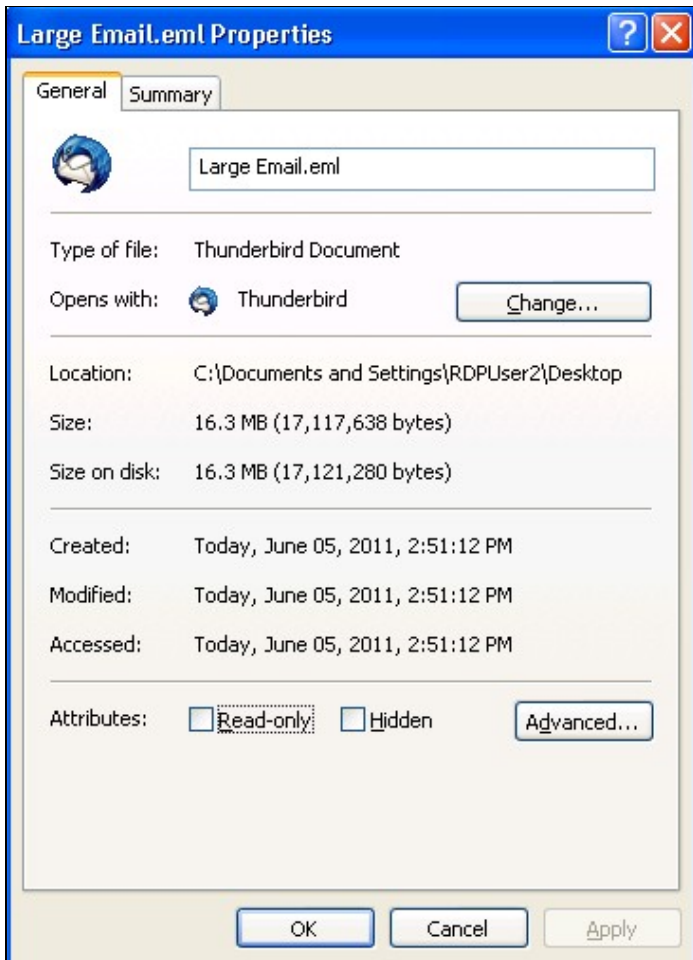
## How High is Too High?

Note that setting the body and email sizes too high may cause issues with the Retriever process. For example, assume the Max Email and Max Body sizes were both set to 300097152 bytes.

An extremely large text email could cause the Retriever's java process to crash. In the below example, we can see that a 16.3MB text email has singlehandedly brought down the Retriever process.



## Customer\_Emails\_Not\_Being\_Retrieved



```
2011-06-05 14:51:17.077 GMT-0400 <@> INFO <@> [66:RxInstance id : 999] <@> ProcessId:2304 <@> PID:
2011-06-05 14:51:17.077 GMT-0400 <@> INFO <@> [66:RxInstance id : 999] <@> ProcessId:2304 <@> PID:
2011-06-05 14:51:17.155 GMT-0400 <@> INFO <@> [66:RxInstance id : 999] <@> ProcessId:2304 <@> PID:
2011-06-05 14:51:17.155 GMT-0400 <@> INFO <@> [66:RxInstance id : 999] <@> ProcessId:2304 <@> PID:
2011-06-05 14:51:17.921 GMT-0400 <@> WARN <@> [66:RxInstance id : 999] <@> ProcessId:2304 <@> PID:
2011-06-05 14:51:24.640 GMT-0400 <@> ERROR <@> [66:RxInstance id : 999] <@> ProcessId:2304 <@> PID:
java.lang.OutOfMemoryError: Java heap space
    at java.lang.AbstractStringBuilder.expandCapacity(AbstractStringBuilder.java:99)
    at java.lang.AbstractStringBuilder.append(AbstractStringBuilder.java:393)
    at java.lang.StringBuilder.append(StringBuilder.java:120)
    at com.egain.mail.module.retriever.Parse.parseTextPart(Parse.java:1196)
    at com.egain.mail.module.retriever.Parse.dumpPart(Parse.java:760)
    at com.egain.mail.module.retriever.Parse.parseEmail(Parse.java:347)
    at com.egain.mail.module.retriever.service.RxProcess.parseEmail(RxProcess.java:4345)
    at com.egain.mail.module.retriever.service.RxProcess.retrieveMailsForHost(RxProcess.java:1386)
    at com.egain.mail.module.retriever.service.RxProcess.retrieveMails(RxProcess.java:1386)
    at com.egain.mail.module.retriever.service.RxInstance.startInstance(RxInstance.java:114)
    at com.egain.platform.framework.dsm.common.ThreadPool$PoolThread.run(ThreadPool.java:112)
```

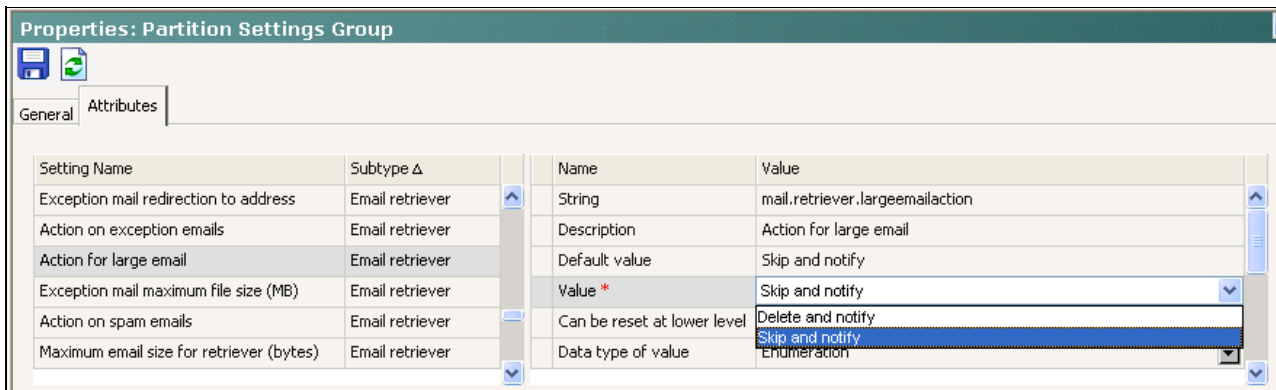
Note that the retriever process will automatically restart, but will not attempt to pull that mail again by default.

```
2011-06-05 15:06:24.155 GMT-0400 <@> INFO <@> [47:RxInstance id : 999] <@> ProcessId:2364 <@> PID:
2011-06-05 15:06:24.155 GMT-0400 <@> INFO <@> [47:RxInstance id : 999] <@> ProcessId:2364 <@> PID:
2011-06-05 15:06:24.218 GMT-0400 <@> INFO <@> [47:RxInstance id : 999] <@> ProcessId:2364 <@> PID:
2011-06-05 15:06:24.218 GMT-0400 <@> INFO <@> [47:RxInstance id : 999] <@> ProcessId:2364 <@> PID:
2011-06-05 15:06:24.608 GMT-0400 <@> INFO <@> [47:RxInstance id : 999] <@> ProcessId:2364 <@> PID:
```

How High is Too High?

## Customer\_Emails\_Not\_Being\_Retrieved

Also note that EIM's action on large emails can be changed to delete instead of skip from the Administration Console:



## Resolution

In this scenario we focused on the troubleshooting required when emails are not being pulled into EIM.

- Issues with POP3 server (note: the same logic could be applied to IMAP servers, with different port numbers)
- Maximum Email Size configured on EIM preventing message retrieval
- Maximum Body Size configured on EIM preventing display of messages in Agent Console's reply pane