E-mail Server Administration Guide

Genesys Engage Email 8.5.0

1/23/2022

Table of Contents

E-mail Server Administration Guide

This section provides information for administrators regarding E-mail Server. In addition to the topics on this page, there is also information on the following:

- How E-mail Server uses JavaMail properties.
- The types of notification of delivery status and message disposition.
- How to customize the e-mails from external resources.

See also information, applying to both UCS and E-mail Server, on mixing IPv6 and IPv4 and on running the server as a Windows Service with TLS.

Limitations

- Attachments—There is no limit on the size of attachments to e-mails. You can use the `maximum-msg-size` option to limit the overall size of incoming messages (that is, the total size of all message parts, including the body and any attachments).
- UCS:
  - E-mail Server 8.1.2 can work only with UCS 8.1.1 or later (however UCS 8.1.1 can work with any version of E-mail Server).
  - E-mail Server 8.1.3 or later can work only with UCS 8.1.3 or later.

Note on Deleting Interactions in Strategies

In its requests to UCS, E-mail Server provides parameters for tenant ID, Interaction type, Interaction subtype, status, and parent ID.

Therefore, when E-mail Server updates threaded interactions in UCS, the parent interaction must still exist in the UCS database. For example, in the case of a chat interaction and a chat transcript being sent, the parent must not be deleted before E-mail Server successfully sends the transcript.

In versions prior to 8.1.400.10, when E-mail Server sent an e-mail, it incorrectly updated the corresponding interaction in the UCS database. This incorrect update prevented statistics from being computed correctly.

List of Attached Files

Starting in release 8.1.0, inbound e-mails can include an attached data type `_AttachmentFileNames`, which contains a list of the names of files attached to the inbound e-mail.

Handling Unparsable E-Mails

If E-mail Server is unable to parse an incoming e-mail, it creates a new e-mail interaction (a "wrapping message") with the following characteristics:

- The header is the same as the header of the original, unparsable e-mail.
  - If the header of the original e-mail is unparsable, the subject of the new interaction is `Unknown subject.`
  - If the From address of the original e-mail is not valid, the From address of the new interaction is `unknown@<default_domain>`, where <default_domain> is the domain specified by the `default_domain` configuration option of the E-mail Server application.
- The text of the new interaction is `Error encountered during preprocessing of this message + <reason_for_failure> + Original Incoming Email is attached to this Email.`
- The original e-mail is attached to the new e-mail.
- The new e-mail has an attached key-value pair, whose key is `_WrappingMessageReason` and whose value is a text string that describes the reason for creating the wrapping message.

Connection Information

This page documents general connection information for E-mail Server.

Connecting to Exchange Server with EWS

Starting in release 8.1.4, E-mail Server can connect to an Exchange Server running Exchange Web Services (EWS). By connecting to the corporate server using an HTTP connection, you gain flexibility in getting through the firewall, as HTTP ports are often already opened.

To do this, use the following options settings:

pop-client Section

Option Name	Setting
type	ews (new possible value in 8.1.4)
folder-path (new in 8.1.4)	(empty) The key must be present.
port	The port used for EWS. Common values are 80 for unsecured connections and 443 for secured connections
server	EWS url (see "Finding the EWS URI" below).
mailbox	User's adress, for example, JeffP@contoso.com

smtp Section

Option Name	Setting
server-type (new in 8.1.4)	ews
server	EWS url (see "Finding the EWS URI" below). For example, https://owa.example.com/ews/exchange.asmx

> **Important**
>
> The `pop-connection-security` and `smtp-connection-security` options have no effect when used with EWS. Secured or non-secured connection are used depending on the server's configuration. The connection is automatically done and negotiated using Apache's HTTP client, which handles TLS negotiation if needed.

Finding the EWS URI

Most of the time the EWS is published together with the OWA: If the OWA-URL is for example https://owa.example.com/owa, EWS is available at https://owa.example.com/ews/exchange.asmx. The EWS-URL can be tested in any browser (except Internet Explorer). The request should be

forwarded to https://example.com/ews/Services.wsdl and a WSDL should be sent to the browser.

Specifying the **From** Header

When using the `Forward` object in a routing strategy, or any method that can specify a user to go in the **From** header, the corporate e-mail server might refuse to send the e-mail. To avoid this, you can configure the corporate server to allow sending e-mails on behalf of another user.

Here is an example for Microsoft Exchange using PowerShell:

```
Add -ADPermission "Bruce Wayne" -User "gotham\selinaK" -Extendedrights "Send As"
```

This allows selinaK to send e-mails on behalf of the user "Bruce Wayne."

Customizing E-mail Server

List of Forbidden Headers

E-mail Server does not allow certain headers to be added to outbound e-mail. These excluded headers are listed in the file `com/genesyslab/icc/emailserver/ForbiddenHeaders.properties`, contained in `esj.jar`, which is normally located in `\GCTI\eServices 8.1.0\E-mail Server Java\<E-Mail Server Application name>\lib`.

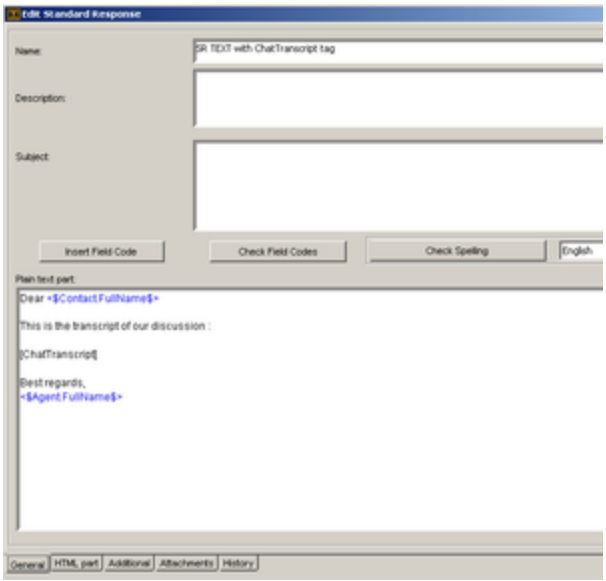
You can modify this list by extracting `ForbiddenHeaders.properties` to the `<E-Mail Server Application name>` directory, then editing the content. E-mail Server will then use this modified file. If there is no such file in the `<E-Mail Server Application name>` directory, E-mail Server uses the one in `esj.jar`.

Customizing the Format of External Resource E-mails

E-mails from external resources are received in plain text format. You can customize the format in which these e-mails are presented.

Chat Transcripts

Ordinarily when including the transcript of a chat session in an e-mail, the transcript is appended to the end of the e-mail. To insert the transcript somewhere else, place the tag [ChatTranscript] where you want the transcript to appear. You can do this in the plain text or the HTML version or both. The following figure shows an example (click to enlarge).



Chat Transcript Tag in Standard Response

JavaMail Properties

E-mail Server uses the JavaMail API library 1.4. JavaMail can make use of numerous properties, which are documented at the following locations:

- Environment properties: http://www.oracle.com/technetwork/java/javamail-1-149769.pdf (Appendix A: Environment Properties)
- JavaMail Session properties: https://javamail.java.net/nonav/docs/api/
- JavaMail Session properties for IMAP: https://javamail.java.net/nonav/docs/api/com/sun/mail/imap/package-summary.html
- JavaMail Session properties for POP3: https://javamail.java.net/nonav/docs/api/com/sun/mail/pop3/package-summary.html

These properties are treated in different ways in eServices, depending on

- Whether they are set internally by E-mail Server.
- Whether they can be modified by users.

These two parameters define three different categories of property:

- Set internally and not user-modifiable
- Set internally and user-modifiable
- Not set internally and user-modifiable

The next three sections list the properties in each category and describe how to set the ones in user-modifiable categories.

Set Internally, Not User-Modifiable

- mail.pop3.class
- mail.imap.class

Set Internally, User-Modifiable

- mail.debug
- mail.pop3.host
- mail.pop3.user
- mail.pop3.port

- mail.pop3.connectiontimeout
- mail.pop3.timeout
- mail.pop3.socketFactory.class
- mail.pop3.socketFactory.fallback
- mail.pop3.socketFactory.port
- mail.imap.host
- mail.imap.user
- mail.imap.port
- mail.imap.connectiontimeout
- mail.imap.timeout
- mail.imap.socketFactory.class
- mail.imap.socketFactory.fallback
- mail.imap.socketFactory.port

You can modify these using existing configuration options, as shown in the following table. In this table, <protocol> is either POP3 or IMAP; for example, mail.<protocol>.timeout covers `mail.pop3.timeout` and `mail.imap.timeout`. JavaMail Properties Controlled by Configuration Options

JavaMail Property	Configuration Option
mail.debug	enable-debug
mail.<protocol>.connectiontimeout	connect-timeout
mail.<protocol>.timeout	protocol-timeout
mail.<protocol>.user	mailbox
mail.<protocol>.host	server
mail.<protocol>.port mail.<protocol>.socketFactory.port	port
mail.<protocol>.socketFactory.class mail.<protocol>.socketFactory.fallback	enable-ssl

See the eServices 8.1 Reference Manual for complete information on these options.

Not Set Internally, User-Modifiable

Any of the properties not listed in the two preceding sections can be modified by creating options in E-mail Server's `pop-client` section. The option name is the property name. For the value, see the JavaMail documentation listed above.

> **Important**
>
> Do not use this method to modify the properties, listed in the preceding section, that are controlled by configuration options.

Here is an example of adding an option to modify a JavaMail property: Some POP3 servers do not properly implement TOP, an optional POP command. This can create conflicts between the results of the TOP and RETR commands, which in turn can prevent E-mail Server from parsing the retrieved e-mail. To prevent these conflicts, you can create an option that invokes JavaMail's mail.pop3.disabletop property. The option name is `mail.pop3.disabletop`, it must be in the pop-client section, and its value must be `true`. E-mail Server then does not use TOP to retrieve messages, only RETR.

Delivery Status Notification and Message Disposition Notification

Outbound e-mails can include a request for a return message indicating whether and how the original e-mail was delivered. In Genesys eServices, you do this using the Send `Email` object in a routing strategy, as described in the Universal Routing 8.1 Reference Manual. The return message is of one of the following three types:

- If delivery fails: InboundNDR
- If delivery succeeds:
  - InboundReport
  - InboundDisposition

These types are represented as attribute values of the `Interaction Subtype` Business Attribute in Configuration Manager. E-mail Server assigns the return message to the appropriate type, and UCS stores it as a child of the outbound e-mail that contained the request.

The following sections describe each type and its contents.

InboundNDR

If one of the SMTP servers involved in the transport of the original e-mail fails to deliver it, E-mail Server submits the return message to the system with subtype `InboundNDR` (NDR stands for non-delivery report). There are two ways that E-mail Server can detect an inbound e-mail as an NDR:

RFC 3464

For this way, both of the following must be true:

- The e-mail conforms to RFC 3464, which means that it includes information about delivery status.
- That information indicates that delivery failed for at least one recipient.

In this case, E-mail Server submits the e-mail to the system with attached data.

Message Parts

For this way, all of the following must be true:

1. The e-mail contains either a `message/rfc822` part or a `message/rfc822-headers` part.
2. The part referred to in (1) contains a `Message-ID header.`
3. One of the following must be true:

- The e-mail's From field contains one of the values specified in the E-mail Server `ndr-senders-list` option (the default is `mailer-daemon,postmaster,mmdf`).
- The `Message-ID` header referred to in (2) matches the message ID of some interaction already stored in the UCS database.

In this case, E-mail Server submits the e-mail to the system with no particular attached data. The subtype InboundNDR indicates the failure of delivery; the message itself contains no additional information.

Structured Information

When E-mail Server attaches data to the inbound interaction, it is of two kinds. The first kind, structured information, is listed in the following table.

Key	Possible Values	Description
_DSNInfo.RecipientCount	Any integer	Number of recipient addresses covered in this DSN
_DSNInfo.Recipient1.Recipient	Any string	Recipient address
_DSNInfo.Recipient1.Action	delayed delivered expanded failed relayed	Action applied for this recipient
_DSNInfo.Recipient2.Recipient	Same as _DSNInfo.Recipient1.Recipient	
_DSNInfo.Recipient2.Action	Same as _DSNInfo.Recipient1.Action	
_DSNInfo.RecipientN.Recipient	Same as _DSNInfo.Recipient1.Recipient	
_DSNInfo.RecipientN.Action	Same as _DSNInfo.Recipient1.Action	

In RecipientN in the last two rows of the preceding table, N is the value of `_DSNInfo.RecipientCount:` the number of recipients covered in this InboundReport.

> **Important**
>
> A non-delivery report may arrive even if the outbound e-mail did not request it. If it does, E-mail Server still submits it to the system with the subtype InboundNDR.

Raw Information

The second kind of information that E-mail Server attaches is raw information. That is, all information included in the reply e-mail's header is attached as key-value pairs, with the key name formed by prefixing `_DSNRawInfo` to the field name used in the reply. Some examples are:

```
_DSNRawInfo.Reporting-MTA
_DSNRawInfo.RecipientCount
_DSNRawInfo.Recipient1.Original-Recipient
_DSNRawInfo.Recipient1.Action
_DSNRawInfo.Recipient1.Status
_DSNRawInfo.Recipient1.Remote-MTA
```

`_DSNRawInfo.Recipient2.Final-Recipient`

For details, see RFC 1894.

InboundReport

You request delivery status notification (DSN) by selecting the Delivery status notification box in a Send Email routing object. The reply to this request receives the subtype InboundReport. This reply conforms with RFC 1894, and includes, as attached data:

- The structured information listed in Table 21 on page 203.

  Note that if the _DSNInfo.RecipientN.Action key has a value of failed, E-mail Server assigns the reply the subtype InboundNDR, not InboundReport.

- The raw information contained in the keys whose names start with _DSNRawInfo, as described in the previous section.

> **Important**
>
> Depending on the implementation of the SMTP servers involved, there are the following possibilities:
>
> - Individual DSN messages can be generated, each one related to one or several recipient addresses.
> - A single DSN message can be generated, related to one or several recipient addresses.

InboundDisposition

You request message disposition notification (MDN, also called read receipt) by selecting the `Message disposition notification` box in a `Send Email` routing object. The reply to this request receives the subtype `InboundDisposition`. This reply conforms with RFC 3798, and includes, as attached data, the information listed in the following table.

Key	Possible Values	Description
_MDNInfo.ActionMode	manual-action automatic-action	Mode of the action applied to the e-mail
_MDNInfo.DispositionType	displayed deleted	What was done with the e-mail
_MDNInfo.SendingMode	MDN-sent-manually MDN-sent-automatically	How the message disposition notification is being sent
_MDNInfo.Recipient	Any string	Recipient address covered by this

Key	Possible Values	Description
		message disposition notification

This reply is sent as long as all of the following conditions are met:

- It was requested in the outbound e-mail. This is independent of whether a delivery status notification was also requested.
- Delivery succeeded.
- Either of the following:
  - The recipient agreed to send the read receipt.
  - The recipient mailer was configured to automatically send read receipts.

In addition to the structured information listed in the preceding table, all information included in the reply e-mail's header is attached as key-value pairs, with the key name formed by prefixing `_MDNRawInfo` to the field name used in the reply. Some examples are:

- `_MDNRawInfo.Disposition`
- _MDNRawInfo.Final-Recipient
- _MDNRawInfo.Original-Message-ID
- _MDNRawInfo.Reporting-UA

For details, see RFC 3798.

Customizing the Format of External Resource E-mails

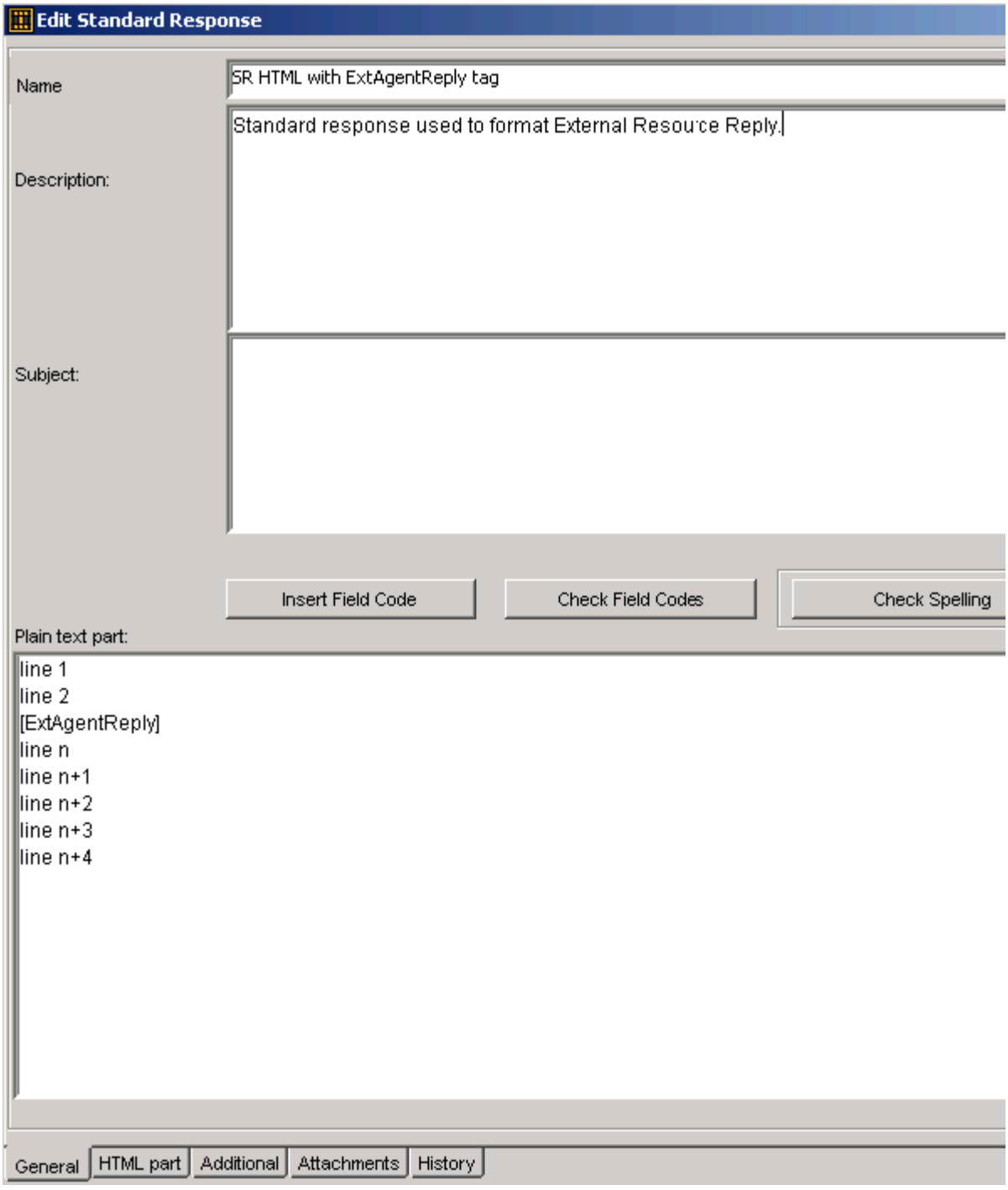
E-mails from external resources are received in plain text format. To customize the format in which these e-mails are presented, you must:

Create New Standard Response

Create a New Standard Response in Knowledge Manager

This standard response will be used to customize e-mails built by the `ResponseFromExtResource` service.

1. Create a new standard response in Knowledge Manager containing the tag [ExtAgentReply]. The following figure shows a sample plain-text version.



Standard Response for External Reply: General Tab

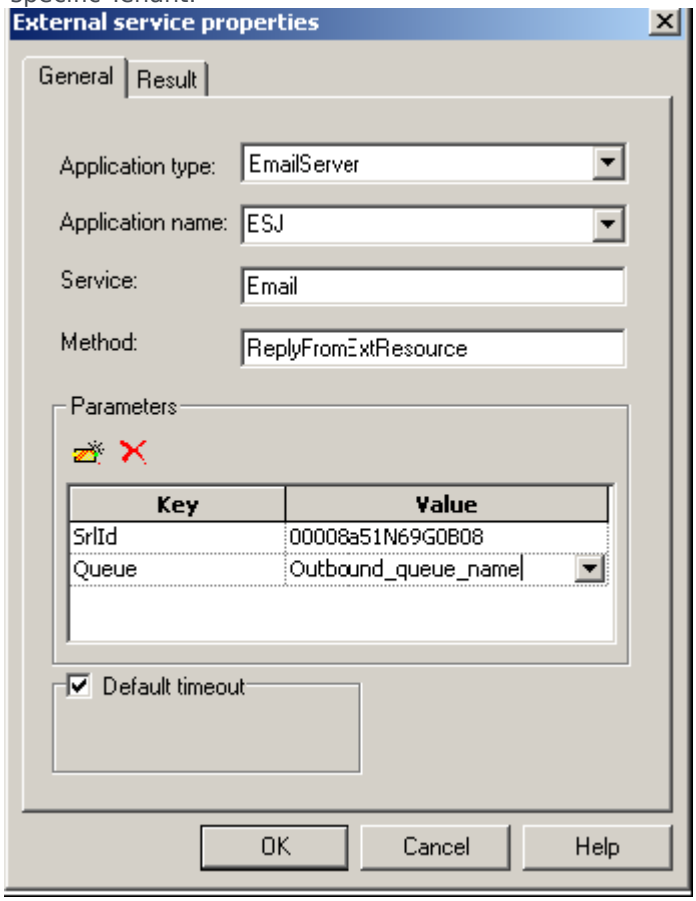
2. Optionally, use the HTML tab to create an HTML version.

Update the Strategy

Update the Strategy that Sends the Standard Response

You must add the standard response ID to the strategy. This provides the strategy with the standard response you wish to use for responses from external resources.

1. Log in to Interaction Routing Designer and open your strategy for editing.
2. In the strategy, create an `External Service` block to call the E-mail Server's `CreateReplyFromExtResource` service. See the figure below for an example.
3. On the `General` tab, enter the following values:
   `Application type: EmailServer`
   `Application name:` <name of your E-mail Server application>
   `Service: Email`
   `Method: ReplyFromExtResource`
4. In the `Parameters` section add two entries: `SrlId` and `Queue`.
5. For the `SrlId` parameter, the value is the ID of the standard response you created for external resource responses. You will locate the ID in the next procedure (Find the Standard Response ID).
6. For the `Queue` parameter, the value is the name of the queue upon which the strategy to send e-mails is loaded. The name of this queue can be found in Configuration Manager in the `Scripts` folder under the specific Tenant.



External Service Block Properties

> **Important**
>
> Additional optional parameters can be added. Refer to the Reply Email From External Resource block description in the Universal Routing 8.1 Reference Manual for more information.

7. Save and reload the modified strategy.

Find the Standard Response ID

Locate the standard response ID

This ID is needed to update the strategy to allow for the customization of e-mails built from the ReplyFromExtResource service.

1. In Configuration Manager, locate the standard response created in the Create New Standard Response procedure. Under your tenant, navigate to `Resources -> Business Attributes -> Category Structure-> Attribute Values.`
2. Locate your standard response and open it. The standard response ID appears in the `Name` field but it is not possible to copy it from here.
3. Click the `Annex` tab.
4. In the `General` section double-click the `Id` option.
5. The option value is the standard response ID. Copy the option value.