

Oracle® eMail Center

Implementation Guide

Release 11*i*

November 2000

Part No. A86113-03

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Preface

Welcome to the Oracle Customer Relationship Management, Release 11i, suite of applications.

This Implementation Guide provides information and instructions to help you effectively implement Oracle Email Center.

This preface explains how the Implementation Guide is organized and introduces other sources of information that can help you.

Intended Audience

This guide is aimed at the following users:

- Anyone implementing Oracle eMail Center

This guide assumes you have the following prerequisites:

- Understanding of the company business processes
- Knowledge of products and services as defined by your marketing policies
- Basic understanding of Oracle

Structure

This guide contains the following sections:

- eMail Center Overview
- Application Architecture
- Email Processing

- Planning the Implementation
- Integration Dependencies
- Installation
- Implementation
- Troubleshooting
- Abbreviations
- Glossary
- Related Documentation and Resources

Related Documents

For more information, see the following manuals:

- *Oracle Email Server Installation and Configuration Guide*
- *Oracle Email Server Implementation Guide*

Implementing Oracle eMail Center

This document contains the following sections:

- eMail Center Overview
- Application Architecture
- Email Processing
- Planning the Implementation
- Integration Dependencies
- Installation
- Implementation
- Troubleshooting
- Abbreviations
- Glossary
- Related Documentation and Resources

eMail Center Overview

Oracle eMail Center is a complete solution for managing both inbound and outbound email interactions with customers, partners, suppliers, employees and other entities that interact with an organization.

Incoming email can be broadly categorize into structured and unstructured types. Structured emails are created by filling out a form or a template, it can be any text template or an HTML form on the WWW. Unstructured emails are typical, free form text messages.

Oracle eMail Center invokes appropriate, customizable processes that are targeted to handle different types of inbound email interactions. Workflow processes are setup to automatically resolve inbound structured email. Unstructured inbound email is passed through Oracle interMedia Text processing to determine the intent of the message. Workflow processes are then setup to attempt automatic resolution of these interactions based on the message intent/classification. Inbound interactions that cannot be automatically resolved are routed to the appropriate human agent in the Interaction Center using both rule and skill based routing schemes.

Once an email message gets to an agent, the eMail Center provides tools and capabilities to maximize agent productivity and effectiveness by providing fully-formed suggested responses for inbound emails and a high-performance point-and-click agent interface that minimizes the need for typing, includes a spellchecker, and the ability to attach or insert appropriate documents. Oracle eMail Center allows storage and retrieval of documents, URLs and images from Marketing Encyclopedia System (MES). eMail Center also allows interMedia text queries on both the Marketing Encyclopedia System (MES) and the Solution Management System (SMS) knowledge bases.

In addition to managing inbound email interactions, eMail Center provides capabilities to initiate and manage outbound interactions. System generated or external application generated notifications can be automatically sent as emails, whose format adheres to all the business practices configured into the system.

Email-based sales, marketing, and advertising campaigns can also be executed. Oracle eMail Center can process campaign lists, expand the campaign content material, add tracking tags, and send personalized emails to addresses in the list.

Abbreviations

API - Application Programming Interface

CRM - Customer Relationship Management

eMC - Email Center

HTML - Hyper Text Markup Language

IEM - Product code for eMail Center

IH - Interaction History

IMAP - Internet Messaging Access Protocol

JMA - Java Mail API

JSP - Java Server Pages
JTF - CRM Foundation Layer
KB - Knowledge Base
KMS - Knowledge Management Systems
MES - Marketing Encyclopedia System
NLS - National Language Support
OES - Oracle Email Server
OTM - Oracle Telephony Manager
SMS - Solution Management System
SMTP - Simple Mail Transport Protocol
URL - Universal Resource Locator
UWQ - Universal Work Queue
WWW - World Wide Web

Application Architecture

The following main components comprise Oracle eMail Center:

Agent Interface

A Java Server Pages (JSP) based application that runs on the agent interface in a browser. The supported browser is Microsoft Internet Explorer 5.0 and higher. It utilizes two Java Applets, an editor applet that allows the user to compose messages and select the font, color, formatting, etc., and it also allows importing of images (both .gif and .jpg files) and the second is a hidden applet, which maintains a connection with the Universal Work Queue Selector. This applet allows the exchange of information between eMC and UWQ.

System Administration Interface

A Java Server Page (JSP) based graphical user interface allows defining, viewing, monitoring and controlling system behavior.

Operations Manager Interface

A Java Server Page (JSP) based graphical user interface allows authorized interaction center domain experts (operations managers) to configure operational rules or business practices for eMail Center and to specify business process attributes.

eMail Center Server

Is made up of a Java Server and a few database components. The Java server delivers information derived from an email message to the OTM server for routing and delivery to an appropriate agent(s). The main database component is the workflow based rules engine that process all inbound email messages. It can be customized to process emails based on different email parameters.

Oracle Email Server (OES)

Is the mail server. The emails here can be accessed through JMA – IMAP APIs or through PL/SQL APIs.

Database Configuration

Oracle Email Server and Oracle eMail Center can be configured to be installed on two separate database instances or on the same instance. Both configurations are supported.

Other Modules, Servers and Components

CRM Foundation Modules

eMail Center uses several features of the CRM Foundation product, such as the common MES (Marketing Encyclopedia System), Universal Work Queue, One-to-One Fulfillment, and Interaction History. Of these, MES facilitates the evaluation of unstructured email. The other features essentially integrate eMail Center with the agent interface and the rest of CRM.

Routing Server

Routes job items (telephony and email interactions) to agents and agent groups based on configurable skills and rules parameters.

OTM server

The Oracle Telephony Manager, holds the state of all the agents, and maintains the distribution queues for all interactions. These interactions include email, telephony,

faxes, and web calls. OTM drives the router (actually a server, too) to determine which agents are to receive an email or telephone call. OTM receives the email from eMail Center and sends it to the router.

The output of the router is a list of agents qualified to handle the interaction. Based on this list, OTM distributes the email. "Distribute" in this case means that it puts the email into the queue of an agent, or the queue of an agent group, that the router identified.

This process occurs once for every new email. Although many agents might see the email in their queue, only one agent will service the interaction. Upon delivering the email to an agent, OTM removes it from all other agent queues. When an agent selects the email from the queue, OTM fires an event to the agent interface. When this happens, the agent might see a screen pop with a subset of the information contained in the email interaction.

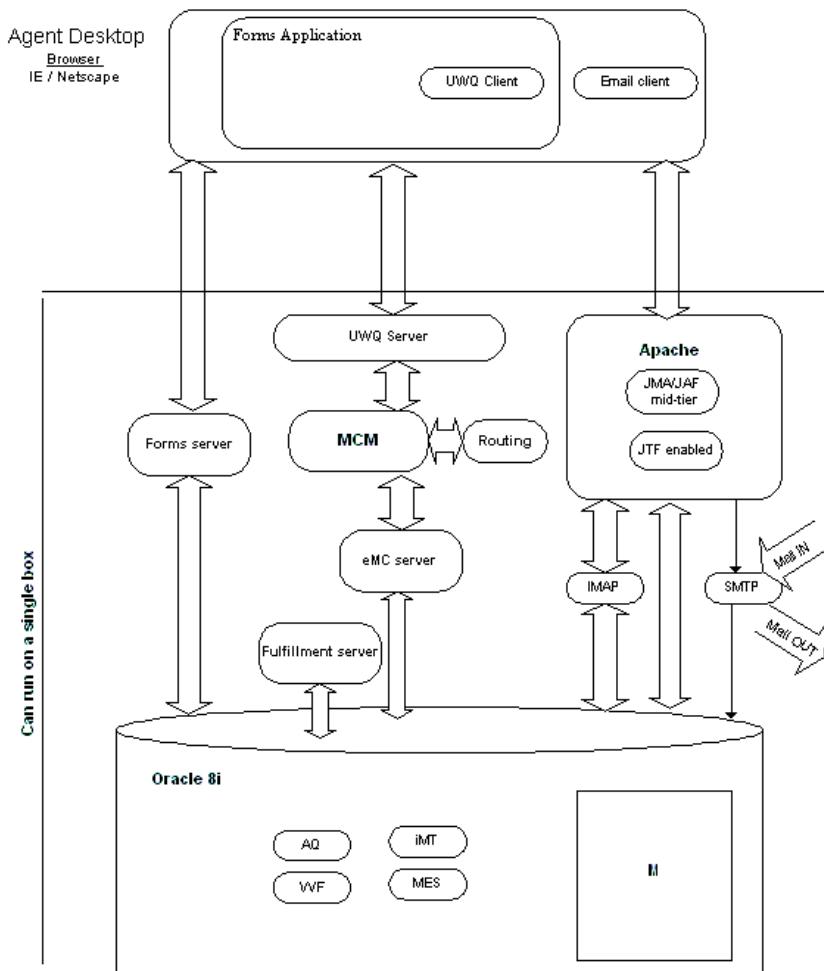
Apache server

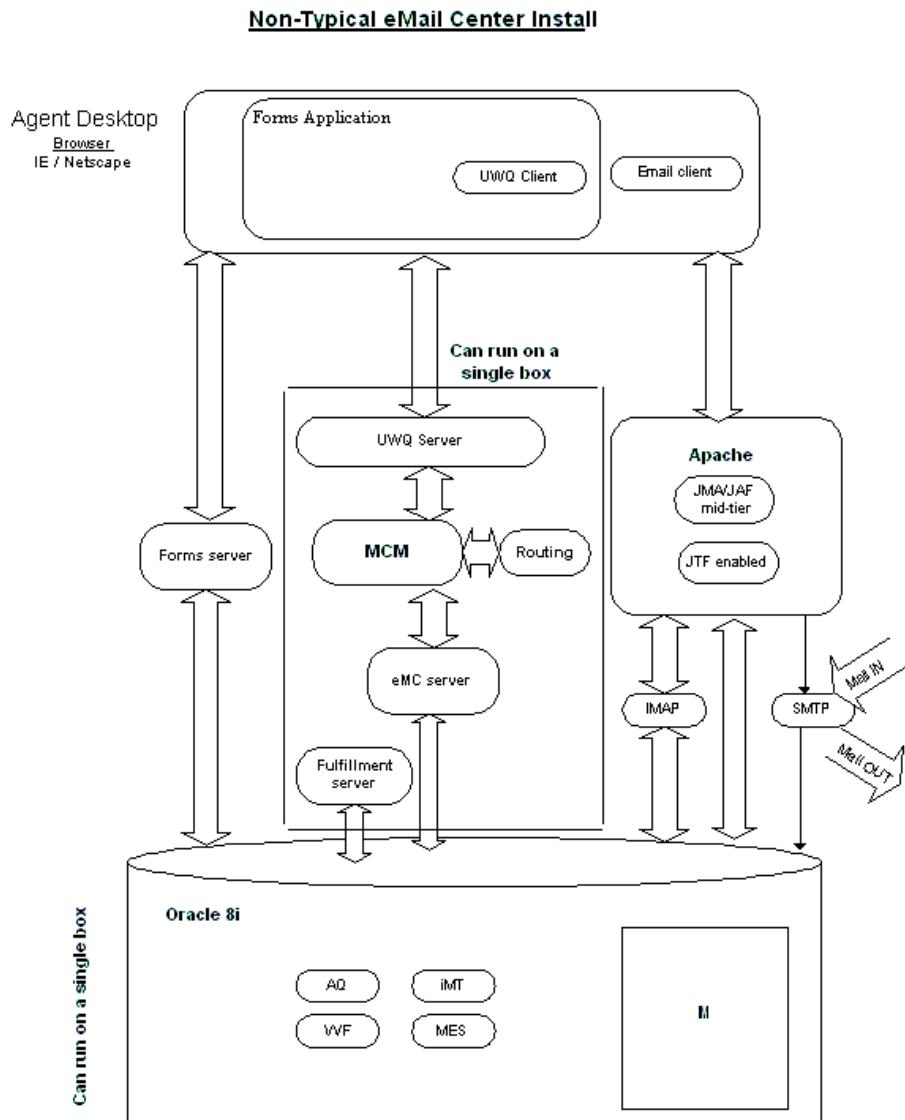
Apache is a third party product that handles HTML messages, such as email, between the source database and the agent interface. Some Oracle CRM and ERP products, such as Accounts Receivable, are forms driven. They require a forms server to interpret and display database information. Newer CRM products, like eMail Center, use HTML instead of forms. The Apache server and the internet browser work to display the information. The Apache server manipulates HTML email objects between the eMail Server database, sometimes call the Message Store, and the agent interface (an email client) using HTTP. The agent interface runs an internet browser, such as Netscape.

Application Configuration

These figures show a typical and an alternate configuration of the various servers.

Typical eMail Center Install





Email Processing

The eMail Center process flow diagram describes events that occur when the eMail Center handles inbound or outbound email messages, as well as events on the agent interface during those events.

As defined earlier incoming emails can be either structured or unstructured based on the message content/format.

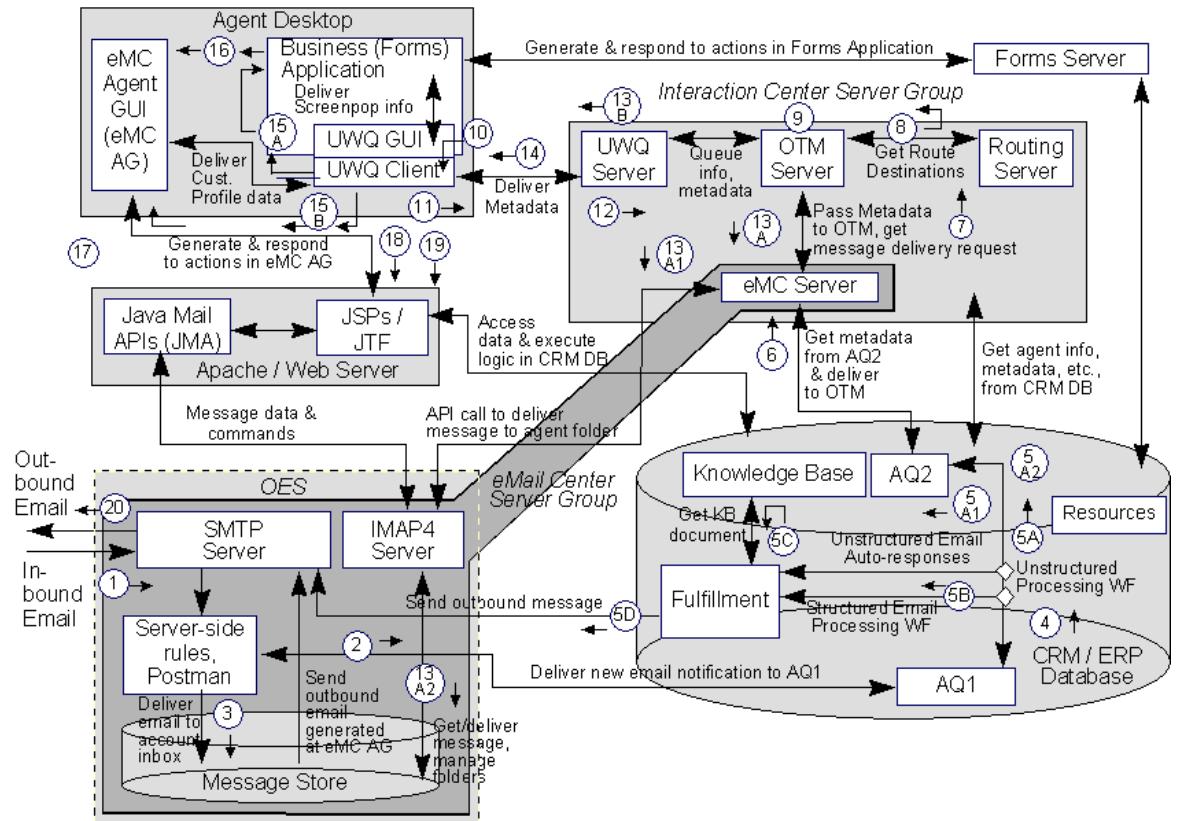
An outbound message can be a single message or a bulk mailing.

Single messages can be automatic replies to structured or unstructured inbound messages. Messages can also be manually created agent interface.

Bulk mailing is initiated by a CRM business application, such as Customer Care, that creates a mailing list and requests a message template.

eMail Center Processing Overview

The following diagram and numbered process flow depicts the start to finish system processing flow for eMail Center.



1. Inbound email arrives at the SMTP Server.
2. OES attempts to place the email ID into AQ1.
 - OES (Oracle Email Server) lets eMC know that a new email has arrived by executing a server-side rule that places the email ID in AQ1.
 - AQ (Advanced Queuing) is a feature of the Oracle 8i database that provides asynchronous notification between components. In this case, AQ1 items are picked up by the unstructured workflow that is initiated by the Concurrent Manager.
3. OES delivers the incoming message to the appropriate account inbox folder if the email ID was successfully put in to AQ1.

- If the email ID could not be put in to AQ1, the incoming message is delivered to the RETRY folder of the appropriate account.
 - Later (controlled by the administrator), eMC processes items in the retry folder and attempts to put the email IDs of these items into AQ1.
- 4. Concurrent Manager launches the unstructured email processing workflow.
- The unstructured email processing workflow (WF) picks up the next email ID from AQ1 and begins processing the associated email.
- A node in the WF determines whether the email is structured or unstructured.
- If the email is structured, the structured email processing WF is invoked.
 - (go to step 5B)
- If the email is unstructured, the appropriate path in the unstructured processing WF is executed, based on the OES account to which the email was delivered.
- The account is a business account, such as “support”, “service”, “sales”, or “marketing”. Later in this diagram, the email message is moved to the account of an agent associated with the business account.
 - (go to step 5A)
- 5. (5B) The structured email processing WF executes.
- WF executes the appropriate structured email path, based on the structured email type ID in the message.
 - For example, if the structured email type ID indicates that it is a “Get Service Request Status” query, the corresponding WF path in the structured email processing WF is executed.
 - Each path in the structured email processing WF should be designed to automatically process the corresponding email message.
- Nodes in the WF path make API calls to the CRM applications.
 - They leverage application data and functionality to automatically process the interaction.
- When the processing path is completed, an API call is made to Fulfillment.
 - Creates and sends an automated response.
 - Uses the response template specified in the API call.
- In case a processing error is encountered, the email is treated as unstructured and sent back to the unstructured email processing WF.

(5C) Fulfillment creates the email message to be sent out.

- It picks up the specified response template from MES.
- If the response template contains merge fields, it attempts to expand the merge fields, either by:
 - Running the query associated with the response document (if any), or by
 - Using any merge field values that were passed to it directly via the API call from the workflow.

(5D) Fulfillment sends out the email message.

- The email auto-response is sent out via the SMTP server.
- Structured email processing is completed.

(5A) Unstructured email processing continues.

- Execute any user defined business rules / procedures to analyze the email.
- If desired, the iMT based automated intent analysis is performed to generate suggested classifications and suggested responses for the email being processed.
- Check to see if auto-response is needed.

(5A1) Unstructured email auto-response.

- If an interaction needs to be handled as an auto-response:
 - Send a request to Fulfillment to send out the auto-response.
 - Use the specified response template and merge field expansion data / query.
 - Go to steps 5C and 5D
 - Unstructured email processing is completed.
 - An auto-response can be generated for an unstructured email either:
 - If a rule has been defined in the workflow to send out an auto-response when the rule is satisfied, or
 - If the confidence levels on the top suggested classification and associated top suggested response are above pre-defined confidence limits.

(5A2) Unstructured email manual (agent) response.

- Additional implementation specific unstructured email processing (if any) is done and the email ID, along with other metadata, is delivered to AQ2.
 - AQ2 is another advanced queuing notification, similar to AQ1.
 - AQ2 is an asynchronous notification between the unstructured workflow and the eMC server.
- 6. eMC Server fetches the metadata from AQ2.
- 7. eMC Server delivers the metadata to OTM.
- 8. OTM sends the metadata to and gets back route destinations from the Routing Server.
- The Routing Server evaluates implementation specific static or dynamic routing rules to determine route destinations for the email message.
- The Routing Server specifies which individual agents can receive the email message. (The individual agents are the route destinations).
- If an agent group qualifies for the email message, the Routing Server identifies all the agents in the group as route destinations.
- The route destination information is sent to OTM.
- 9. OTM adds the email item to the personal queue of each agent specified by the Routing Server.
- OTM keeps track of the status of all the agent queues. It manages the agent queues.

Note: Step 9 is the end of the email driven process. That is, the arrival of a new email message triggers the processing described up to this point.

- 10. In the agent work area, the agent requests the next media item (email) from the UWQ GUI.
 - Agent selects the appropriate email account / campaign in UWQ and clicks on the “Get Work” button in the UWQ GUI.
 - The UWQ GUI form invokes the UWQ Client bean.
- 11. UWQ Client sends the “Get Work” request to UWQ Server.
 - It specifies which agent is making the request.

- If specifies that the request is for the next email item.

12. UWQ Server passes the “Get Work” request to the OTM Server.

13. (13A) OTM passes the “Get Work” request to the eMC Server.

(13A1) The eMC Server makes a call to OES to move the appropriate email message from the account inbox to the agent’s email folder inbox.

(13A2) OES executes the request.

- OES moves the email message content from the account Inbox to the agent’s folder.

(13B) OTM passes the email item metadata to the UWQ Server. The metadata contains:

- Media item type (email, telephony, ...)
- Email ID (MSG_ID)
- Sender’s email address
- Other key value pairs

14. UWQ Server passes the metadata to the UWQ Client.

15. (15A) UWQ Client pops the business application and sends it the metadata so that fields in the business application screen are filled appropriately.

- In most cases, the sender’s email address from the incoming message is used to identify the customer and populate the business application form with the appropriate customer information

(15B) UWQ Client pops the eMC Agent GUI (eMC AG) to the “Preview” screen. The actual message content is retrieved from agent’s folder in the OES Message Store and displayed in the eMC AG

- The agent can read the message and choose to:
- **Respond** to the message
- **Cancel** immediate processing of the message (put it off until later)
- **Reroute** the email
- **Forward** the email
- **Transfer** the email

Note: Only the **Respond** option is used as an example.

16. On the agent interface, eMC AG displays customer data, made available from the business application by the UWQ Client.
 - eMC AG displays the customer data in its Customer Profile area.
 - TeleService Contact Center is an example of a business application.
 - UWQ Client delivers the screen pop to the business application form being displayed on the agent interface (see 15A).
 - The business application form sends appropriate data to eMC AG for display.
17. The agent selects the 'Respond' option in the eMC AG 'Preview' screen and the 'Response screen is displayed.
 - Other metadata for the message retrieved from the database and displayed in the various eMC AG screens includes:
 - Suggested classifications
 - Suggested responses
 - Marked up message information
18. JSP / JTF components interpret actions taken in the eMC Agent GUI and makes the appropriate API calls in response to these requests to perform the desired actions.
19. Create and send the agent generated response.
 - The agent constructs the response in the editor by typing in the response and / or picking up suggested responses or response documents and attachments from the knowledge base or file system.
 - The response is composed and formatted by the JSP / JTF servlets on the web server.
 - The outbound email is delivered to the outbound message queue in the OES message store using java mail API (JMA) calls.
20. The outbound email is picked up from the queue and sent to the Internet via the sendmail process.

eMail Center Processes

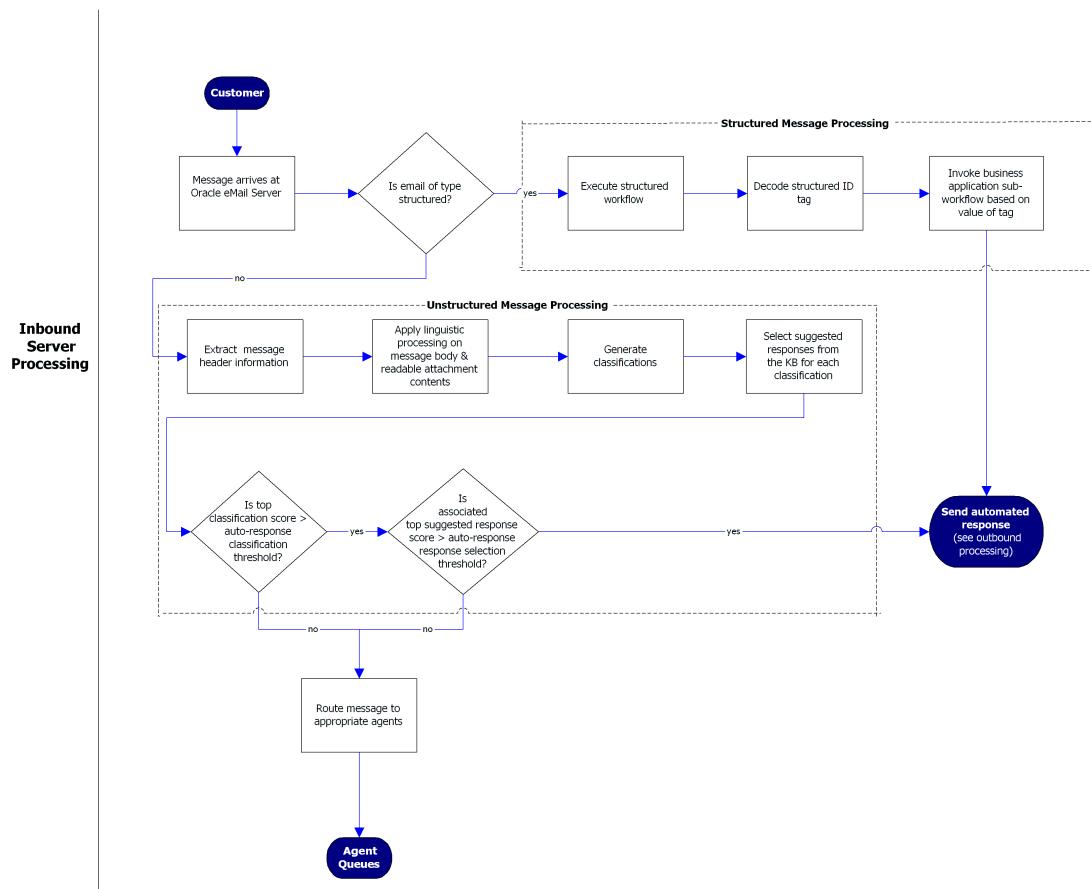
Overview

eMail Center has three processes:

1. Inbound Server Processing.
 - Structured eMail Processing
 - Unstructured eMail Processing
2. Desktop Processing.
3. Outbound Server Processing.
 - Single Message
 - Bulk Mailing

Inbound Server Processing

Inbound processing begins when the eMail Server receives a customer message and passes it to the eMail Center Server.



Customer

The customer creates an email message.

Message arrives at Oracle eMail Server

The server must be Oracle eMail Server.

Is email of type structured?

Email type can be either structured or unstructured. Structured email comes from a form the customer filled in on a web site or from a customer reply to an email questionnaire that had a structured format. In the case of a reply, the customer must be instructed to keep the email ID included in the original message and to answer the form without modifying its format.

If the email is type structured, go to **Structured Message Processing**

If the email is type unstructured, go to **Unstructured Message Processing**

Structured Message Processing

If the email is type structured, the process takes this path.

Execute structured workflow

eMail Center has one workflow, and it includes a structured path. The structured workflow path has several process paths available that are parallel to each other. The workflow process selects one of them.

Decode structured ID tag

The inbound structured email message contains an ID tag that identifies what structured email template it uses.

Invoke business application sub-workflow based on value of tag

eMail Center processes the email and selects the appropriate workflow based on specifications in the structured email. It might execute Fulfillment functions, then it can launch an Oracle business application, such as Customer Care.

Send automated response

(See outbound processing.) Whether or not eMail Center executes Fulfillment functions or launches a business application, it is capable of generating an automatic email response to the customer.

Unstructured Message Processing

If the email is type unstructured, the process takes this path.

Extract message header information

Read the header information associated with the email. It includes the sender's return address and the subject line.

Apply linguistic processing on message body & readable attachment contents

Extract readable attachments and concatenate their text to the email body. Using linguistic processing, generate themes for the concatenated message.

Generate classifications

Analyze the themes, comparing them to classification theme signatures in the classification table. Select the top classification matches.

Select suggested responses from the knowledge base for each classification

Suggest responses for the top classification matches. Do this by using a mix of the theme signatures identified in the email and theme signatures of the top classification matches. With the theme signature mix, get suggested responses from the knowledge bases, MES and SMS.

Is top classification score greater than the auto-response classification threshold?

If the classification score inspires confidence, then go to the next test.

If the classification score does not inspire confidence, route the message to an agent. Go to **Route message to appropriate agents**.

Is the associated top suggested response score greater than the auto-response response selection threshold?

If the response score inspires confidence, send the response. Go to **Send automated response (see outbound processing)**.

Route message to appropriate agents

If either the classification score or the suggested response score do not inspire confidence -- were not greater than the respective threshold -- send the message to an agent for handling.

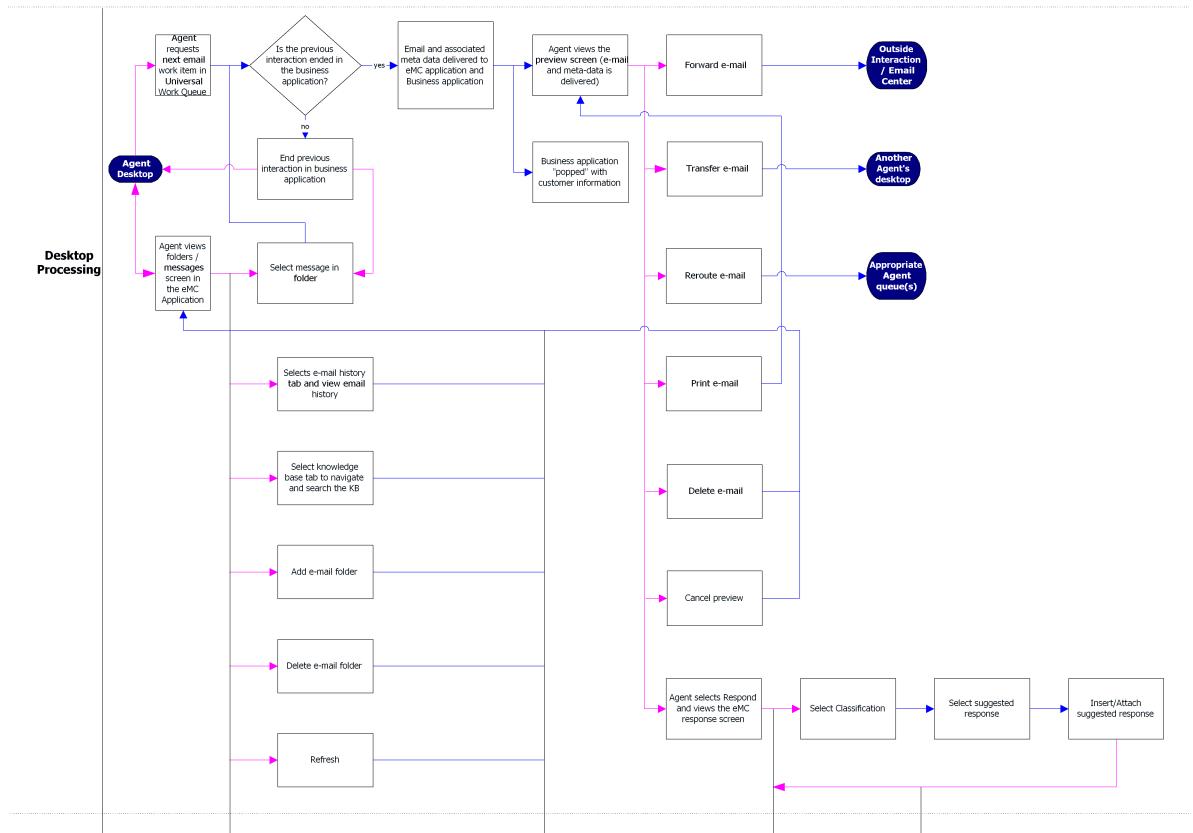
Send automated response (see outbound processing)

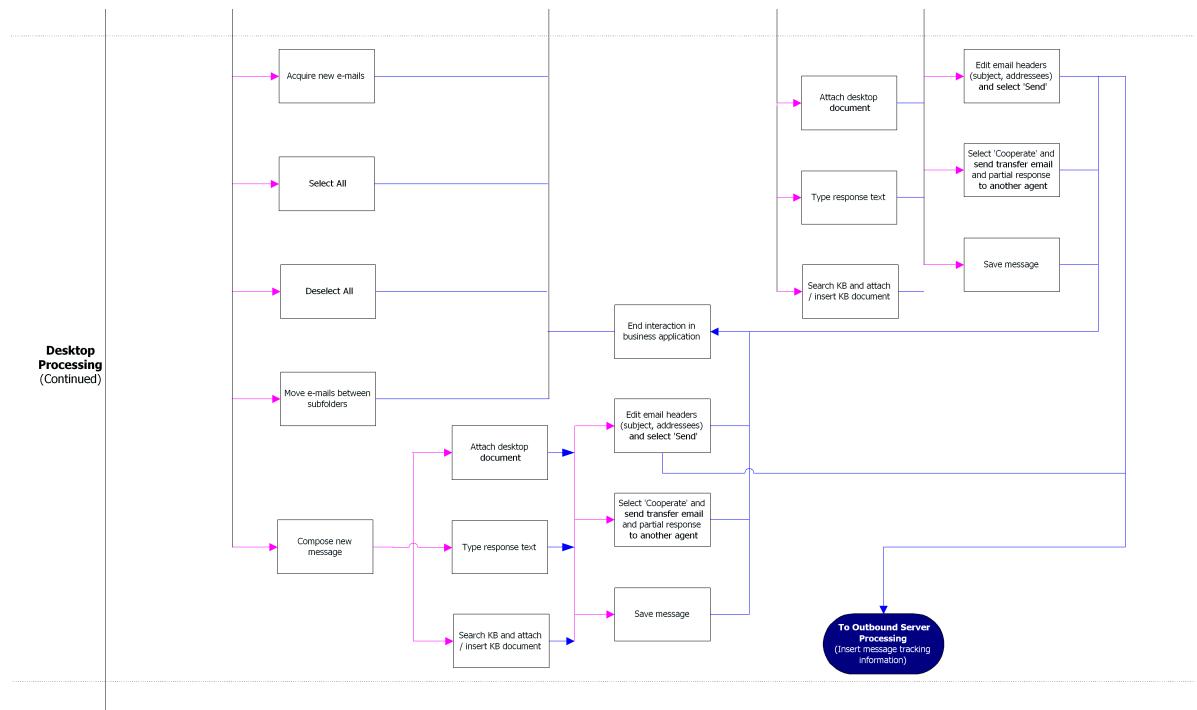
If both the classification score and the suggested response score do inspire confidence, send the response if auto-response is not turned off. It does not require agent intervention.

Desktop Processing

Desktop processing begins the first time when the agent requests an email work item in the Universal Work Queue (UWQ). It repeats itself each time the agent requests another email item.

The desktop process can handle either inbound email or outbound email. Inbound email normally is unstructured. Structured email does not require agent intervention unless the template is missing or an error occurs. The only outbound email the agent handles is that which the agent initiated manually. Outbound email generated by a business application does not require agent intervention.





Agent Interface

In an interaction center, agents can be assigned to multiple communications media, including inbound telephone calls, outbound telephone calls, and email. In this scenario, either the supervisor, the agent, or Oracle Interaction Blending indicate that the agent is working with email.

The agent begins working with email by requesting an email item from the Universal Work Queue.

At the end of the each email item the Desktop Processing loop returns to this point and presents the agent with two options:

- **Agent requests next email work item in Universal Work Queue**
- **Agent views folders / messages screen in the eMC (eMail Center) Application**

Agent requests next email work item in Universal Work Queue

The agent begins one email cycle by requesting an email item from the UWQ.

Is the previous interaction ended in the business application?

Normally the agent handles only one customer interaction at a time. If Customer Care or some other business application still has an open interaction, it must close the interaction before UWQ will issue an email item to the agent.

Select message in folder

If no interaction is open, then the agent can select a message from one of the folders.

Email and associated meta data delivered to eMC application and business application

eMail Center releases an email item to the agent. This includes the meta data, which is message header information and other properties.

Business application "popped" with customer information

If the agent is in a business application, such as Oracle Customer Care, eMail Center sends the message to that application. The message meta data frequently contains enough information for the business application to find the customer's record -- assuming an existing customer -- and pops it on the screen.

Agent views the preview screen

The agent can preview the message before responding to it by clicking the subject of the message in the inbox. At this point, the agent is looking at a preview of the

email message, and has not taken any action on it. The agent could cancel the preview and request another email item.

The agent has several options to choose amongst that include:

- **Forward email**

Forward the email outside eMail Center or outside the interaction center.

- **Transfer email**

Transfer the email to another agent handling the same account. For example, an agent assigned to the "Support" account can only transfer emails to other agents handling the "Support" account.

- **Reroute email**

Reroute the email to another agent queue. This might indicate that the workflow has an error in its agent group routing.

- **Print email**

Print the email and return to the preview.

- **Delete email**

Delete the email and return the agent to a display of email folders and message screens. Go to **Agent views folders / messages screen in the eMC Application**.

- **Cancel preview**

Cancel the preview without taking any action. Return the agent to a display of email folders and message screens. Go to **Agent views folders / messages screen in the eMC Application**

- **Respond**

Take action on the email. Go to **Agent selects Respond and views the eMC response screen**.

Agent selects Respond and views the eMC response screen

In choosing to respond to the email, the agent has several choices, including:

- Accept the suggested classification and response. This leads to three nodes in the process flow:

- **Select Classification**

- **Select suggested response**

- **Insert/Attach suggested response**

These steps are self explanatory. The agent can repeat them several times for each issue marked up in a multi-issue email, and for as many classifications and responses as are available in the suggestion lists.

- **Attach desktop document**
- **Customize the response**
 - The agent can customize the response by typing free form text using the full-featured editor available. The agent may also wish to respond to the message manually rather than use a suggested response. In this case the agent either type the message or can select a "template" from the standard set of templates available.
- **Search KB (knowledge base) and attach / insert KB document**

These three options, **Attach**, **Type**, and **Search**, also are self explanatory. They present three options in the process flow as well:

- **Edit email headers (subject, addresses) and select 'Send'**
When the agent selects Send, the email is sent to the node labeled, **To Outbound Server Processing**
- **Select 'Cooperate' and send transfer mail and partial response to another agent**
- **Save message**

On completing each of these three options, **Edit**, **Cooperate**, or **Save**, the process flow takes the agent to the node, **End interaction in business flow**.

End interaction in business application

This is the end of one email item process cycle. The agent starts another cycle in one of the first nodes:

- **Agent views folders / messages screen in the eMC Application**
- **Agent requests next email work item in Universal Work Queue**

Agent views folders / messages screen in the eMC Application

This is an alternate point for the agent to begin an email cycle, the first being **Agent requests next email work item in Universal Work Queue**.

If the agent chooses this path, the Desktop Process offers these options:

- **Select message in folder**

- **Select email history tab and view email history**
- **Select knowledge base (KB) tab to navigate and search the KB**
- **Add email folder**
- **Delete email folder**
- **Refresh**
- **Acquire new emails**
- **Select All**
- **Deselect All**
- **Move emails between subfolders**
- **Compose new message**

These options are self explanatory. When the selected option is completed, the Desktop Process returns the agent to this node.

One of the options, **Compose new message**, takes the agent though several process nodes before returning to this node.

Select Message in folder

This entry in the description is repeating an option of its parent node. It is needed to continue describing the process of this node.

If the agent selects a message in the folder, Desktop Processing routes the agent to the same flow path described earlier:

- Go to the first node, labeled **Agent requests next email work item in Universal Work Queue**, and
- Look at the next step in the Desktop Processing, labeled **Is the previous interaction ended in the business application?** The process follows that path.

Compose new message

This entry in the description is repeating an option of its parent node. It is needed to continue describing the process of this node.

If the agent chooses to compose a new message, Desktop Processing offers these options (they are similar to, but slightly different from, the options offered by the **Agent selects Respond and views the eMC response screen node**):

- **Attach desktop document**
- **Type response text**

When selecting to respond manually, the agent has two options not shown in the process flow:

- Respond to messages manually, typing free form text
- Respond to messages using a response template. Here the agent manually selects a template category. Then the Merge screen appears with a list of suggested responses under the selected template category.
- **Search KB (knowledge base) and attach / insert KB document**

These three options, **Attach**, **Type**, and **Search**, also are self explanatory. They present three options in the process flow as well:

- **Edit email headers (subject, addresses) and select 'Send'**

When the agent selects Send, the email is sent to the node labeled, **To Outbound Server Processing**

- **Select 'Cooperate' and send transfer mail and partial response to another agent**
- **Save message**

On completing each of these three options, **Edit**, **Cooperate**, or **Save**, the process flow takes the agent to the node, **End interaction in business flow**.

End interaction in business application

This is the end of one email item process cycle. The agent starts another cycle in one of the first nodes:

- **Agent views folders / messages screen in the eMC Application**
- **Agent requests next email work item in Universal Work Queue**

To Outbound Server Processing

This node points to the Outbound Server Processing flow chart.

Outbound Server Processing

Outbound Processing can begin one of three ways:

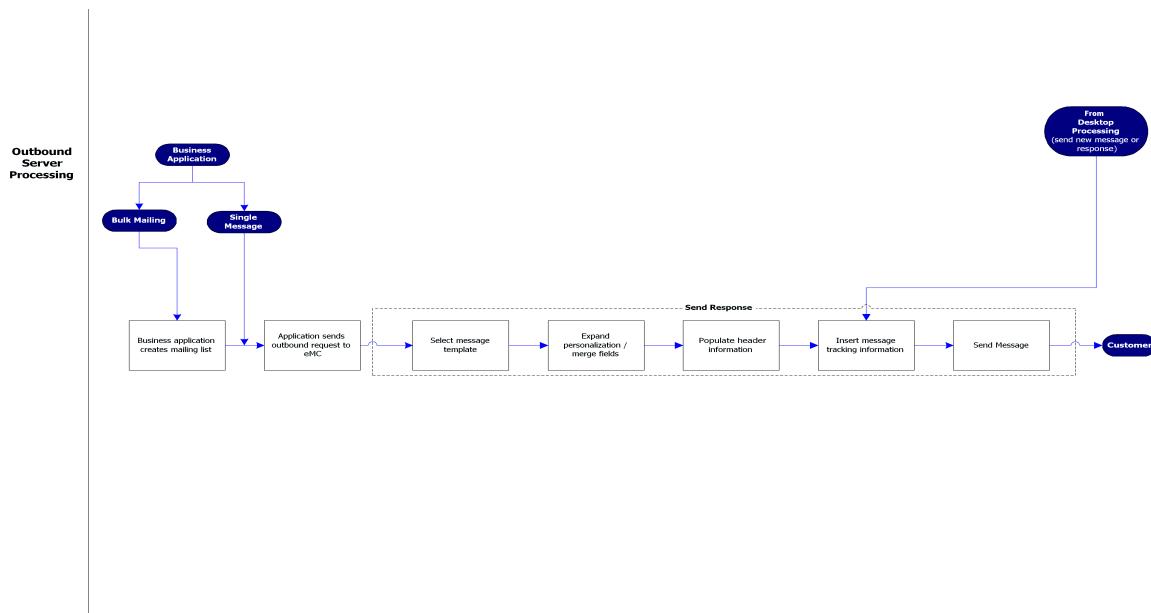
- It can begin when a business application, such as Customer Care, starts a bulk mailing campaign.
- In that same business application, an agent or a process can create a single email message, also causing Outbound Processing to begin.

- Earlier in this document, Desktop Processing caused Outbound Processing to begin when an agent selected the Send option either while responding to an inbound email or while creating a new email.

The Outbound Process has a single path with two entry points:

- Business application creates a mailing list**
The business application is executing a bulk mailing campaign.
- Application sends outbound request to eMC (eMail Center server)**
The business application is sending a single message.

This description starts at the beginning of the Outbound Processing path and continues to the end.



Business Application

A business application, such as Fulfillment, starts an automated process and creates a single campaign.

Single Message

This is the second entry point. In the business application an agent or a process created an email message.

Application sends outbound request to eMC

Obviously the single message is inserted here.

Send Response

Send Response is a group of nodes in the eMail Center process that generates a message to be sent to the eMail Server on its way to the customer.

The group of Send Response nodes are:

- **Select message template**
- **Expand personalization / merge fields**
- **Populate header information**
Header information includes the customer's email address in the To field and a title for the Subject field.
- **Send message**

The eMail Center Server sends the message to the eMail Server.

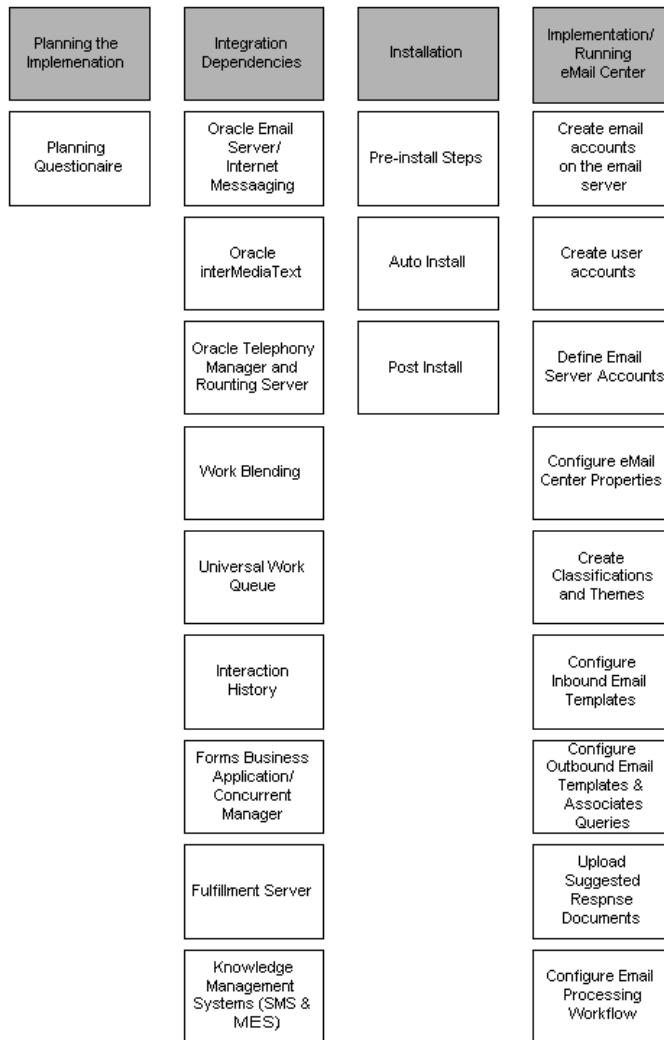
Planning the Implementation

Implementing Oracle eMail Center is a complex process that requires knowledge of a variety of technologies and processes. Persons implementing Oracle eMail Center should have a working knowledge of Oracle Forms, HTML, Java, and the installation platform (Windows NT or Unix), in addition to an understanding of the operational requirements of an interaction center.

This topic group contains an implementation planning questionnaire that will help you determine and collect information you will need during the implementation process.

The Implementation Process

The following diagram depicts the implementation process for eMail Center:



Implementation Planning Questionnaire

The following questions provide a high level overview of the information necessary to successfully implement Oracle eMail Center. This is information that should be decided upon prior to beginning the implementation process.

Use the following questionnaire to gather information crucial to the implementation process:

1. What email addresses does the business want to set up to receive email?

You will need to define the corresponding email accounts on OES to which inbound email will be directed. Examples could be: support@company.com, info@company.com, promotions@company.com, sales@company.com, etc.

2. For each email account to be defined, which agents will be processing interactions?

Note: An agent may be defined for multiple accounts, e.g., if an agent needs to work on email interactions sent to the 'support' account as well as those sent to the 'info' account.

3. How will agents be grouped for each account?

Is it sufficient to define only one group for all the agents assigned to a particular account, or does it make sense to divide the agents into groups?

It would make sense to define multiple agent groups for a particular account if there will be different agents who focus on working on certain types of issues / classifications for the account, so that routing rules can be set up appropriately.

Note: Setting up multiple groups for a given account does not mean that you cannot route a given interaction to multiple groups. Defining multiple groups provides additional granularity for routing purposes.

4. For each account, what's the set of classifications that need to be defined?

These classifications are essentially labels for the buckets into which the customer wants to sort incoming emails for a particular account. Classifications can be used to route individual emails to agents as well as select the appropriate responses from the knowledge base. The subject matter for each classification should be mutually exclusive and collectively exhaustive for emails expected to be received in that account.

5. What are good sample messages for each classification?

- Does the customer already have sample data?
- Do you need to create samples for classifications?

- Do the samples completely represent the different subject matter anticipated in emails belonging to the classification?

Note: The quality of the sample messages directly impacts the effectiveness of the classification functionality. Sample messages should only contain text that is directly relevant to the subject matter for that classification (the text can be regular sentences as opposed to a list of keywords, but should not contain text such as 'Thank you in advance for your prompt attention to this matter,' or other extraneous text).

6. What are good sample responses for each classification?
 - Does the customer already have sample data?
 - Do you need to create samples for classifications?
 - Do the samples completely represent the different types of responses for the classification?

Ideally, there should be at least one sample response for each sample message. As is the case with sample messages, the quality of the sample responses directly impacts the effectiveness of the response selection functionality and should only contain text that is directly relevant to the response subject matter.
7. What documents need to be uploaded to the knowledge bases?
8. What static routing rules need to be defined?

What should be the destination agents / agent groups for each static route?
9. What dynamic routing procedures / workflows need to be developed?

What are the implementation details for creating the stored procedures / workflows?
10. What keywords or key phrases in the headers or contents of a message indicate which eMC account a message belongs to?

E.g., a message with the key phrase 'service request' belongs in the 'support' account, and if it was sent to the 'info@company.com' account it should be redirected to 'support@company.com'.
11. What are the business requirements for processing unstructured emails?
 - What are the rules for determining when to send an auto-acknowledgement and selecting the response for the auto-acknowledgement?

- What information from the CRM DB needs to be extracted to make processing decisions for an email message?
- What information should the system look for in the incoming message to use in rules processing?
- And so on...

12. How should bounced messages and other responses to tagged emails be handled?

- Responses routed directly to the agent who sent out the message, or routed according to the routing server rules?

13. Notify sending application on message bounce / auto-response?

14. What are the default outbound email header values for each account?
From address, reply-to address, etc.

15. What are the processes / transactions that are or should be targeted for automated processing using structured email?

As a general rule, you should try to structured email processing enable high frequency interactions / transactions for which automated processing is possible, using workflows that can access customer data, knowledge base documents, and CRM / ERP functionality to generate appropriate responses.

16. For each business process / interaction that needs to be structured email enabled, what are the requirements for the associated HTML (Web) form?

- What input do you need from web users to automate the targeted business process / interaction?
- What additional information do you want to get from the web user?
- What information do you need / want to provide to the web user when he / she is filling in the form?
- What should the layout of the HTML form look like?
- Do you want to embed javascript or equivalent code to do input validity checking?
- What are the valid values for each input field?
- Which fields are required versus optional?

17. For each structured email HTML form, which previously defined eMC account should the form be sent to?

18. For each business process / interaction that needs to be structured email enabled, what are the requirements for the associated workflow?
 - What does the associated workflow need to do?
 - What are the required workflow nodes?
 - Which ones are already available, which need to be built?
19. For each business process / interaction that needs to be structured email enabled, what should the response template look like?
What merge fields will be included in the response template?

Integration Dependencies

This topic group contains a list of the core products with which Oracle eMail Center integrates and a brief description of each core product.

Oracle Email Server (OES)

Oracle Email Server is the core email system. The native email functionality is supported by this system. Oracle Email Server has both PL/SQL and IMAP interfaces and is bundled with the Sendmail implementation of SMTP service.

The topics in this section describe its important sub-components.

IMAP server

Oracle Email Server implements the server section of the IMAP protocol. The server is mainly used by the IMAP implementation of JMA (middle tier) to access emails stored in the Message Store.

Message Store

The Message Store resides in an Oracle database (8.1.6), and it is a collection of database tables and stored procedures that implement the various email specific operations. Email accounts including folders, all incoming emails, and all outgoing emails are stored here.

SMTP Server

Currently Oracle Email Server is bundled with the Sendmail's implementation of the SMTP protocol. Various options like third party spam and virus checks can be added to make a more robust system.

OES PL/SQL APIs

The Oracle Email Server PL/SQL APIs extend the normal email functionality to implement rule based notifications, account maintenance, and interMedia Text (iMT) processing of incoming email messages. This additional functionality results in a close integration with the Oracle Email Server product.

Known Limitations:

- Oracle eMail Center is tightly integrated with this product. Other Email Services, existing or new, must integrate with this product.
- Spam and Virus check features are currently missing.
- Email encryption/decryption features are missing in the Oracle Email Server release 5.1.x.
- Oracle interMedia Text's linguistic processing currently work only on English text. Other languages are being supported in the future releases.

Platform Dependencies:

- Oracle Email Server and its components are ported to most major platforms.

Configuration Options:

- Oracle eMail Center can integrate to multiple instances of Oracle Email Server. In some cases there will be multiple instances of Oracle Email Server Message store, which share a common IMAP server and SMTP components.

Oracle interMediaText (iMT)

Oracle interMedia Text is a text/linguistic-processing module bundled as a component of Oracle 8.x database. It is mainly used to determine the intent of each incoming email message.

Known Limitations

- Oracle interMedia Text's linguistic processing currently work only on English text. Other languages are being supported in the future releases.
- Only bundled with Oracle 8 and higher versions. Not available on earlier versions.

Platform Dependencies

- Ported to most major platforms.

Configuration Options

- You can customize the linguistic processing module by modifying the theme and iMT Knowledge Base sections. This focuses the linguistic processor to look for more relevant information and enables you to fine-tune email processing.

Oracle Telephony Manager (OTM)

The Oracle Telephony Manager maintains the agent distribution queues and agent states for any Interaction Center. It also provides access to a common routing engine. OTM is media independent and can route all types of interactions (email, telephony, faxes, web calls) to the call center agents.

Known Limitations

- Only one OTM server can exist per Interaction Center.

Platform Dependencies

- A Java Server; Runs on Solaris and NT platforms.

Configuration Options

- There is a 1:1 relationship between an OTM and an eMC Server; however, the rest of the eMail Center modules are shared.

Routing Server

The Routing Server determines which agent(s)/agent groups get a new interaction. The routing can be skill and/or rule based. The routes are defined for various classifications and parameters.

Platform Dependencies

- A Java Server; Runs on Solaris and NT platforms.

Work Blending

The Work Blending server determines the type (email, phone call, fax, etc.) of interaction an agent should service next. To make this determination, Work Blending obtains real time information about the agent from UWQ.

Universal Work Queue

UWQ Client and Server code work in unison to do the following:

1. Relay information between OTM and the Forms Application.
2. Capture certain information for statistical purposes.
3. Capture certain information for work blending purposes.

UWQ also works in conjunction with Work Blending to determine what type of interaction the agent should service next.

Platform Dependencies

- A Java Server; Runs on Solaris and NT platforms.

Interaction History (IH)

The Interaction History maintains all interaction life-cycle segments, i.e. accounts for the entire time duration beginning at the moment an Interaction (fax, phone call, email.) is registered in the system to the instant it is resolved. This is a cumulative record of all interactions passing through the system. It also records information about various agents who handled the interaction in the recorded time duration.

Forms Business Application

This can be any Oracle CRM Forms application (Oracle Service, Oracle TeleSales, Customer Care). These forms applications embed the UWQ client, enabling them to work with the Oracle eMail Center agent interface. This is done via Java socket communication between the UWQ client and the eMC agent interface. The business applications contain the necessary profiles and business intelligence.

Fulfillment Server

Fulfillment Server is a part of Oracle CRM Foundation. This service enables various applications to fulfill/complete various pending tasks. For eMail Center, this service enables eMC to automatically send out single and/or bulk emails.

Knowledge Management Systems (KMS)

At present, the Knowledge Management system consists of SMS and MES. All KMS interactions are channeled through the SMS system which exposes a single set of

APIs hiding the complexity of the various sub-systems. Both PL/SQL and Java APIs exist to enable interMedia based queries and retrievals.

Both MES and SMS are knowledge bases. eMail Center uses MES to store eMC specific documents. SMS is currently optional for eMail Center. At present, eMail Center does not support automated responses using information from the SMS knowledge base.

Solution Management System (SMS)

A repository of problem, diagnosis, related symptoms and their solutions.

Marketing Encyclopedia Systems (MES/KB)

MES is also known as the Knowledge Base (KB). It is a repository of various documents, URL, images and such. MES is partitioned into various application spaces, each application (e.g Tele-Sales, Oracle eMC, etc.) can store documents, URLs, images and such in its own private space in this system. Various PL/SQL and Java APIs and a JSP UI exists to create/upload, list, categorize and order these entities.

Platform Dependencies

- A database module; Oracle 8.x ported to most platforms.

Concurrent Manager

Concurrent Manager is a component of Oracle Application Object Library. It is responsible for scheduling and running various concurrent programs submitted by the user. It uses Distributed Concurrent Processing and can simultaneously run concurrent requests on several different server machines or CPUs. Oracle eMail Center makes use of this facility to schedule and run various email processing modules.

Platform Dependencies

- A database module; Oracle 8.x ported to most platforms.

Installation

This topic group covers the following topics:

- [Pre-installation steps](#)

- [Installation by Rapid Install](#)
- [Post-installation steps](#)

Pre-Installation Steps

There are currently no pre-installation steps necessary for either the agent interface or eMail Center Server for Oracle eMail Center.

The Auto-Installation Process

This topic provides a high level overview of the auto-installer (Rapid Install) process. This process installs the schema and core functionality (Foundation Components) for Oracle applications. There are five steps in the process, as well as some finishing steps that need to be performed to successfully complete the installation process.

Steps

1. Choose the desired install environment (production, test, or demo).
2. Select the products to install.
3. Select the NLS settings.
4. Select the location of the top-level directories.
5. Select the name of the configuration file.
6. Complete the finishing steps necessary for the products you selected to install.

References

For more detailed information on the Rapid Install process, please refer to the How Rapid Install Works topic group in the Installation Overview section, and the Running Rapid Install topic group in the Starting Your Installation section of the Oracle Applications *Installing Oracle Applications* documentation.

Post-Installation Steps

Two post-installation procedures are necessary for the eMail Center server side. The first procedure consists of installing and configuring the Email Server. The second procedure involves installing and configuring the eMC Server. For the second process, you will need the *Oracle Call Center Applications Setup CD*.

[Installing and Configuring Oracle Email Server \(OES\)](#)

Installing and Configuring Oracle eMail Center Server (eMC)

Installing and Configuring Oracle Email Server (OES)

Use this procedure to install and configure Oracle Email Server.

Prerequisites

Before configuring the Email Server, you should complete the initial Rapid Install process. The Oracle Email Server documentation provides detailed instructions on installing Email Server with Rapid Install.

Steps

1. Install Oracle Email Server (OES) 5.1 (patchset 3) on the same or on a separate instance as the Oracle Applications Instance. Follow the instructions provided in the *Oracle Email Server Installation Guide* (Installing Oracle Email Server section). Oracle Email Server was formerly known as Oracle Internet Messaging (IM).

In the post-install Email Server configuration, select **NO** for LDAP install. For more information on this step, refer to the *Oracle Email Server Installation Guide* (Configuring Oracle Email Server section).

Once the installation process is complete, you can configure the Oracle Email Server instance to talk with the Oracle Applications Instance.

2. Connect to the Oracle Email Server database instance with the **OO** user and password. Grant privilege on IM_IMT_EXTN to oraoffice.

Note: The default configuration is single instance. Single instance implies that Oracle Applications data and Oracle Email Server data reside in the same database.

3. Create a sqlnet tnsnames entry on the Oracle Email Server machine to point to the Oracle Applications Instance. (If installed on an instance separate from Oracle Applications Instance).
4. Create a Database Link to the CRM instance from the Oracle Email Server instance. You need the following:
 - Password for the Oracle Applications APPS schema.
 - Password for the Oracle Email Server OO schema.

Use SQLPLUS to login to Oracle Email Server as user **OO** (using the **OO** password entered during Oracle Email Server installation) and use the following to create the database link:

```
CREATE DATABASE LINK <link name> CONNECT TO <APPS
username> IDENTIFIED BY <APPS password> USING <tns / service
name>;
```

Note: The name of the above mentioned database link <link name> is used later to configure other eMC components.

Installing and Configuring Oracle eMail Center Server (eMC)

Use this procedure to install and configure Oracle eMail Center Server (eMC Server).

Note: Oracle eMail Center follows the Oracle standard for User Interfaces and the following field colors indicate:

Yellow - required field

White - optional field

Grey - read only field

Light blue - query mode

Overview

eMC Server is installed as part of the Call Center Applications installation process.

Prerequisites

Before you can create an eMC Server, you must create a Server Group for the eMC Server.

Note: The server group you create here will be referenced in the Create Account screen as an Interaction Center.

Perform the following steps to create a server group:

1. Open the Server Administration module from the Front Office Navigator, the Call Center Administration module, or the Routing Server Administration module.
The Server Locator Window opens at the Server Group tab screen.
2. In the Server Group Registration area, enter the server **Group Name**, **Location**, and **Description**.
3. From the File menu, choose **Save**.

Steps

1. From the Self Service application login screen, login using the default system administrator user name and password.
2. From the list of application responsibilities, select **Call Center Server Administration**.
The Call Center Server Administration module appears.
3. From the Call Center Server Administration module, double-click **UWQ Server Locator** (if it doesn't open automatically).
The Server Locator screen appears.
4. From the Server Locator screen, click the **Server** tab.
5. In the Server Registration area, type data for the following fields:
 - Server Name
 - Server Location
 - Type Name - select **iCenter Server** from the drop-down list, click **OK**
 - Member Group Name - select the server group you want this server to belong to, click **OK**
 - Using Group Name - select the using group ID from the drop-down list, click **OK** This identifies other groups that have permission to use this server.

Note: DNS Name and IP Address will be automatically assigned after the eMC Server is run for the first time.

- User Address - optional field, enter information if you wish

- Description - optional field, enter information if you wish
- Server Parameter - not required for configuring eMC Server
- Value - not required for configuring eMC Server

6. From the File menu, click **Save**.

References

For detailed information on installing eMC Server, please refer to the *Oracle Call Center Applications Setup* documentation.

Refer to the *Oracle Telephony Manager Concepts and Procedures* documentation for detailed information on creating a server group.

Implementation

This topic provides a high level overview of the implementation process. This section is designed to furnish you with an overall idea of the order in which the implementation of Oracle eMail Center occurs. Each of the steps will be expanded upon in individual topics.

Prerequisites

The installation process must be completed before you can begin implementing eMail Center.

Steps

1. Create Email Accounts on the Email Server
2. Create User Accounts
3. Define Email Server Accounts
4. Creating an eMail Center Agent
5. Setting up Routing for Inbound Email.
6. Configure eMail Center Properties
7. Configure UWQ to Launch the Business Application
8. Create Classifications and Themes
9. Configure Structured Email Templates
10. Configure Automated Response Documents and Associated Queries

11. Upload Suggested Response Documents
12. Use Email Processing Workflow

Creating Email Accounts on the Email Server

For detailed information about creating email accounts on the Email Server, refer to the Managing Directory Information chapter of the *Oracle Email Server Administration* documentation (Creating Email Server User Accounts section).

Creating User Accounts

Oracle eMail Center System Administrator Interface ships with four default responsibilities, eMail Center Administrator, eMail Center Operations Manager, eMail Center DBA, and eMail Center Client. The process of setting up an Administrator or Operations Manager and assigning the appropriate responsibilities consists of several steps.

Note: You should have administrator level access to both the forms and the HTML based applications to perform these tasks.

1. Creating an employee (forms app)
2. Creating a CRM user (HTML app)
3. Assigning user responsibilities (forms app)
4. Setting JTF default profiles (forms app)
5. Setting UWQ Default Profiles (forms app)
6. Setting CRM resources (forms app)

Step:	1	2	3	4	5	6
Admin	X	X	X	X		
Ops. Manager	X	X ^t	X	X		X
DBA	X	X	X			
Agent	X	X	X	X	X	X ^{tt}

^t You need to assign JTF_ADMIN role

^{tt} You cannot perform this step until the OES accounts are defined in eMail Center

Note: You cannot create the agent account at this time. You must first define the email server accounts as shown in the Defining Email Server Accounts topic. Once you have defined the email server accounts, you can then create the agent accounts by following steps 1-6 above.

Creating an Employee with HRMS

Use this procedure to create employees with the Oracle Human Resources Management System.

Prerequisites

To perform the following steps, you must have Oracle HRMS installed and configured. If you do not have Oracle Human Resources Management System installed, you will need to create the employee using the Oracle Resource Manager application.

Note: If the employee already exists, you do not need to perform this step.

Steps

1. From the Self-Service (forms) application login screen, login using the default system administrator user name and password.
2. From the list of application responsibilities, select **US HRMS Manager**.
The Navigator-HRMS Manager screen appears, displaying a list of functions.
3. From the list of functions, double-click **People**.
4. Double-click **Enter and Maintain**.
A decision box appears, asking you if you want to change the effective date.
5. Click **NO**.
The Find Person screen appears.

6. From the Find Person window, click **New**.
An employee data form appears.
7. On the form, type information in the following fields:
 - Last - (name)
 - First - (name)
 - Title - (select from the drop-down list)
 - Type - (select from the drop-down field)
 - Employee Number
 - Birth Date
 - Social Security Number (for US version only)
 - All other fields are optional
8. Save the record to complete the process of creating an employee.

Note: Do not exit the application at this time. You will be returning to it when you assign user responsibilities.

References

For more information and detailed steps on creating employees, refer to the *Oracle Human Resources System Administration* documentation.

Creating a CRM User

Use this procedure to create CRM users.

Steps

1. From the common CRM login screen, type the default system administrator user name and password.
The CRM default screen appears.
2. Click the User tab.
3. Click the Add sub-tab.
The User Registration screen appears.
4. On the User Registration screen, enter data for all required fields.

- Select "End User" from the Account Type drop-down list

5. Click **Submit**.

Note: Perform the following steps for creating the Operations Manager account ONLY.

6. Click the Assign Roles sub-tab.

The Search User screen appears.

7. On the Search User screen, type the user name and click **Go!**

Note: You can search all user names by performing a wildcard search instead of typing the full user name.

The User Name table appears.

8. From the list of names, click the desired user name.

The User - Role Mapping table appears

9. Select the **JTF_FM_ADMIN** role (this role allows integration with the Fulfillment console).

10. Click ">" to assign the above role to the user.

11. Click **Update**.

Note: Do not exit the application once you select roles!

Assigning User Responsibilities

Use this procedure to link the user to the employee and to assign user responsibilities.

Note: If you are already logged into the Oracle Forms application, click **File**, select **Switch Responsibility**, and select **System Administrator**. Otherwise, follow steps 1 and 2.

Steps

1. From the Self Service application login screen, login using the default system administrator user name and password.
2. From the list of application responsibilities, select the **System Administrator** responsibility.
The Navigator System Administrator screen appears, displaying a list of functions.
3. From the list of functions, click **Security**, **User**, then **Define**.
The User form appears.
4. Query each type of user and assign the appropriate responsibility to that user.

User Type	Responsibility
Administrator	eMail Center Administrator
Operations Manager	eMail Center Operations Manager
DBA	eMail Center DBA
Agent	eMail Center Client (agent interface)

Note: If you want the agent to be able to handle telephone calls, then select **Interaction Center Agent** as the responsibility.

Note: You can search all user names by performing a wildcard search instead of typing the full user name.

5. From the drop-down list in the Person field, select the name of the corresponding employee previously created in the *Creating an Employee* section.

Note: Oracle recommends that only one user is assigned to each employee. It is possible, however, to assign multiple user IDs to an employee, even though you will receive warning messages.

6. From the File menu, click **Save**.

References

For more information on setting up the UWQ Selector and selecting agent work, refer to the *Oracle Universal Work Queue Concepts and Procedures* and *UWQ Selector GUI* documentation.

For more information on creating users, refer to the *Oracle Human Resources Management System (HRMS)* documentation.

Setting JTF Default Profiles

Use this procedure to set JTF default profiles.

Prerequisites

You must know the responsibility ID for eMail Center Administrator, Operations Manager and Agent before setting the JTF profile. To find the responsibility ID, perform the following steps:

1. From the Navigator System Administrator screen, click **Security**, **Responsibility**, then **Define**.
2. Query the desired responsibility based on the table below:

User Type	Responsibility
Administrator	eMail Center Administrator
Operations Manager	eMail Center Operations Manager
Agent	eMail Center Client (agent interface)

3. From the Help menu, click **Diagnostics**, then **Examine....**
The Examine Field and Variable Values screen appears.
4. Click the drop-down list in **Field**.

The Choose a Field screen appears.

5. From the list in the Choose a Field screen, select the RESPONSIBILITY_ID.
6. Click **OK**.

The value of the RESPONSIBILITY_ID is displayed in the Value Field of the Examine Field and Variable Value screen.

7. Click **OK**.

Note: Repeat these steps for the Administrator, Operations Manager, and Client responsibilities.

Steps

1. From the Navigator System Administrator screen, click **Profile**, then **System**.
The Find System Profile Values screen appears.
2. From the Find System Profile Values screen, click **Clear**.
3. Click the User check box and from the drop-down list in the User field, select the user name.
4. In the Profile field, type **%JTF_PROFILE_DEFAULT%** and click **Find**.
A list of system profile values appears.
5. In the User column, set the following values for these profiles:

Profile	Value	Description
JTF_PROFILE_DEFAULT_APPLICATION	680	eMail Center value for the application ID.
JTF_PROFILE_DEFAULT_LANG	US	This is the language code. (It is possible that you may not have this profile. If this is the case, your language setting is controlled by the ICX: Language profile).
JTF_PROFILE_DEFAULT_NUM_ROLES	15 (recommended)	This determines the number of rows you can see on each page when in browse mode.
JTF_PROFILE_DEFAULT_RESPONSIBILITY		This is the value responsibility ID you obtained in the prerequisite steps.

6. From the File menu, click **Save**.
7. Repeat these steps for every user with the Administrator or Operations Manager responsibility.

Setting UWQ Profiles

Setting the following UWQ profiles controls the kind of work (telephone calls, email, etc.) that is queued for an agent.

UWQ profiles only need to be set for agent accounts. Use this procedure to set UWQ profiles.

Steps

1. From the Profile screen, type%IEU% in the Find field (this will search all profiles that start with IEU).
2. Click **OK**.
A list of profiles appears.
3. From the list of profiles, select **IEU: Queue: Inbound Email**.

Note: The profile must be selected for the site level before selecting it for the agent level.

4. Click **OK**.
The Inbound Email Profile appears in the System Profile Values screen.
5. From the drop-down list in the User field, select **YES**.
6. Save the record.
7. Repeat steps3 through 6, selecting profiles for **IEU: Queue: Email** and **IEU: Blending Style**.

Note: For the **IEU: Blending Style** profile, select **Not Blended** from the drop-down list in the User field.

8. Save the record to complete the process of setting up UWQ profiles for the new agent.

Setting CRM Resources

These steps should only be performed to set CRM Resources for users with the Operations Manager and Agent responsibility.

Use this procedure to set the CRM resources.

Steps

1. From the Navigator System Administrator screen, click **File**, then **Switch Responsibility**.

2. Select the **CRM Administrator** responsibility.

A screen appears, displaying a list of functions.

3. From the list of functions, double-click the **Resources Manager**.

4. Double-click **Maintain Resources**.

5. Double-click **Import Resources**.

The Selection Criteria screen appears.

6. From the Resource Category field, select **Employee**.

7. From the Name field, select the new employee's name.

8. Click **Search**.

The Search Results list appears, displaying a row of data with Category set to Employee and Name set to the new employee's name.

9. Click **Create Resource**.

The Default Values screen appears.

10. Click **OK**.

The Selected Resource screen appears.

11. From the Selected Resources screen, click **Save Resource**.

12. Click **Detail**.

The Resource screen appears.

13. Perform the following steps depending on the account type:

For Operations Manager account(s):

- In the Roles tab, select **Marketing Encyclopedia** from the drop-down list for Role Type and select **MES Administrator** from the drop-down list for Roles (this allows integration with the MES application).

For Agent account(s)

- In the Interaction Center tab, select the desired interaction center you wish to associate with the eMail Center from the drop-down list in the Interaction Center field. From the drop-down list in the Email Account field, select the desired email account. Select **Default** from the drop-down list for the Parameter field and click the Value field to select the default values.

14. Accept the default values on the remaining tabs.

15. From the File menu, click **Save** to save the resource.

Defining Email Server Accounts

This topic group provides a high-level overview of the steps necessary to define Email Server accounts in the eMail Center System Administrator Interface, a worksheet for gathering all the necessary information, and detailed steps for performing each part of the defining Email Server accounts procedure.

Note: The eMail Center System Administrator Interface is an HTML based console and is separate from the Oracle Applications forms based Admin console.

High-level Steps

Prerequisites

To perform the following steps, you must have an administrator level status.

Steps

1. Create a Server Group entry.
2. Define an eMC Server entry and assign the eMC Server entry to the previously created Server Group.
3. Define an Email Db entry and assign this Email Db entry to the previously created Server Group.

4. Define one database link and create two others. You will define the link from OES to the Apps instance created earlier, and you will create two links to your Email Db (your Oracle Email Server database). One link for user <oraoffice> (synchronize accounts) and one for user <OO> (mail manipulator accounts). In a single instance scenario, the database link would be self-referencing.
5. Define an Email Server entry and assign this Email Server to the previously created Server Group.

Note: You can choose to run your IMAP/POP and SMTP processes on the same machine as the Oracle Email Server or on a different machine. For detailed information, refer to the *Oracle Email Server Administration Guide*.

6. Enable the two queues (if they are not already enabled).
7. Create an account for every user.

Note: For detailed information on creating entries in the Interaction Center drop-down list, refer to the *Oracle Universal Work Queue (UWQ)* documentation.

References

For more information on defining Email Server accounts, refer to the following documentation:

Oracle eMail Center Concepts and Procedures

Oracle Email Server Administration Guide

Oracle Universal Work Queue Concepts and Procedures

Worksheet

Use the following worksheet to gather all the necessary information for completing the detailed tasks in the Defining Email accounts procedure.

Create Server Group

Group Name: _____ Group Description: _____

Create EMC Server

EMC Server Name: _____ IP Address: _____

DNS Name: _____ Group Server: _____

Create Email Database Server

Database Name: _____ Service Name: _____

Host Name: _____ Database Description: _____

Port (SQL*Net port, default is 1521): _____ RT Availability: _____

Protocol (default is TCP): _____ Group Server: _____

Database SID (GLOBAL_NAME of the
database): _____**Create Database Link**

Server: _____ User: _____

Name: _____ Password: _____

Create Email Server

Email Server Name: _____ RT Availability: _____

DNS Name: _____ Group Server: _____

IP Address: _____ Server Type: _____

Port (Defaults 143 for IMAP, 147 for
SMTP): _____

—

Create Account

Name: _____	Email Server: _____
Domain: _____	Interaction Center: _____
Profile: _____	

Detailed Steps

Use the following procedures to define Email Server accounts.

Define Server Group

1. From the common CRM login screen (HTML), type the default system administrator user name and password.
The eMail Center System Administrator Interface appears, displaying the Server tab screen.
2. From the Server tab screen, click the Group sub-tab.
The Server Groups screen appears.
3. From the Server Groups screen, click **Create**.
The Create Group screen appears.
4. Type a group name and a group description in the provided fields.
5. Click **Create** to save the record.
The server group is created and you return to the Server Groups screen.

Note: If you do not see your new server group displayed, use the **Next** and **Last** commands to locate it in the list.

Define EMC Server

1. From the Server Groups screen, click the EMC sub-tab.
The EMC Servers screen appears.
2. From the EMC Servers screen, click **Create**.
The Create EMC Servers screen appears.
3. Type the EMC server name, DNS name, and IP address in the provided fields.

4. From the drop down list in the Group Server field, select the server group you previously created.
5. Click **Create** to save the record.

The EMC server is created and you return to the EMC Servers screen.

Note: If you do not see your new EMC server displayed, use the **Next** and **Last** commands to locate it in the list.

Define Email Database Server

1. From the EMC Servers screen, click the Email DB sub-tab.
The Database Servers screen appears.
2. From the Database Servers screen, click **Create**.
The Create Database screen appears.
3. Type the database name, hostname, port, protocol, SID, service name, description, and RT availability in the provided fields.
4. From the drop down list in the Group Server field, select the server group you previously created.
5. Click **Create** to save the record.

The database server is created and you return to the Database Servers screen.

Note: If you do not see your new database server displayed, use the **Next** and **Last** commands to locate it in the list.

Create Database Link

Note: You will need to perform these steps three times. First for the <oraoffice> user and then for the <OO> user, then to define the link going from OES to Apps you created earlier.

Steps

1. From the Database Servers screen, click the DB Link sub-tab.
The Database Links screen appears.

2. From the Database Links screen, click **Create**.

The Create Database Link screen appears.

3. From the drop-down list in the Server field, select the server.
4. Type the name, user and password in the provided fields.
5. Click **Create** to save the record.

The database link is created and you return to the Database Links screen.

Note: If you do not see your new DB LinkName displayed, use the **Next** and **Last** commands to locate it in the list.

Define Email Server

Note: You need to perform these steps twice. Once to define the IMAP server and once to define the SMTP server. IMAP is the protocol for the agent interface to talk to the server and SMTP is the protocol for communications across the internet.

1. From the Database Links screen, click the Email sub-tab.

The E-mail Servers screen appears.

2. From the E-mail Servers screen, click **Create**.

The Create E-mail Server screen appears.

3. Type the email server name, DNS name, IP address, port, and RT availability in the provided fields.
4. From the drop down list in the Group Server field, select the server group you previously created.
5. From the drop-down list in the E-Mail Server Type field, select the email server type.
6. Click **Create** to save the record.

The email server is created and you return to the E-mail Servers screen.

Note: If you do not see your new email server name displayed, use the **Next** and **Last** commands to locate it in the list.

Enable Queues

1. From the E-Mail Servers screen, click the Queue tab.

The Advanced Queues screen appears.

2. From the Select column, click the check box for the two desired queues.
3. Click **Enable** to enable the two selected queues.
4. Once you have enabled the queues, click **Refresh**.

The Advanced Queues screen updates to reflect the new status for the selected queues.

Create Account

Follow the steps below to create the accounts you wish to have on your site (example: Classifications, or Support).

Note: You will need to perform these steps for every account you wish to receive email.

1. From the Advanced Queues screen, click the Account tab.

The Accounts screen appears, displaying information in table form for all current accounts.

2. Click **Create**.

The Create Account screen appears.

3. Type the account information in the provided fields.
4. Once you have provided the required information, click **Create** to save the record.

You are returned to the accounts screen and your new account is displayed in the table.

5. Repeat steps 2 through 4 for each account you wish to receive email.

Creating an eMail Center Agent

Once you have created your accounts on the Email Server, you can create your eMail Center agent user accounts. To create an eMail Center agent user accounts, follow the procedures provided in the Creating User Accounts topic.

Note: To create an agent, you must first define the email server accounts.

Setting up Routing for Inbound Email

Follow the steps in the following chart to set up rules-based routing. The chart shows you where to read in detail about the setup step. The Window Names(s) column shows you in which window(s) you perform the step, and if the window is available only if you use a specific responsibility or product. The Required column shows you if the step is required, optional, required with defaults, or conditionally required.

Step Number	Required?	Oracle Sales Setup Step Description	Window Name(s)	AIW Reference
<input type="checkbox"/> Step 1	Required for rules-based routing	Define a group. See: Defining Groups	Define Groups window; Dynamic Groups window	NA
<input type="checkbox"/> Step 2	Required for rules-based routing	Define a route. See: Defining Routes	Routing Administration window	NA
<input type="checkbox"/> Step 3	Required for rules-based routing	Define the route priorities. See: Defining Route Priorities	Routing Priority window	NA
<input type="checkbox"/> Step 4	Required for rules-based routing	Define the classifications. See: Defining Classifications	Classification Administration window	NA

Defining Groups

There are two types or groups for rules-based routing: static and dynamic. A static group requires that you manually edit information about individual group

members. In a dynamic group, the database automatically updates information about individual group members.

For procedures, see:

- [Defining a Static Group](#)
- [Defining a Dynamic Group](#)

Defining a Static Group

Use this procedure to configure a static group for routing.

Prerequisites

None

Steps

1. Navigate to the Define Groups window.
 - a. In the Navigator window, on the Functions tab, choose **Call Center Admin > Routing Server Administration**.
The Routing Administration window appears.
 - b. Click **Static Groups**.
The Define Groups window appears.

Guidelines

When configuring static groups, use the following guidelines:

- The Group Number and Group Name must be unique.
- If you want to prevent an agent from being shared with other groups, check the Exclusive Flag box to indicate that the agent belongs exclusively to this group.
- You cannot create member records without choosing a Parent Group.
- When defining a static/dynamic group for Routing, the usage of the group should be set to 'Call Center' so that the group will be available in the Routing Admin LOV for static/dynamic groups.

Defining a Dynamic Group

Use this procedure to configure a dynamic group for routing.

Prerequisites

None

Steps

1. Navigate to the Dynamic Groups window.
 - a. In the Navigator window, on the Functions tab, choose **Call Center Admin > Routing Server Administration**.
The Routing Administration window appears.
 - b. Click **Dynamic Groups**.
The Dynamic Groups window appears.
2. If necessary, choose **File > New**.
3. Enter a unique name for the group.
4. From the Usage list, select the usage of the list.
5. Optionally, enter a description of the list.
6. Optionally, in the Active Dates area, select or enter the start and end date for the use of the group in routing.
7. Enter the SQL statement that selects the members of the group.
8. Click **Check Syntax**.
If the SQL statement is invalid, then an error message appears. If the SQL statement is valid, then no message appears.
9. From the **File** menu, choose **Save**.

Guidelines

- When defining a static/dynamic group for Routing, the usage of the group should be set to 'Call Center' so that the group will be available in the Routing Admin LOV for static/dynamic groups.

Defining Routes

A route definition identifies the potential groups or members to which a call may be routed and the call parameters (such as ANI) to be used in determining the destination of a call.

There are two types of routes for rules-based routing: static and dynamic. Static routing is based on data stored in cache. Dynamic routing is based on PL/SQL queries. Static routing is faster, but dynamic routing is more flexible.

Note: If the route server cannot determine agents from the defined destinations, then the server routes the message to the default destination defined for the route.

For procedures, see:

- [Defining a Static Route](#)
- [Defining a Dynamic Route](#)

Defining a Static Route

Use this procedure to define a static route.

Prerequisites

- Define a group. For more information, see [Defining Groups](#).

Steps

1. Navigate to the Routing Administration window.
 - a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Routing Server Administration**.
The Routing Administration window appears.
2. If necessary, choose **File** > **New**.
3. In the Route Definition area, identify the route.
 - a. Enter a unique name to describe the route.
 - b. From the Route Type list, select **Static**.
 - c. Optionally, enter the description of the static route.
 - d. If this route uses the Oracle Applications database, select **Application Database**.
 - e. If this route does not use the Oracle Applications database, select **Non Application Database** and enter the database driver and URL.

4. On the Route Destinations tab, select the groups to which calls may be routed.
5. On the Route Rules tab, define the parameters expected in an incoming call.
 - a. From the Key list, select a key (for example, ANI).
 - b. Enter the value for the selected key (for example, 888-555-1234).
6. From the **File** menu, choose **Save**.

Defining a Dynamic Route

Use this procedure to define a dynamic route.

Prerequisites

None

Steps

1. Navigate to the Routing Administration window.
 - a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Routing Server Administration**.
The Routing Administration window appears.
2. If necessary, choose **File** > **New**.
3. In the Route Definition area, identify the route.
 - a. Enter a unique name to describe the route.
 - b. From the Route Type list, select **Dynamic**.
 - c. From the Default Destination list, select the default destination to be used when the Routing Server cannot determine a destination based on the procedure parameters.
 - d. Enter the description of the dynamic route.
 - e. If this route uses the Oracle Applications database, select **Application Database**.
 - f. If this route does not use the Oracle Applications database, select **Non Application Database** and enter the database driver and URL.
4. On the Route Destinations tab, define the procedure that is to be used to derive the destination for call.

- a. In the Dynamic Destination area, enter the name of the procedure (Package.Procedure) that is to be used to derive the destination for message.
- b. In the Procedure Parameters area, identify the parameters for the procedure.
Sequence is a generated number that indicates the sequence of the parameter.

5. On the Route Rules tab, define the rules for the route.
 - a. From the Key list, select a key (for example, ANI).
 - b. Enter the value for the selected key.
6. From the **File** menu, choose **Save**.

Defining Route Priorities

You can define and change the priority of route definitions. Changing the value of a route priority affects the values of other route priorities. If you increase the value of a priority, then the priorities of all the routes with a value equal to or greater than the original value decrease by one. If you decrease the value of a priority, then the value of all the routes with a value equal to or less than the original value increase by one. For example, if you decrease 6 to 3, then 3 increases to 4, 4 increases to 5, and so on. If you increase 3 to 6, then 4 decreases to 3, 3 decreases to 2, and so on.

Use this procedure to set the priority for a route.

Prerequisites

None

Steps

1. Navigate to the Routing Priority window.
 - a. In the Navigator window, on the Functions tab, choose **Call Center Admin** > **Routing Priority Administration**.
The Routing Priority window appears.
2. From the Priority list, select a priority.
3. Click **Change Priority**.
4. From the **File** menu, choose **Save**.

Defining Classifications

Classifications specify how to identify and route particular types of messages that are associated with the selected Route ID. Classifications are of two types: literal and database procedure. A literal classification is a string. A database procedure classification is a stored procedure.

Classification rules can determine the route that a call must take, or a classification rule can designate a message as a classification for reports or for screen pops. Every classification must have rules that define the conditions under which the classification occurs. When a message meets all these conditions, the classification is the result and the message is routed accordingly.

A classification can have multiple rules associated with it. An individual route can have multiple destinations, which can be either static or dynamic. Every route has a sequence of a Key and a Value whose relationship is determined by one of the available Operations (=, !=, >, >=, <, <=).

If an incoming routing request results in a new classification, the new classification is added to the route request as one of the parameters. The server tries to find a new route based on this route request.

Note: If you configure a classification rule that results in a new rule, then you will need a route that is defined for that new rule.

For example, if the classification rules in the preceding table result in adding the new classification rule CLASSIFICATION=GOLD to the classification request, then a new route is determined based on the new rule.

For procedures, see:

- [Defining a Literal Classification](#)
- [Defining a Database Procedure Classification](#)

Defining a Literal Classification

Use this procedure to define a literal classification.

Prerequisites

None

Steps

1. Navigate to the Classification Administration window.
 - a. In the Navigator window, on the Functions tab, choose **Call Center Admin > Classification Administration**.

The Classification Administration window appears.
2. If necessary, choose **File > New**.
3. In the Classification Definition area, define the classification.
 - a. Enter a unique name to describe the classification.
 - b. From the Type list, select **Literal**.
 - c. Enter the maximum amount of time, in seconds, that the Routing Server should spend trying to determine the destination.
 - d. If this classification uses the Oracle Applications database, select **Application Database**.
 - e. If this classification does not use the Oracle Applications database, select **Non Application Database** and enter the database driver and URL.
4. On the Classification Rules tab, define the rules for routing based on the keys identified in the route definition.
 - a. From the Key list, select a key.

Note: A key used in a classification rule must be the same as that identified in the route rules definition.

- b. From the Operation list, select an operator.
- c. Enter the value for the selected key.

5. From the **File** menu, choose **Save**.

Defining a Database Procedure Classification

Classifications specify how to identify and route particular types of messages that are associated with the selected Route ID. A database procedure classification is a stored procedure. The following conditions apply.

Prerequisites

None

Steps

1. Navigate to the Classification Administration window.
 - a. In the Navigator window, on the Functions tab, choose **Call Center Admin > Classification Administration**.

The Classification Administration window appears.
2. In the Classification Definition area, define the classification.
 - a. Enter the name of the database procedure.

Note: The name of the classification is not verified against the stored procedures. Be sure to enter the correct procedure name.

 - b. From the Type list, select **Database Procedure**.
 - c. Enter the maximum amount of time, in seconds, that the Routing Server should spend trying to determine the destination.
 - d. If this classification uses the Oracle Applications database, select **Application Database**.
 - e. If this classification does not use the Oracle Applications database, select **Non Application Database** and enter the database driver and URL.
3. On the Classification Rules tab, define the rules for routing based on the keys identified in the route definition.
 - a. From the Key list, select a key.

Note: A key used in a classification rule must be the same as that identified in the route rules definition.

 - b. From the Operation list, select an operator.
 - c. Enter the value for the selected key.
4. On the Classification Parameters tab, identify the parameters for the database procedure.

- a. From the Parameter list, select a parameter.
- b. From the Datatype list, select the data type of the parameter (for example, VARCHAR).
- c. From the Direction list, select the direction of the parameter (for example, IN).
Sequence is a generated number that indicates the sequence of the parameter.

5. From the **File** menu, choose **Save**.

Configuring eMail Center Properties

Use this procedure to configure the properties for eMail Center. This procedure provides the UWQ Server with the URL to launch the eMail Center agent interface component. This step is only required when setting up the system for first time use, or after changing the Apache server root.

Steps

1. From the common CRM login screen, type the default system administrator user name and password.
The CRM default screen appears.
2. From the default screen, click the Advanced tab.
The Advanced screen appears.
3. From the Advanced screen, click the Properties sub-tab.
4. From the View drop-down list on the Properties sub-tab, select **IEM**.
A list of links should appear.
5. From the list, click the link **iem.base.url**.

Note: If the list of links does not appear after step 4, click **Create** and the Create Key screen appears. Type **iem.base.url** in the Key field and move on to step 6.

6. Type the Apache server system root URL in the Value field (e.g. <http://www.visioncorp.com/>)

Note: You must include the last slash (/) in the URL, as it is required.

7. Click Update.

You return to the previous screen.

8. Click Update again to save all changes.

References

For more information, refer to the Administering Oracle eMail Center section of the *Oracle eMail Center Concepts and Procedures* documentation.

Configuring UWQ to Launch the Business Application

Follow the steps below to define the business application for Oracle Universal Work Queue to pop or start when emails are delivered to users.

Prerequisites

Any application that needs to be "popped" must be successfully installed, configured, and made available to UWQ. For more information on how to make a new application available to UWQ contact the UWQ Product Manager.

Steps

1. From the Self-Service (Forms) application, log in using an account that has access to the UWQ Administrator responsibility.
2. Double click the UWQ Administrator responsibility.
The Media-Action-Classification-Association form appears.
3. Click the Media Type field and select the LOV.
4. Select a Media Type. (Example, Inbound Email).
5. Click the Classification field and type the classification for which you would like to associate the screen pop or Media Action.
6. Click the Media Action field and select the LOV.
7. Select Customer Care Media Function proc.
8. Repeat steps 5-9 to create additional Media Action Classification Associations.

Creating Classifications and Themes

Overview

Resolving interactions involves two major challenges:

- Understanding the intent of the communication. What is being requested or communicated?
- Determining the appropriate responses or actions necessary to resolve the interaction

These challenges can be answered by human intervention (an agent reads and responds), a semi-automated process that requires human assistance, or a fully automated analysis and response.

A fully automated process requires three processes:

- Beginning: Analyze the intent of the unstructured email message
- Middle: Classify the intent
- End: Suggest one or more responses to the message, based on the classification

Oracle eMail Center uses the iMT (interMedia Text) feature of the Oracle 8i database to analyze incoming email messages based on the linguistic properties of the various parts of the email, such as header, subject, and body. The term "classification" refers to the category under which the email should be classified. A good example of classifications for a hardware company would be Accessories, Service, Product Information, Installation, etc.

Each classification has a set of underlying theme signatures that are used by iMT to classify the email. Each theme signature for a classification has an associated score, which is used to order the classifications base on probability percentage.

This weighting methodology applies to theme signatures for responses as well. After a message is classified, eMail Center creates a search string based on the combination of the incoming message theme set and the response theme set. This search string is then used to query the MES database to retrieve the suggested response documents.

Note: Please note the distinction between eMC classifications and the classifications derived by the routing server.

- eMC classifications indicate the intent of a message.
- Routing classifications are used in the UWQ GUI to display media items and may or may not relate to the intent of a message.
- Routing classification can be the account name into which the email arrived.

Classifications and themes can be created in two ways:

- By sending email to a “classification” email account
- From the eMail Center Operations Manager Interface

Terms

Classification - the intent(s) of an email message.

Classification (as eMC sees it) - categories into which incoming email messages are sorted.

Classification Theme Signature - collection of themes and associated weights for the specified classification.

Response Selection Theme Signature - collection of themes and associated weights for responses to a specified classification.

Sample Message - a cleaned up message or piece of text whose contents are directly related to the characteristics of the classification.

Sample Response - cleaned up response or piece of text whose contents are directly related to the characteristics of responses for the classification.

Theme - keywords or phrases extracted from the text of the message or relative terms selected from the knowledge base.

Theme Signature - collection of themes and their associated weights.

Weight - signifies the relative importance of a particular word in a given theme.

Creating Classifications and Themes by Sending Email

Use this procedure to create classifications by sending email to the "classification" email account.

Prerequisites

A "classification" email account should be created on the Email Server and should also be defined in the eMail Center.

Steps

1. Send an email to the "classification" account you created with the subject line reading:

<Classification Name><accountname@domainname><Q> OR

<Classification Name><accountname@domainname><R>

The letters 'Q' and 'R' above indicate whether the classification and corresponding theme signatures generated are for the incoming message (Q) or the outgoing response (R).

For example, if you created an email account called "support" for handling all support related issues and if you want to create a classification called "hardware" to categorize all hardware support issues, the email would have the following the subject line.

<hardware><><Q> OR <hardware><><R>

Based on whether you append the letter 'Q' or the letter 'R' to the subject line, the iMT will treat the email body as a sample inbound message or a sample response and generate themes with associated weights for the same.

Note: If the classification name specified in the subject line already exists, then the theme's signatures (and their weights) will be updated for the existing classification based on the content of the email.

References

For detailed information on creating email accounts on the Email Server, refer to the Managing Directory Information chapter of the *Oracle Email Server Administration* documentation (*Creating Email Server User Accounts* section).

For detailed information on defining Email Server Accounts in the eMail Center, refer to the *Defining Email Server Accounts* section of the *Oracle Email Server Administration* documentation.

Creating Classifications from the Operations Manager Interface

Use this procedure to create classifications from the eMail Center Operations Manager Interface.

Steps

1. From the Oracle Applications Operations Manager screen, click the Classification tab.
The Classification screen appears.
2. From the Classifications screen, click **Create**.
The Create Classification screen appears.
3. In the Classification Name field, type the classification name.
4. From the drop down list in the Email Account field, select the email account.
5. Click **Create**.
The classification is created and you return to the Classifications screen.

Creating Themes from the Operations Manager Interface

Use this procedure to create themes from the eMail Center Operations Manager Interface.

Prerequisites

The classification for which you are creating a theme must already be created.

Steps

1. From the Oracle Applications Operations Manager screen, click the Classification tab.
The Classification screen appears.
2. From the Classifications screen, click the Themes sub-tab.
A drop down list appears, displaying all of the existing classifications.

3. From the drop down list, select the classification for which you wish to create themes.

4. Click **Create**.

The Create Themes screen appears, displaying the selected classification name.

5. In the provided fields, type the name and score for the theme you are creating.

6. From the drop-down list in the Type field, select the type of theme.

7. Click **Create**.

The new theme is created for the selected classification and you return to the Classifications screen.

Configuring Structured Email Templates

Overview

eMail Center includes a set of structured email templates (web forms). Structured email templates are HTML documents placed on an enterprise's web server that can be filled out by a customer/prospect and result in the creation of a structured email when that customer/prospect clicks the Submit button. These templates can be used to leverage email as a tool to perform such tasks as create a service request, inquire about the status of service request, etc.

You can enable the included templates to submit email by pointing the HTML code for the templates to the correct web server and configuring the web server to handle the EmailGeneratingServlet. To do so, perform the tasks in the Modifying Existing Templates topic group below.

If the included templates are insufficient for your purposes, you can create your own custom templates. To do so, perform the tasks in the Creating Inbound Email Templates topic group.

Modifying Existing Structured Email Templates

This topic group provides steps for modifying the templates included with eMail Center.

Pointing the HTML Code to the Correct Web Server

Use this procedure to point the HTML code for the templates to the correct web server.

Steps

1. Modify the following line of HTML code to point to the correct server:

action="XXX/oracle.apps.iem.emailgen.EmailGeneratingServlet"

(Where XXX is the full path of the folder where the servlets are stored on the web server). This path should include the machine name, port information and the folder information.

For example: *http://ap040sun.us.oracle.com:8000/jsp/*

Note: *.80* is the default port number for eMail Center. You only need to indicate the port number in the above line if you wish to utilize a different port number.

Configuring the Web Server to Handle the EmailGeneratingServlet

Use this procedure to configure the web server to handle the EmailGeneratingServlet.

Prerequisites

Before performing this task, your web server must be installed and configured to run JServ or its equivalent.

Steps

1. Add the following line in the zone.properties file of JServ:

servlet.oracle.apps.iem.emailgen.EmailGeneratingServlet.initArgs=hostname=<HOSTNAME>,to=EMAIL@DOMAIN

Note: *HOSTNAME* refers to the name of the machine on which the SMTP server is running. *EMAIL* refers to the email account and *DOMAIN* refers to the domain on which the email resides.

Creating Structured Email Templates

Templates are the structured email means by which customers can contact your interaction center. They are designed to provide information to eMail Center in a particular format that allows eMail Center to determine how to process the form. Forms are created as either User Interface forms or HTML forms, and are created

using virtually any HTML authoring application. Templates are created using any text authoring application.

Allowed HTML Form elements include:

- Buttons
- Check boxes
- Radio Buttons
- Menus
- Text Input
- Hidden Controls

Each form will present a different predefined structured email template; however, there must be a structured email ID tag hidden on each form. The look and feel of the page can be customized to suit your needs.

Note: Applets, image files and Active X controls should not be part of the form.

Before creating UI forms, you should first determine two things:

- What is the purpose of the form?

Every organization (and often project) is different, having different needs when it comes to capturing and managing information.

The purpose of the web form could be one of the several things. For instance, to check the customer's order status or it could be a service request. Based on the purpose, the content of the form would change. For example, if the organization is a service oriented organization, the forms would contain fields that would capture the type of service requested by the user, and all the other associated information. If the organization were to be selling products, the forms would be populated with their product details and the user would be requested to select the various available products, quantity required, type of product requested etc.

- What data must be captured to support processing?

The required data fields of the form are totally dependent on the calling applications data requirements.

Consider a service related situation. Capturing the customer account number or service request number or a product serial number would be vitally important.

Capturing other useful information would be extremely helpful, but the ones that are mentioned above would be an absolute must, to ensure that the request is attended to by the eMail Center.

In a sales situation, capturing the customer's contact information and perhaps, what products they are interested in would help to route it through the concerned department and give a response back to the customer.

In the case of general service information, it is possible to have a new customer, in which case, their contact information, their questions, concerns etc., would have to be obtained.

High-level Steps

The following steps assume you are using a HTML authoring application for creating inbound email templates:

1. Creating the title of the HTML form (template)
2. Creating the form tag
3. Create the hidden tag.
4. Adding form elements.
5. Adding validation logic.

Steps

1. Create the title of your HTML form (template).

Example for a service request form:

```
<H2><font color=red><u> Got a Problem?</u></font></H2>
<H3>Use this handy form to submit a service request.</h3>
<p>*<b>Required Fields</b>
<br><b></b>&nbsp;
```

2. Create the form tag.

In this example the form has the name submit_problem. The form tag should have an action and a method. The action refers to the Servlet to which the information from this form is submitted. The method is a post referring to the HTTP protocol used to transfer the information from this form to the Server. OnSubmit performs error checking to ensure that all the required fields are entered and in order.

```

<form name="submit_problem"
action="http://servername.yourcompany.com/servlets/oracle.apps.iem.emailgen.EmailGeneratingServlet" method="post" onSubmit="return verifyfields(this)">
</Form>

```

3. Create your hidden tag. A hidden tag with the following value format must be part of each form (without this tag, the Servlet would not be able to process the request):

```
<EMAILTYPE>_<TYPE>_<SUBTYPE>
```

Tag	Value
EMAILTYPE	Used to indicate web-based or text. If an email is generated from web-based email client, EMAILTYPE will be "WEB". Otherwise its value will be "TXT".
TYPE	Denotes the request group, such as ORDER REQUEST or SERVICE.
SUBTYPE	Represents detail information about a request, such as CREATE or STATUS.

Example:

```
<input type="hidden" name="tag" value="WEB_SERVICE_CREATE">
```

Having created the form tag and hidden tag, follow the steps below to add form elements.

4. Create a table to format the other form elements in order.

```
<table width="100%">
```

5. Add the text input field to capture the email address.

```
<td><blockquote><div align="right"><b>Email  
Address</b></div></blockquote></td>
```

```
<td>*<input type="text" name="emailadd" value=""  
size="20"></td><td>&nbsp;</td>
```

The first column <TD> holds the label of the form element and the second column holds the input box where the user can enter the information. Most of the other fields in this form are also text fields and the syntax for those are given in step 6.

6. Add the remaining fields.

```
<td><blockquote><div align=right><b>Your  
Name<b></div></blockquote></td>  
<td>*First Name</font>  
<br><input type="Text" name="firstname" value="" size="20"  
maxlength="20"></td>  
<td><div align=left>*Last Name  
<br><input type="Text" name="lastname" value="" size="20"  
maxlength="20"></div>
```

7. Add the Submit and Reset buttons.

```
<td colspan=3><center><input type=Submit  
value=Submit>&nbsp;&nbsp;<input type=reset value=Reset>
```

8. Close the table with a </table> tag.

Follow the steps below to add validation logic.

9. Add JavaScript Error Checking Code.

Ideally, you should place the JAVASCRIPT code within the head tags, but it can also be placed anywhere within the page.

10. Validate your form.

Note: Error checking for required fields is mandatory to ensure that a proper automated response is sent back to the customer. The nature of error checking would depend on the type of form that is being submitted.

Uploading Structured Email Templates in iSupport

The steps below assume that the customer has also purchased the Oracle iSupport application, through which the end-user will be able to submit an email via an inbound template. If you do not purchase the iSupport application, then you will need to open Windows Explorer and copy the structured email templates to the \$IEM_TOP / html directory for your web server.

Note: Since the templates (HTML files) are referenced and not physically stored in the application, the administrator should be aware of the exact location of these files on the web server.

Use this procedure to upload structured email templates into iSupport.

Prerequisites

Before performing this task, iSupport must be installed and you must have an administrator level login.

Steps

1. Login to Oracle iSupport as an administrator.
2. From the iSupport default screen, click the Email Templates tab.
3. From the Email Templates tab, click **Add Email Template**.
4. In the Template Name field, type the name of the template.

Note: Use a name that best describes the template.

5. In the Template Location field, type the location of the template.

Note: Be sure to enter the full path (including the file name) for the location.

6. Click **Create**.

Important: You can update the location of a previously loaded template, but you cannot update the name. To update the name of the template, you must first remove the existing template and upload the template again with a new name.

References

For more information on uploading inbound templates to iSupport, refer to the *Oracle iSupport* documentation.

Verifying The Template is Referenced Correctly

Use this procedure to verify that you have referenced the template correctly in iSupport.

Steps

1. Login to Oracle iSupport as an administrator.
2. From the iSupport default screen, click **Email**.
3. Select the template you wish to verify by clicking the corresponding check box.
4. Click **Continue**.

The application should now be able to successfully display the contents of the template.

References

For more information on verifying the contents of the template in iSupport, refer to the *Oracle iSupport* documentation.

Configuring Automated Response Documents and Associated Queries

Overview

Automated responses to structured and unstructured inbound requests are handled by Oracle Fulfillment. Oracle Fulfillment is one of the CRM foundation products and should already be installed. The response documents in Fulfillment are referred to as “Master Documents”, and they may or may not have a query associated with them. If the master document has one or more merge fields, then it should have an associated query to populate those merge fields. The number of columns in the select clause of the query should equal the number of merge fields in the master document.

Creating Automated Response Documents

You can create email forms and apply a query to generate a personalized outbound email. Automated response documents are created using any HTML editor. As stated earlier, prior knowledge of HTML is assumed here. Before creating an email template, you must identify the query containing the desired result set for the document. Release 11i of eMail Center will only support one query per email template; however, multiple email templates can use a single query.

The only dynamic content that eMail Center allows is the use of Merge fields and fragments. Merge fields were explained in the previous section. Fragments are zip files, which are stored in the MES tables.

The directory structure of the zip file must be organized in the following manner: place all HTML files and an images directory in the root. Place all associated images in the images directory.

Rules for Using Merge Fields and Fragments

A set of rules governs the use of both merge fields and fragments. The guidelines for using the merge fields and fragments are mentioned below.

1. HTML documents can be created following HTML standards. These documents should be in directory. That directory's structure should be a parent directory in which all the HTML files would reside, and an images directory in which all the associated images would be placed. The HTML files and an images directory with all the images associated with the HTML files would be zipped together and be available as a zip file. Release 11i 1-to-1 fulfillment will only support static images. This means images cannot be included in a HTML file as a merge field or as Fragments. Any image included in the HTML document needs to be in the images directory and the path of the image should point to the images directory. For instance, in the response to Please Call Me form, a reference to the oracle logo would be like:

```

```

Note: The HTML file and the images directory are in the same level. All associated images should reside in the images directory.

2. The list of available Merge Fields from the query will be in the file merge_fields.txt (or any other name that you gave) that you previously created using the create data source button. (As explained in the previous section- Getting bind variables for a Query).
3. Bind variable names are case sensitive. When bind variables are used, they should be used exactly as they are referred to in the file that was created earlier. Cutting and pasting the bind names from the file merge_fields.txt would solve the problem.

Rules for Creating Automated Response Documents

1. Merge fields must be surrounded by the following special tag and special characters.

The tag that should surround the merge field is:

```
<span style='mso-field-code'>&#171; &#187;</span>
```

Mergefield can be placed in the middle as shown in the following example:

```
<span style='mso-field-code'>&#171;Mergefield&#187;</span>
```

The Mergefield place holder is highlighted. Bold letters indicates the special tags and special characters that enclose the merge field. The highlighted Mergefield is just a place holder. The actual Merge field should be placed there in the document.

Important: Merge Fields are case sensitive and should be referred to exactly the same as they were obtained from the query.

2. If merge fields are embedded in an HTML table, the table can only have two rows. The first row must be the table header and the second row should hold the merge fields. In such an instance, the data must be repeated for the number of times the rows are returned by the query.
3. Fragments cannot contain merge fields inside them. Fragments are zip files containing HTML files and an image directory with all associated images placed under it. This directory structure must be maintained all the time.
4. The tags surrounding the fragments are:

```
<span style='fragment-field-code'>&#171; &#187;</span>
```

The Fragment ID would go in the middle as shown in the following example:

```
<span style='fragment-field-code'>&#171;FragmentID&#187;</span>
```

Create an Associated Query

Use this procedure to create a query in Fulfillment before associating it with a master document.

Prerequisites

Before performing this procedure, Oracle Fulfillment must already be installed.

Steps

1. From the common CRM Login screen, login as the Fulfillment administrator.
2. Click the Query tab.
3. Click **Create**.
4. In the “Create Query” screen, type in data for the following fields.
 - Query Name - this name should be unique.
 - Query Description - a brief description of the query.
 - Query String - this is the SQL statement for the query. The number of fields in the “Select” clause should equal the number of merge fields in the master document. Do NOT end the query with a “;” or “/”, the standard SQL syntax to execute the query.
 - Application Database - the database instance against which the query should be run.
 - Application User Name - the userid of the account that should be used to run the query.
 - Application Password - the password for the above userid.
5. Click **Create**.

Important: Once you create the query, please note the Query ID number. You will need this ID number for the verification process.

Uploading Automated Response Documents and Associated Queries

Use this procedure to upload an automated response document in Oracle Fulfillment and associate a query (if required).

Prerequisites

Before performing this procedure, Oracle Fulfillment must already be installed.

Steps

1. Login to the CRM application as a fulfillment administrator.
2. Click the Template tab.
3. Click the Master Document sub-tab.

4. Click **Upload**.
5. Type the full path for the filename, or click **Browse** to browse through your local file system.
6. After selecting the file click **Upload**.
A screen appears that allows you to associate a query if required.
7. In the Description field, type a brief description about the document.
8. From the **Query** drop-down list select the associated query name. If you don't wish to associate any query select **No Query** which is also the default option.
9. Click **Upload** to complete the process of uploading a master document and associating a query to it.

Uploading Suggested Response Documents

Overview

Oracle eMail Center (eMC) uses the Marketing Encyclopedia System (MES) as its document repository. This topic group describes the process of uploading response documents into the response document repository (also referred to as KB or the knowledge base). MES stores documents under different categories.

eMail Center requires a category called "EMC Templates" to store the email templates. These templates are standard email responses that an agent may use to respond to an inquiry and should not be confused with the "inbound templates" or customer service web forms that are uploaded in iSupport. Currently, eMail Center ONLY searches the "EMC Templates" category for email templates and all available categories for suggested responses.

Important: We are also assuming that the customer has purchased iSupport (for the purpose of uploading inbound email templates). If the customer has not purchased iSupport, they should be aware of steps that need to be performed to reference the standard set of templates provided by eMail Center on their web server.

High-level steps

1. Create the category in MES (only performed once).
2. Define a hierarchy among categories (only performed once).

3. Create a suggested response document.
4. Upload the documents into MES.
5. Verify the document was uploaded.
6. Create and upload an associated query (only if the document has merge fields).
7. Associate the suggested response document and the query.

References

For more information on MES categories, refer to the *Oracle Marketing Online* and *Oracle Marketing Encyclopedia System* documentation.

Creating a Category in MES

Use this procedure to create a category in MES for the response templates.

Prerequisites

You must have a valid administrator login account.

Steps

1. Login to Oracle Marketing Online application (which owns the MES repository) as an administrator.
2. From the default screen in Marketing Online, click the MES tab.
3. From the MES tab, click the Administration sub-tab.
4. From the MES Administration sub-tab, click **Category Manager**.
The Category Manager screen appears.
5. In the provided fields, type the name of the new category and a description of it.
6. Click **Update**.

Oracle Marketing Online creates the new category.

Defining a Hierarchy Among the Categories

Use this procedure to define a hierarchy among categories by creating sub-categories.

Prerequisites

Before you can define a hierarchy among categories, you must first create the categories as shown in the *Creating a Category in MES* topic.

Steps

1. Login to Oracle Marketing Online application (which owns the MES repository) as an administrator.
2. From the default screen in Marketing Online, click the MES tab.
3. From the MES tab, click the Administration sub-tab.
4. From the MES Administration sub-tab, click **Hierarchy Manager**.

The Hierarchy Manager screen appears, displaying a list of child and parent categories.

5. From the list of child categories (on the right column), select the desired child category.
6. From the drop-down list in the Parent Name (left) column, select the corresponding parent category.
7. Click **Update**.

Oracle Marketing Online links the child category to the selected parent category.

Creating a Suggested Response Document

A suggested response document can be a Word or an HTML document that may or may not have merge fields. A merge field is a place holder, for a variable which gets automatically filled when a query associated with document is fired. The associated query is executed when a response document is selected. The merge fields need to be enclosed within special tags, “«”, which can be entered by holding down the “Alt” key and typing “0171” on the numeric keypad (with the Num Lock Turned off), and “»”, which can be entered by holding down the “Alt” key and typing “0187” on the numeric keypad (with the Num Lock Turned off). Example:

Dear «CP_FIRST_NAME» «CP_LAST_NAME»,

Thank you for your interest in «PRODUCT_NAME». This product will be released on «RELEASE_DATE».

Uploading Documents Into MES

Use this procedure to upload response documents into MES.

Prerequisites

Before you upload response documents into MES, you must first create a category.

Steps

1. Login to Oracle Marketing Online application (which owns the MES repository) as an administrator.
2. From the default screen in Marketing Online, click the MES tab.
3. From the MES tab, click the Publish sub-tab.
4. From the drop-down list in the Item Type field, select an item type.

Note: For response documents, you should select the item type **File**.

5. In the provided fields, type a title, author name, and description.
6. From the drop-down list in the Content Type field, select a content type.

Note: For response documents, you should select the content type **Master Document**.

7. Leave the Content Creation Date and Effective Start Date fields blank.
8. From the drop-down list in the Duration field, select the **Permanent** radio button or enter a value and a time period for that value.
9. Select a priority for the document.
10. Do not click the **Create distribution rules on publish** check box.
11. From the Category field, click **Find**.

The Find screen appears, displaying a list of the categories.

12. From the list, select the corresponding category.

Note: You can expand the category tree by clicking the (+). Once the parent category expands, click the desired child category name to select it.

- 13. Click **Upload File**.**
- 14. Click **Browse** to browse through the file system.**
- 15. From the file system, select the desired document.**
- 16. Click **Open**.**

The entire path for the selected document is now displayed under File Name.

- 17. Click **Attach File**.**

The file uploads. Once the file has fully uploaded, the File Name is no longer displayed.

Important: Do not click any other button until the file has fully uploaded, or the upload process will fail. Also, if the response document contains one or more inline images, then please repeat steps 14 through 17 for every image file (.gif or .jpeg) that needs to be included in the response document.

- 18. Once the file uploads and the File Name disappears, click **Finished**.**
The file name should display under Files.
- 19. Click **Publish**.**
A success message will be displayed on the top of the screen in red letters.

Note: To publish another document you must start by clicking Publish sub-tab again. Do not try to use (re-cycle) data entered for a previous file.

Verifying the Document Uploaded Successfully

Use this procedure to verify the document successfully uploaded into MES.

Prerequisites

Before you verify the success of your upload, you must first complete all the steps in the *Uploading Documents Into MES* topic.

Steps

1. Login to Oracle Marketing Online application (which owns the MES repository) as an administrator.
2. From the default screen in Marketing Online, click the MES tab.
3. From the MES tab, click the Categories sub-tab.
4. Click the category name under which you uploaded your response documents.

The name of the file and its description should appear. If not, go back and repeat the steps listed in the *Uploading Documents Into MES* topic.

Create an Associated Query and Upload it

You need to associate a query with a response document only if the document has merge fields that need to be filled automatically based on some input parameters. Refer to the *Create an Associated Query* section to create an associated query and upload it.

Note: After uploading the query, click on the query name, now displayed in the table under the Query tab. Make a note of the QUERY ID for the query you just uploaded. You will need this ID to associate the query with the response document.

Associate the Suggested Response Document and the Query

To be able to associate the suggested response document and the query to expand the merge fields in the document, you will need to have the following data:

Document ID

Query ID (which you should have obtained by performing the steps in the section above)

To obtain the document ID, currently you have to run the following SELECT statement in SQL*Plus:

```
SELECT ITEM_ID
FROM JTF_AMV_ITEMS_TL
```

```
WHERE ITEM_NAME = 'DOCUMENT_TITLE';
```

(Where DOCUMENT_TITLE is the title of the suggested response document you uploaded in MES).

To associate the suggested response document with the query, currently you have to run the following INSERT statement in SQL*Plus:

```
INSERT INTO JTF_FM_QUERY_MES  
VALUES (DOCUMENT_ID, QUERY_ID, SYSDATE, USER_ID, SYSDATE,  
USER_ID, NULL, NULL, NULL);
```

Where *DOCUMENT_ID* is the document ID of the suggested response document obtained by running the SELECT statement above.

QUERY_ID is the ID of the uploaded query (noted when the query was uploaded)

SYSDATE is a system variable provided by SQL*Plus that always has the value of the current system date.

USER_ID is the user ID for the account you used to log in, e.g. 11001

NULL values are inserted in the final three columns since they are not related to our product

Using Email Processing Workflow

A rules engine (error processing) needs to be setup to process unstructured email through eMail Center. The backbone of rules engine is created by using Oracle Workflow, which is a part of Oracle Applications 11i. The name of the workflow for unstructured eMail Processing is “Email Preprocessing”. The rules engine must be configured onsite to cater to the various business rules and requirements of the client.

This topic group provides an overview of both unstructured and structured workflows, a high-level view of the steps involved in configuring operations for workflows, and detailed instructions for performing each of the configuration steps.

Error Processing

Errors that occur during eMail Center processing cannot be directly returned to the agent, since the agent and/or caller generally does not know how to respond to the error (in fact, eMail Center may be a background engine with no human operator). You can use Oracle Workflow Builder to define the events you want to occur in case of an error. Use Oracle Workflow Builder to modify the default error process associated with the process or create your own custom error process.

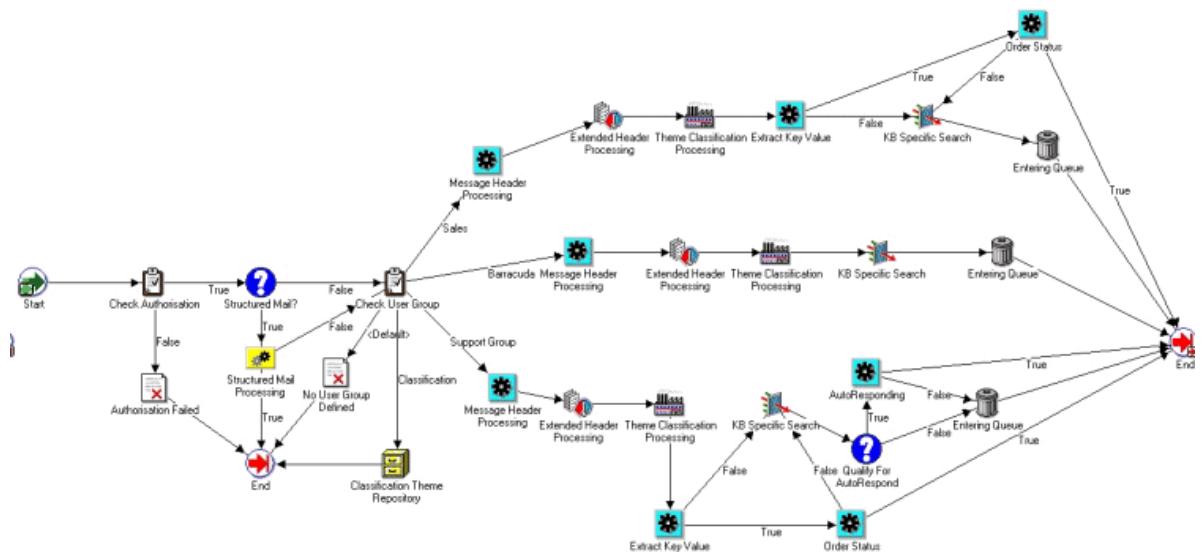
The error process can include branches based on error codes, send notifications, and attempt to deal with the error using automated rules for resetting, retrying, or skipping the failed activity. Once you define your error process you can associate it with any activity.

Defining Workflows

To build or modify workflows, you use the Oracle Workflow Builder application. Oracle Workflow Builder lets you create, view, or modify a business process with simple drag and drop operations. Using the Workflow Builder, you can create and modify all workflow objects, including activities, item types, and messages.

Although unstructured and structured email processing workflows are referred to separately, there is only **one** workflow with multiple paths, one of which being structured.

Email Processing Workflow



Terms to know

Activity - A unit of work performed during a business process.

Node - An instance of an activity in a process diagram as shown in the Process window.

Process - A set of activities that need to be performed to accomplish a business goal.

Workflow - A workflow is a processing path, consisting of a series of process nodes linked together to form paths that support a particular business rule or set of business rules.

Unstructured Email Processing Workflow

The “Email Preprocessing” workflow contains some mandatory nodes, which must be setup to get messages processed and passed to the eMC server.

Note: These seven mandatory nodes must ALL be present in the workflow or the workflow will fail.

These mandatory nodes are:

Node Name	Function
Check Authorization	Checks whether the message coming for the user is a valid eMail Center user. If not, it discards the message.
Structured Mail?	Checks whether the message is structured or unstructured. If the message is structured, it calls the structured workflow processing.
Structured Mail Processing	Calls the structured workflow to process the message as a structured workflow.
Check User Group	Routes the message depending on the account for which it was sent. For example, if the message was sent to the "Support" account, then it branches to the path for Support.
Classification Theme Repository	Processes the classification and theme. Stores the query and response themes for each classifications.
Message Header Processing	Processes the message header.
Extended Header Processing	Processes the extended header.

Node Name	Function
Theme Classification Processing	Classifies the incoming message and extracts the themes.
KB Specific Search	Searches the knowledge base to retrieve related response documents.
Entering Queue	Places the message in a queue after Processing. eMC Server retrieves the message from this queue and processes it further.

The “Email Preprocessing“ workflow also contains some nodes that are not mandatory, but are essential to enhance the functionality.

These nodes are:

Node Name	Function
Extract Key Value	Retrieves the service request number.
Order Status	Communicates between Fulfillment and eMail Center. Returns the response documents containing the service request status.
Qualify For Autorespond	Checks whether a auto-response from eMail Center should be sent or not depending on the attribute value “Threshold score”. Depending on the value of the threshold score, if the top classification score for the message is achieved or exceeded, the Autoresponding node is triggered.
Autoresponding	Autoresponds to a sender with a set of documents having a score greater than the value of “Document Threshold Attribute”.

The Structured Email Processing Workflow

Structured inbound email occurs when a customer completes a well defined form whose template was on a web site or received in an email message sent to the customer.

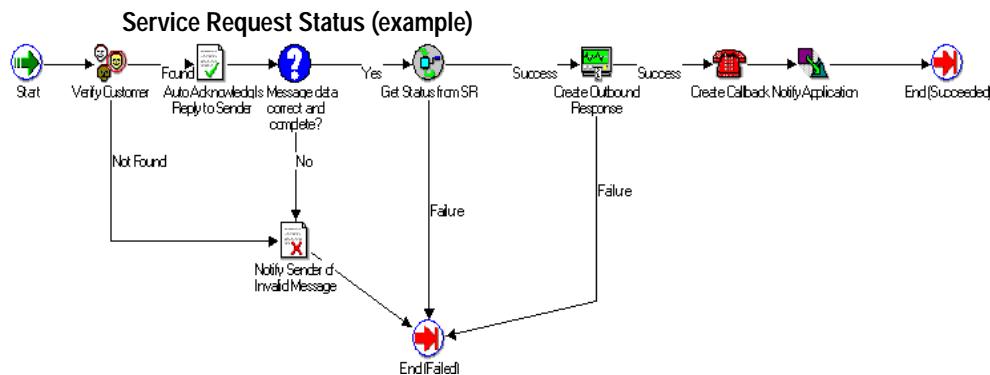
eMail Center has only one workflow for all that it does. The workflow, however, is comprised of paths for unstructured and structured inbound email. Earlier in this

document, the unstructured workflow was shown with one path repeated several times to accommodate each user group.

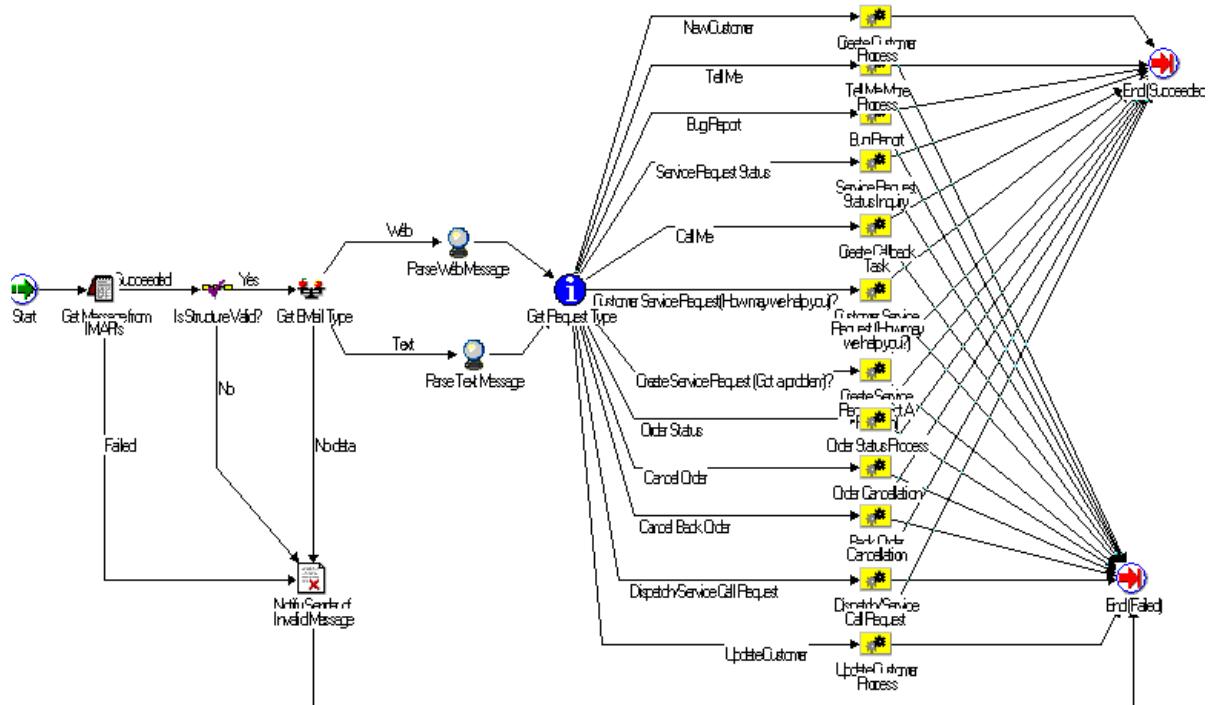
In contrast, structured workflow has 12 different paths shown here, plus one path for invalid messages. Those 12 paths are labeled:

- New Customer
- Tell Me More
- Bug Report
- Service Request Status
- Call Me
- Customer Service Request (How may we help you?)
- Create Service Request (Got a problem?)
- Order Status
- Cancel Order
- Cancel Back Order
- Dispatch/Service Call Request
- Update Customer

All 12 paths share two common end points, one for success and one for failure. The invalid message path goes only to the failure end point.



Structured Email Processing



Node Name	Function
Get Message from IM APIs	Extracts the message content from the email server APIs
Is Structure Valid?	Checks to see if the email is a structured email
Get Email Type	Checks to see if the email is web or text based
Is Message data correct and complete	Checks to see all the required data is complete and correct
Notify Sender of Invalid Message	Sends email back to sender if the email contains invalid data
Parse Web Message	Extracts the required data from the web based email

Node Name	Function
Parse Text Message	Extracts the required data from the text based email
Get Request Type	Extracts the type of request sent by the sender
Auto Acknowledge Reply to Sender	Sends an acknowledgment of receipt of the email request to the sender
Create Customer	Creates a new customer record in the database
Create Outbound Response	Sends the processed response back to the customer
Create Callback	Creates a record in the database for a call back
Notify Application	Indicates completion of the process
Verify Customer	Checks to see if the customer is a valid customer
Is it a lead?	Checks to see if the customer is a lead
Lead Capture	Creates a new lead in the database
Process Bug Report	Creates a new bug in the database
Get Status from SR	Returns the service request status from the database
Send Service Request Status	Sends the service request status to the customer
Create Callback Task	Creates a callback task in the database
Create Service Request	Creates a new service request in the database
Get Status from Order Capture API	Gets the status of the order from the database
Order Capture Order Cancellation	Cancels a previously placed order
Cancel the Back Order	Cancels a back ordered order
Process Dispatch Call Request	Creates a dispatch call
Update Customer Information	Updates the customer information in the database

Creating a Workflow Process

The following high-level steps comprise configuring workflow properties for using default workflow processes and/or creating the new workflow process or node:

1. Creating the Lookup Codes
2. Using a node
3. Setting the User ID
4. Configuring the Global Attributes

For configuring the default unstructured workflow process, follow steps 1 and 4.

For configuring the default structured workflow process, follow steps 3 and 4.

For creating a new unstructured process, follow steps 1, 2, 3, and 4

For creating a new structured process, follow steps 2, 3, and 4

Creating the Lookup Codes

Lookup codes are used in the workflow to link the email accounts with their respective workflow paths or processes. eMail Center ships with a set of default Lookup Codes, such as Support. These lookup codes should match the email accounts created in the Email Server (Refer to Creating Email Server Accounts) and defined in the eMail Center (Refer to Defining Email Server Accounts). If the account name does not match the default lookup codes, follow the steps below to create a new lookup code.

Steps

1. Login to Oracle Workflow Builder.
2. Select process->**Mail Preproc** (this selects the mail preprocessing workflow).
3. Double-click the screen.
In the Workflow Builder, Mail Preproc gets loaded.
4. From the Navigator screen of Oracle Workflow Builder, click **Lookup Type**.
5. Select **IM User Address**.
A list of default lookup codes appears.
6. Right-click **IM User Address**.
7. Select **New Lookup Code**.

The Lookup Code screen appears.

8. Enter the following data:

- Internal Name - this is the email account name that was created in IM and defined in the eMail Center. For example, you can enter "Marketing" for the Marketing account.
- Display Name - this is the descriptive name that appears in the lookup code. (The Oracle Workflow Builder recommends that the Internal Name and Display Name are different).

9. Click **OK**.

Using a Node

This topic provides a high-level overview of the steps necessary to use nodes when building a workflow.

Steps

1. Login to Oracle Workflow Builder.
2. Select process->**Mail Preproc**
3. Double-click the screen.
In the Workflow Builder, Mail Preproc gets loaded.
4. From the Workflow Builder navigator, select **Function**.
All available nodes appear.
5. Drag and drop the desired nodes into the Process diagram.
6. Select either **TRUE** or **FALSE** for boolean return types.
7. Repeat steps 5 and 6 until you have made all desired changes to the workflow.
8. From the Workflow Builder main menu, select **Verify**.
Workflow Builder checks the verification of the new workflow.
9. If the verification is successful, save the new workflow to the database.

Setting the User ID

Structured email processing responses come from the Fulfillment server, so you must be set up as a valid user in Oracle Fulfillment before you can receive a correct response.

The user ID is set up as a look up in the FND_LOOKUPS table and it is seeded there. The value of the user ID is retrieved using the following query:

```
select meaning
  from fnd_lookups
 where lookup_type = 'ITEM_USERID'
```

To determine whether the value returned by the query is a valid fulfillment user, check the returned value with the fulfillment server. If not, you must change the value.

Configuring the Global Attributes

Use this procedure to customize the global attributes for structured and unstructured workflows.

Steps

1. Log in to the Oracle Workflow Builder as Oracle Applications User.
The Show Item screen appears, displaying a list of items.
2. From the list of items in the Show Item screen, select **Email Preprocessing** for unstructured, or select **Structured Inbound Email Process** for structured.
3. Click **OK**.
The Workflow Builder loads the workflow.
4. Configure the global attributes.
 - Set the following global attributes for unstructured:

Attribute Name	Value
Repository Name	Pre-seeded with 'SMS,MES'. If other repositories are required, they must be added here.
Application ID	Application ID that loaded, and therefore owns, documents into Marketing applications.

Attribute Name	Value
Extended Headers	<p>Currently picking up five extended headers that come with a message. The headers are pre-seeded with the following values:</p> <ul style="list-style-type: none"> Extended Header 1: MESSAGE-ID Extended Header 2: ORGANIZATION Extended Header 3: MAILER Extended Header 4: LANGUAGE Extended Header 5: CONTENT-TYPE <p>These attributes are retrieved from the messages and passed to the eMC Server.</p> <p>These values can be changed to meet user requirements.</p>
Value For Key	<p>Pre-seeded with the phrase "service request number is". If this phrase appears in the message body, the customer is asking for a service request status.</p> <p>If customers want to send something different, this value must be changed.</p>
Service Request User ID	<p>Defines a valid fulfillment user ID.</p> <p>Before setting this value, check with the fulfillment service group to locate a valid user ID.</p>
Service Request Document ID	<p>Defines a valid fulfillment document ID.</p> <p>Before setting this value, check with the fulfillment service group to locate a valid document ID.</p>

- Set the following global attributes for structured:

Attribute Name	Value
SR DOC ID	The service request document uses this attribute as an ID for returning the service request status.
CREATE SR DOC ID	The create service request document uses this attribute for returning the service request creation details.

Troubleshooting

This topic group describes ways of troubleshooting various problems that arise while installing, starting, and running Oracle eMail center. This chapter discusses problems in the following areas:

- Installation
- Configuration
- Starting
- Logging on
- Running
- Performance

Installation

IM_IMT_EXTN Error

If you experience an error during eMail Center workflow processing with this package (IM_IMT_EXTN), contact the Metalink for the necessary patch.

iMT Processing Error

Ensure that your LD_LIBRARY_PATH environment variable contains \$ORACLE_HOME/ctx/bin for the external procedure LISTNER calls.

Configuration

Manual Step(s) in question?

Refer to the Implementation section on Modifying Existing Structured Email Templates. Generally means that you have not added the config line to the zone.properties of your web server and/or pointed your HTML forms to the correct web server.

eMail Center does not function in a multiple-instance scenario

Oracle eMail Center can integrate to multiple instances. Refer to the *Post-installation Steps (Server Side)* section in this guide. The default is single-instance.

Classifications can not be created.

The classification account has not been configured and/or is improperly configured.

After upgrading the Oracle database, the Oracle eMail Server (Internet Messaging Server) does not work.

You must relink the eMail Server after any database upgrade (e.g. 8.1.6.1 to 8.1.6.2). To relink, you must create three (3) targets depending upon the Oracle eMail Server options you have installed. If you have installed all three (3) options, you need to run make for all three (3) targets.

- \$ cd \$ORACLE_HOME/office/lib
- \$ make -f office.mk coreinstall
- \$ make -f office.mk psinstall
- \$ make -f office.mk admininstall

Starting

Unable to launch agent interface

Check your system profiles.

Are your agent folders created?

Logging On

There are a variety of reasons why you may not be able to log on. You can use the JInitiator console to look at the process trail of events to determine why you were not able to log on.

Some of the possible problems with logging on include:

Unable to log on to Self Service Applications

Make sure that the Forms server and the database are up and running. Enable Jinitiator console for monitoring and if the error states ?Out of Memory?, clear the contents of the jcache directory. This directory is typically located in C:\Program\Files\Oracle\JInitiator\jcache

Unable to log on to CRM e-Business Suite

Make sure that the Apache server is up and running. Set up user and password correctly. Make sure that the System Profiles have been set up correctly.

Passwords are case-sensitive and you used the wrong case.

You forgot your password or you used an incorrect password. There is no way to determine your old password but your administrator can assign a new password.

Your account may not be properly configured. Your administrator can make required changes to your account configuration.

You were logged on but the system logged you off.

eMail Center allows only one log on per user, someone else may have used your log on.

Running

Emails not being processed

Make sure that the Oracle Email Server is up and running, EMC Server is running, OTM Server is running, UWQ is running

Not getting automated email responses

Check if the Fulfillment server is up and running. Master Documents are loaded in Fulfillment

Documents not being retrieved

Load documents into MES

No structured response generally means that the Fulfillment server is not running.

Template merge is incomplete

Two types of merge fields (straight-insert & query) are supported in the eMail CenterTemplate/Suggested Response Merge functionality. This error generally means that not all of the straight-insert data was available.

Email failed to reach AQ1

This generally means that the Oracle Email Server db link does not exist. Refer to Implementation section of this document.

Email fails to reach account inbox

This generally means that the email account (e.g. support@...) has not been configured to deliver emails to AQ1.

Email goes to retry folder

This generally means that the concurrent manager is not running.

Unable to transfer message

This generally means that the other agent's folder(s) do not exist.

Themes are not being created

Refer to the *Creating Themes from the Operations Manager Interface* section of this guide.

Customer Support/Universal Work Queue Selector not displayed

This generally means that the Forms server is not running and/or you do not have proper privileges.

Unable to display UWQ desktop

This generally means that JTF has updated the package and didn't follow the safe package spec. guidelines, causing dependent Forms to get out of sync. with the package. Rebuild all of the existing IEU Forms components (PLSs/PLLs and FMBs/FMXs) and this problem will go away.

Failed to launch HTML application

Generally means that the incorrect component is being specified.

Markup text does not work

Oracle interMediaText currently works only in English.

Markup text does not find relevant information

Tweak the linguistic processing module by customizing the theme. For additional information refer to *Oracle interMediaText (iMT)* documentation.

New email classification failed

Use sample messages for your classifications that completely represent the subject matter anticipated in emails belonging to the classification.

The auto response failed

Check your threshold settings for confidence scores on incoming message classification.

All classifications were not displayed

The system maximum is seven (7).

Agent Interface

Unable to compose/create message

Classifications are not being displayed.

The agent interface failed to find your theme related documents. Verify that your documents are contained within the Marketing Encyclopedia systems repository. View your documents from the agent interface MES tab.

Performance

The maximum system browser cache is inadequate for your memory
Clear your cache.**The agent interface is partially displayed and/or you must scroll to view the entire desktop**

Increase your display resolution to 1200 by 1000 and maximize displayed window.

Access speed depends largely on your network architecture and somewhat on your PC processor and memory.

New and/or modified workflow processes do not function and/or poorly perform and seem to hang

Verify your logic and query design. Isolate and analyze the suspected query. Create test cases.

Glossary

Agent Interface - The eMail Center email browser

Apache - A third party web server

Applet - A Java program that runs in the Internet browser

Browser - Application that helps in accessing the Internet (Internet Explorer and Netscape)

Classification (email) - The main subject of the email

Client Desktop - Also referred to as the agent interface. The eMail Center email browser

Customer Care - Oracle Product

Distribute - Means that it puts the email into the queue of the agent or agent group that the router identified

Domain - Refers to the domain name in which the email resides

eMail Center - Oracle Product

Fulfillment - Oracle Product

Hostname - Refers to the name of the machine on which the SMTP server is running

interMedia Text - Oracle Product

iSupport - Oracle Product

Java - Programming Language

Knowledge Base - A repository of documents that can be queried

Multiple Instances - CRM and OES are installed in different databases

Response Template - The template that will be used to reply to customers

Single Instance - CRM and OES share the same database

Structured email - An email whose content and structure are known

Unstructured email - An free form email

Web Template - A web page that accepts user input and creates a structured email

Work Queue - A logical queue that holds each Agent's emails

Related Documentation and Resources

The following list of documentation serves as a reference set of documents for installing and implementing Oracle eMail Center:

Oracle Documentation

- *Oracle Applications Concepts*, Release 11i
- *Oracle Applications Installing Oracle Applications*, Release 11i
- *Oracle Applications Implementing CRM Applications*, Release 11i
- *Oracle eMail Center Technical Reference Manual*, Release 11i
- *Oracle eMail Center Concepts and Procedures*, Release 11i
- *Oracle Telephony Manager Installation Guide*, Release 11i
- *Oracle Call Center Applications Setup*, Release 11i
- *Oracle CRM Foundation Components Concepts and Procedures*, Release 11i
- *Oracle Email Server 5.1*
- *Oracle BR100 Planning Guide*
- *Oracle Fulfillment*, Release 11i
- *Oracle iMarketing Concepts and Procedures*, Release 11i
- *Oracle Marketing Concepts and Procedures*, Release 11i
- *Oracle Marketing Encyclopedia System*, Release 11i
- *Oracle Applications System Administrator's Guide*, Release 11i
- *Oracle Email Server Administration Guide*

Other Documentation

- Any HTML authoring guide

Web Sites

- <http://developer.netscape.com/software/signedobj/jarpack.html>
- <http://developer.netscape.com/docs/manuals/signedobj/signtool/index.htm>

Referencing TARs and Patch Information

- For BUG/TAR information:
 - Reference the Oracle BUG Database at <http://bug.us.oracle.com>
- For Patch information:

- Patches are available for download from ARU and/or from MetaLink or TCPatch.