Oracle® eMail Center

Implementation Guide

Release 11*i*

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Oracle eMail Center Implementation Guide, Release 11*i*

Part No. A86113-01

Contents

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Preface

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

This Implementation Guide provides general descriptions of the setup and configuration tasks required to implement Oracle eMail Center successfully.

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

Intended Audience

This guide is aimed at anyone who is tasked with implementing Oracle eMail Center, including:

- Database Administrators
- System Administrators
- Technical Specialists

This guide assumes you have the following prerequisites:

1. Understanding of computer-telephony integration (CTI)
2. Understanding of call center technology
3. Understanding of email technology
4. Understanding of the company business processes
5. Understanding of Oracle Applications, Release 11i
6. Understanding of Oracle Workflow

Structure

This manual 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 Applications Concepts*
- *Oracle Applications Product Update Notes, Release 11i*
- *Oracle Applications Release Notes, Release 11i*
- *Oracle Applications Installation Update Notes*
- *Installing Oracle Applications, Release 11i*
- *Maintaining Oracle Applications, Release 11i*
- *Upgrading Oracle Applications, Release 11i*
- *Oracle Applications System Administrator's Guide*
- *Oracle Applications User's Guide*
- *Oracle Workflow Guide*
- *Implementing CRM Applications*
- *Oracle Email Server Installation and Configuration Guide*

- *Oracle Email Server Implementation Guide*
- *Oracle eMail Center Concepts and Procedures*
- *Oracle eMail Center Technical Reference Manual*

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. eMail Center can also track responses to these emails and tie them into campaign effectiveness analyses.

Application Architecture

The following main components comprise Oracle eMail Center:

Desktop Agent Interface

A Java Server Pages (JSP) based application that runs on an agent's desktop in a browser. The supported browsers are Microsoft Internet Explorer 5.0 and higher and Netscape Navigator 4.5 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 Configuration 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 / IM)

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 desktop agent 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/MCM server

The Oracle Telephony Manager, sometimes called Multi Channel 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 / MCM drives the router (actually a server, too) to determine which agents are to receive an email or telephone call. OTM / MCM 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 / MCM 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 / MCM removes it from all other agent queues. When an agent selects the email from the queue, OTM / MCM fires an event to the agent client desktop. When this happens, the agent might see a screen pop with a subset of the information contained in the email interaction.

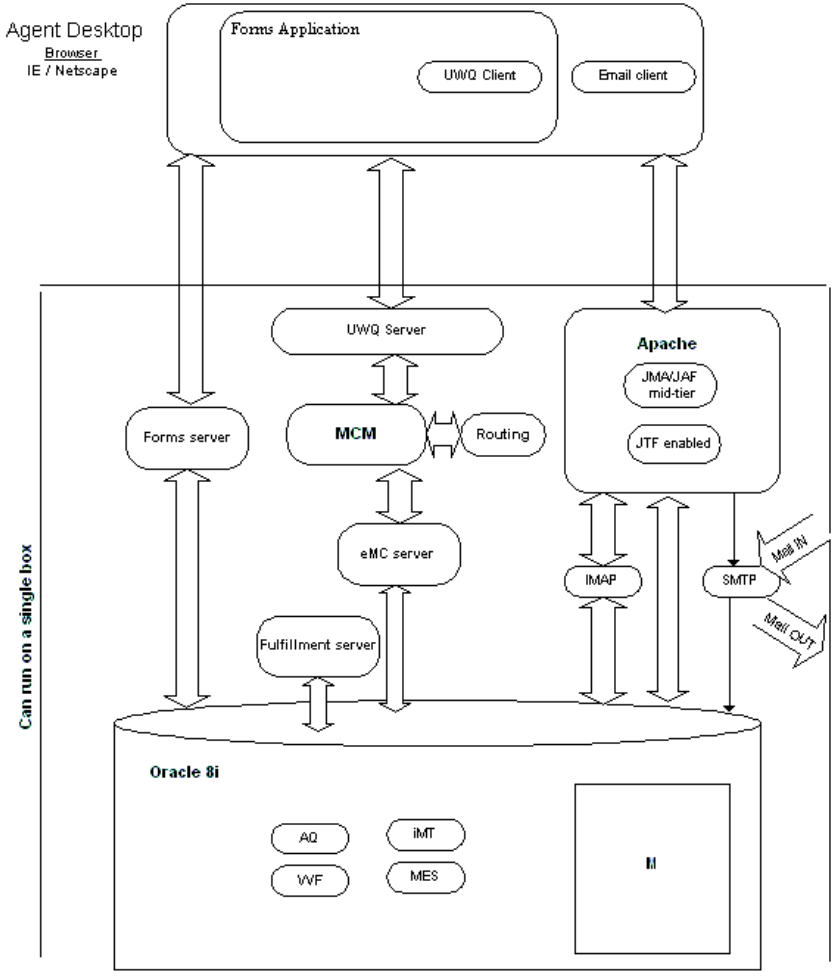
Apache server

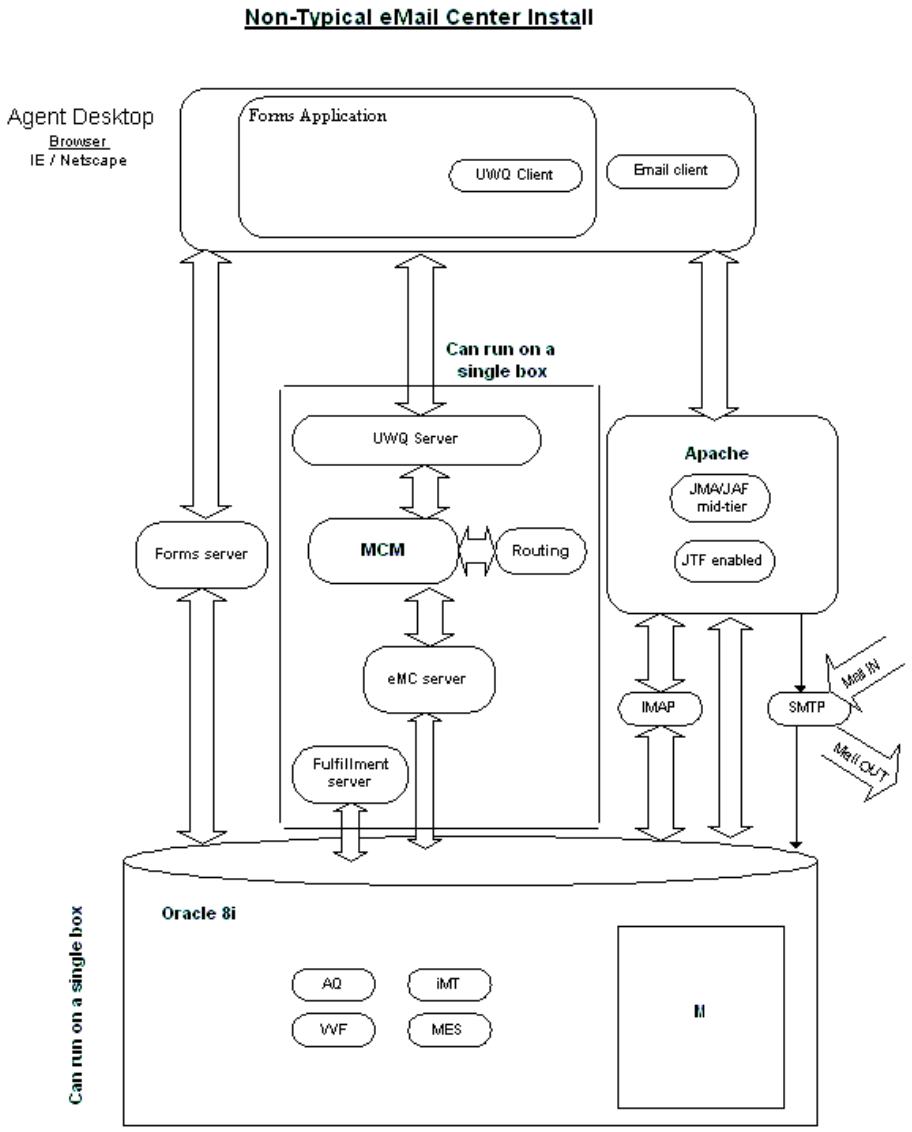
Apache is a third party product that handles HTML messages, such as email, between the source database and the agent desktop. Some Oracle CRM and ERP products, such as Accounts Receivable, are forms driven. They require a forms server to interpret and display database information. Newer CRM products, 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 desktop (an email client) using HTTP. The agent desktop 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




Non-Typical eMail Center Install
Agent Desktop
Browser
IE / Netscape
Forms Application
UWQ Client
Email client
Can run on a single box
UWQ Server
Apache
JMA/JAF mid-tier
JTF enabled
Forms server
MCM
Routing
eMC server
Fulfillment server
IMAP
SMTP
Mail IN
Mail OUT
Oracle 8i
AQ
iMT
WF
MES
M
Can run on a single box

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 desktop 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 created at the desktop by agents.

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 Processes

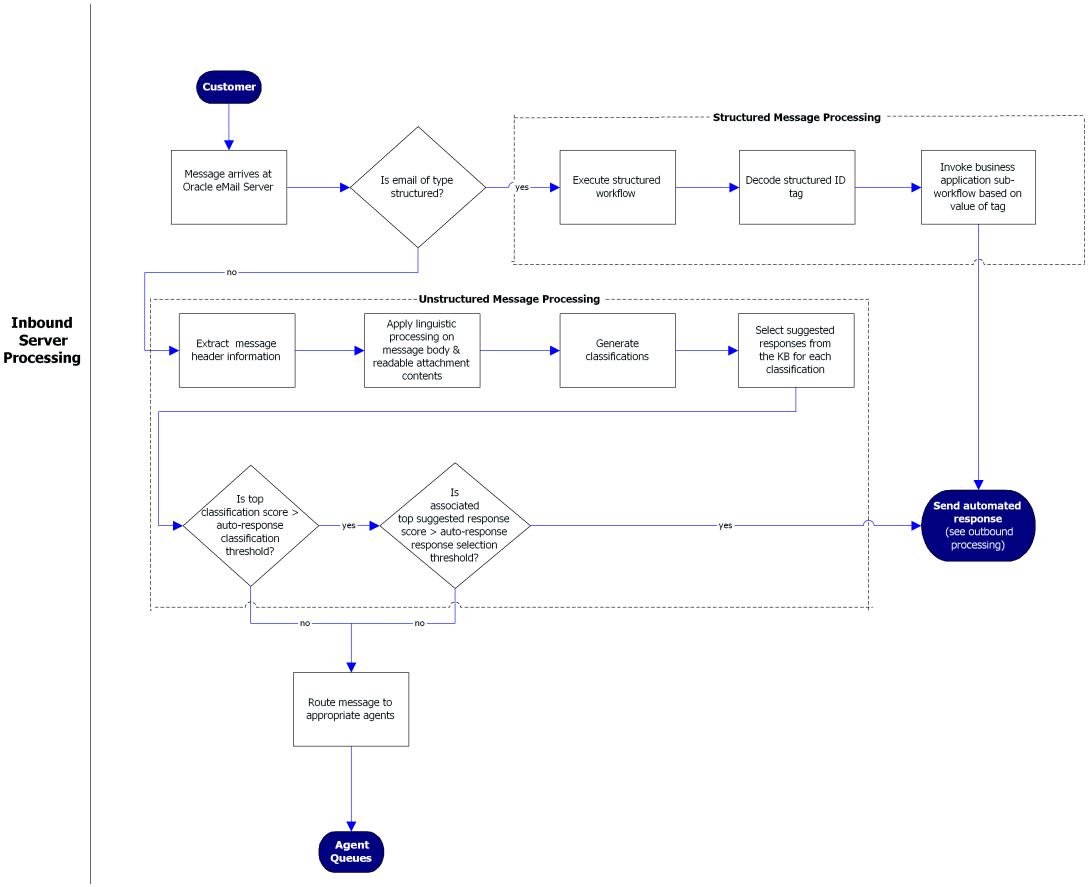
Overview

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.


Inbound Server Processing
Customer
Message arrives at Oracle eMail Server
Is email of type structured?
yes
Structured Message Processing
Execute structured workflow
Decode structured ID tag
Invoke business application sub-workflow based on value of tag
no
Unstructured Message Processing
Extract message header information
Apply linguistic processing on message body & readable attachment contents
Generate classifications
Select suggested responses from the KB for each classification
Is top classification score > auto-response classification threshold?
yes
Is associated top suggested response score > auto-response response selection threshold?
yes
Send automated response (see outbound processing)
no
no
Route message to appropriate agents
Agent Queues

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.

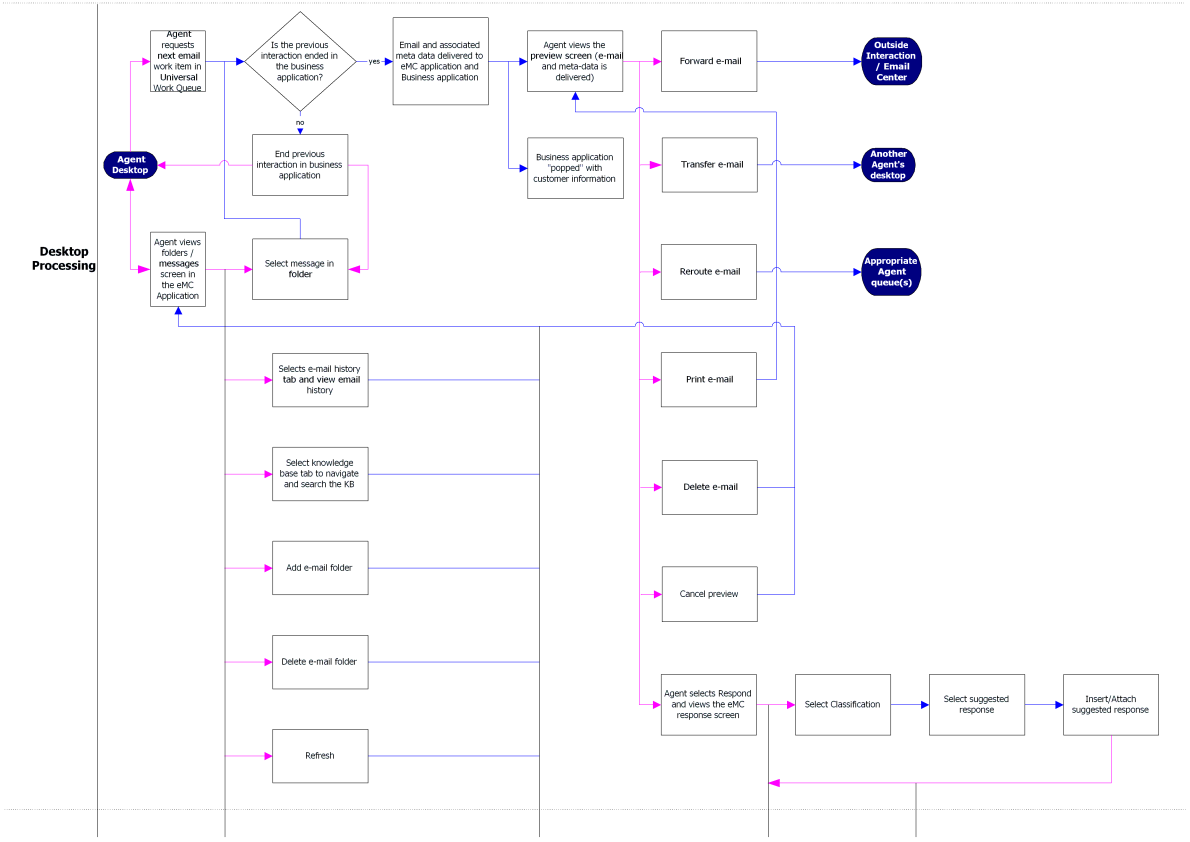
Send automated response (see outbound processing)

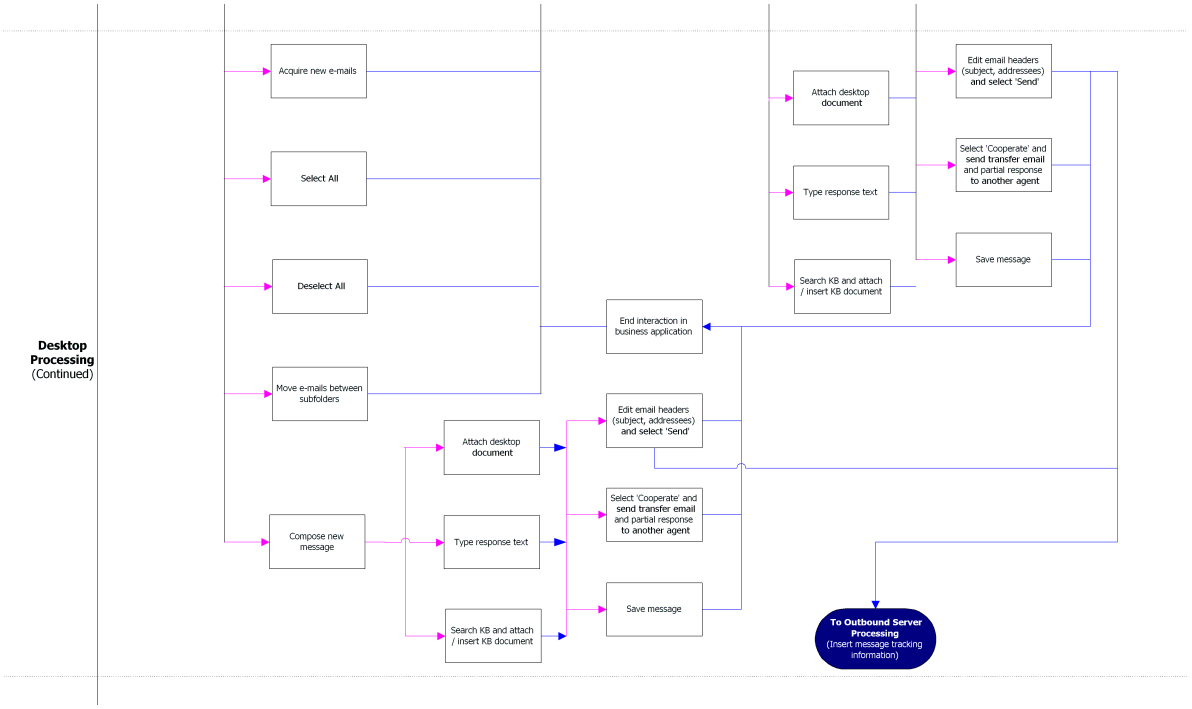
If both the classification score and the suggested response score do inspire confidence, send the response if auto-response is not turned off. It does not require agent intervention.

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.




Desktop Processing (Continued)
Acquire new e-mails
Select All
Deselect All
Move e-mails between subfolders
Compose new message
Attach desktop document
Type response text
Search KB and attach / insert KB document
Edit email headers (subject, addressees) and select 'Send'
Select 'Cooperate' and send transfer email and partial response to another agent
Save message
End interaction in business application
Attach desktop document
Type response text
Search KB and attach / insert KB document
Edit email headers (subject, addressees) and select 'Send'
Select 'Cooperate' and send transfer email and partial response to another agent
Save message
To Outbound Server Processing (Insert message tracking information)

Agent Desktop

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 (Insert message tracking information)**
  - **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 (Insert message tracking information)**

  - **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 (Insert message tracking information)

This node points to the Outbound Server Processing flow chart. In that flow chart, the process continues immediately at the **Insert message tracking information** node in **Send Response**.

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 three entry points:

- **Business application creates a mailing list**

  The business application is executing a bulk mailing campaign.

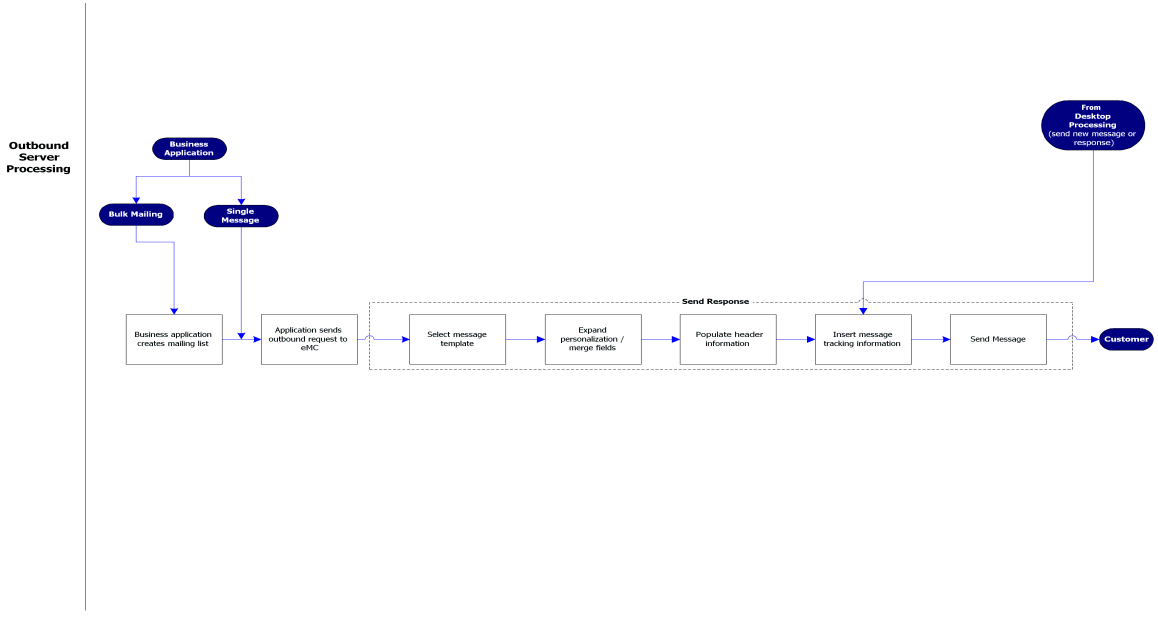
- **Application sends outbound request to eMC (eMail Center server)**

  The business application is sending a single message.

- **Insert message tracking information**

  The agent selected Send in Desktop Processing while responding to an inbound email or while composing a new email.

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



Business Application

A business application, such as Customer Care, starts a bulk mailing campaign, or an agent or a process creates a single campaign.

Bulk Mailing

This is the first entry point. The business application starts a bulk mailing campaign.

Business application creates a mailing list

In this node, the business application has created a mailing list, probably by querying the customer database and merging the appropriate information with a mailing label form.

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, one at a time in the case of bulk mailing, 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.

- **Insert message tracking information**

  This is the third entry point into the Outbound Processing path. Desktop Processing generated this information and inserted it here.

- **Send message**

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

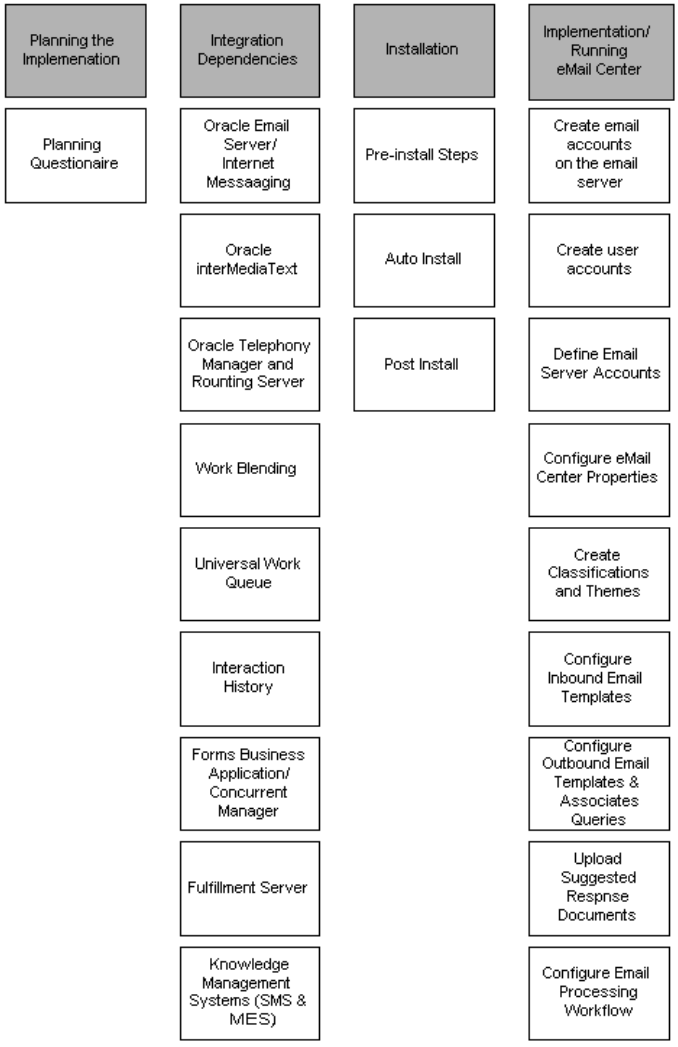
Planning the Implementation

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. Single instance (default) or multiple instances?
2. What email accounts need to be defined in OES?
    - These are the email accounts to which inbound email will be directed. Examples could be: support@company.com, info@company.com, promotions@company.com, sales@company.com, etc.
3. Which agents should be able to process emails directed to each account?
4. What agent groups need to be defined for each account?
5. For each account, what's the set of classifications that covers all emails?
    - These classifications are essentially labels for the buckets into which the customer wants to sort incoming emails. Classifications can be used to route individual emails to agents as well as select the appropriate responses from the knowledge base. Ideally, the subject matter in emails for each classification should be mutually exclusive and collectively exhaustive.
6. 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?
7. 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
8. Where is the customer's knowledge base data?
    - How do you upload this data into the Oracle knowledge bases (MES or SMS)? How should the data base be organized in MES (under what user defined categories within the eMC system defined partitions (Suggested Responses, Templates, etc.)?
9. What thresholds should be set for confidence scores on incoming message classification and suggested responses to trigger automated responses?
10. What static routing rules need to be defined?
    - What should be the destination agents / agent groups for each static route?

11. What dynamic routing procedures / workflows need to be developed?
    - What are the implementation details for creating the stored procedures / workflows?
12. What are the business requirements for processing unstructured emails?
    - What are the rules for automatically redirecting an incoming message to another account (on the same email server or a different one)? 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?
13. What customer data needs to be displayed in the *e*MC Desktop Customer Profile area?
    - This data is retrieved from the desktop business application (Customer Care / Contact Center, Telesales, etc.)
14. What is the maximum number of suggested classification to be displayed in the *e*MC Desktop? (System maximum is seven)
15. What is the maximum number of suggested responses to be displayed for each suggested classification?
16. What MES categories should be searched to get suggested responses for each account?
17. What are the default outbound email header values for each account?
    - From address, reply-to address, extended header tags, etc.
18. 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? Notify sending application on message bounce / auto-response? etc.
19. What should be the default message format for outgoing messages (plain text, HTML, or both?)
20. What keywords or key phrases in the headers or contents of a message indicate that determine 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’.

Integration Dependencies

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

Oracle Email Server (OES / IM)

Oracle Email Server (Internet Messaging) is the core email system. The native email functionality is supported by this system. OES 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

OES 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 OES 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 OES 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 OES 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 OES 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:

- OES and its components are ported to most major platforms.

Configuration Options:

- Oracle eMail Center can integrate to multiple instances of OES. In some cases there will be multiple instances of OES 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/MCM)

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 MCM 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 Desktop Client. This is done via Java socket communication between the UWQ client and the eMC Desktop Client. 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.

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 Desktop Client 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 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 on the same or on a separate instance as the CRM / APPS database. Follow the instructions provided in the *Oracle Email Server* documentation. Oracle Email Server is also known as Internet Messaging (IM).

   Note: .The default configuration is single instance. Single instance implies that CRM data and IM data reside in the same database.

   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 OES instance to talk with the CRM instance.

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

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

3. Create a Database Link to the CRM instance from the OES instance. You need the following:

   - CRM: **apps** password
   - OES: **OO** user's password

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

   CREATE DATABASE LINK <link name>

   CONNECT TO apps IDENTIFIED BY <apps-password>

   USING <tns / service name>;

4. Create a tns entry on the OES machine to point to the CRM instance.

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.

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. Configure eMail Center Properties
5. Create Classifications and Themes
6. Configure Inbound Email Templates
7. Configure Outbound Email Response Templates and Associated Queries
8. Upload Suggested Response Documents
9. 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 Admin Console 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.

1. Creating an employee
2. Creating a user

3. Assigning user responsibilities
4. Setting JTF default profiles
5. Setting UWQ Default Profiles
6. Setting CRM resources

For the Administrator user account, follow step 1, 2, 3, 4.

For the Operations Manager user account, follow steps 1, 2, 3, 4, 6.

For DBA user account, follow steps 1, 2, 3

For the Agent user account, follow steps 1, 2, 3, 4, 5, 6

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

Creating an employee

Use this procedure to create employees.

Prerequisites

You must have Oracle HRMS installed and configured, before you can create an employee.

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 **US HRMS Manager**.

   A 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
   - 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 User

Use this procedure to create 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.
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 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

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.
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 Client 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
DBA	eMail Center DBA
Agent	eMail Center Client

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	
JTF_PROFILE_DEFAULT_LANG	US	This is the language code.
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

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.
2. Click **OK**.

   A list of profiles appears.
3. From the list of profiles, select **IEU: Queue**: **Inbound Email**.
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 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.

    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 Admin console, 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 Admin console 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. Create an eMC Server entry and assign the eMC Server entry to the previously created Server Group.
3. Create an Email Db entry and assign this Email Db entry to the previously created Server Group.
4. Create two Db Links to the Email Db (your Oracle Email Server database). One for user <oraoffice> and one for user <OO>. In a single instance scenario, the database link would be self-referencing.
5. Create 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:_____ RT Availability:_____

Protocol:_____ Group Server:_____

Database SID:_____

Create Database Link

Server:_____ User:_____

Name:_____ Password:_____

Create Email Server

Email Server Name:_____ RT Availability:_____

DNS Name:_____ Group Server:_____

IP Address:_____ Server Type:_____

Port:_____

Create Account

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

Detailed Steps

Use the following procedures to define Email Server accounts.

Create Server Group

1. From the common CRM login screen, type the default system administrator user name and password.

   The eMail Center Admin console 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.

Create 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.

Create 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 twice. First for the <oraoffice> user and then for the <OO> user.

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.

Create Email Server

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

> **Note:** You will need to create an account for every user.

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 user.

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 desktop 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 will appear.

5. From the list, click the link **iem.base.url**.

6. Type the Apache server system root URL (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.

Creating Classifications and Themes

Overview

Oracle eMail Center uses the iMT (interMedia Text) feature of the Oracle 8i database to classify 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.

Classifications and themes can be created in two ways:

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

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 Console

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

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 Classification screen.

Creating Themes from the Operations Manager Console

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

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 Inbound Email Templates

Overview

eMail Center includes a standard set of inbound structured email templates (web forms). 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, respond to a survey 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 Inbound 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/*

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 Inbound 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> 
```

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.emailg
en.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> </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>  <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 Inbound 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 the customer does not purchase the iSupport application, then they should be aware of the steps involved in uploading the inbound email templates on their 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 inbound 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 Outbound Email Response Templates 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 Outbound Email Response Templates

You can create email forms and apply a query to generate a personalized outbound email. Email templates 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:

<img src="images/oraclelogo.gif">

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 Email Templates

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

   The tag that should surround the merge field is:

   « »

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

   «**Mergefield**»

   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:

   « »

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

   «FragmentID»

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**.

Uploading Outbound Response Templates and Associated Queries

Use this procedure to upload a master document in the 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 alloys 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.
2. Define a hierarchy among categories.
3. Upload the documents into MES.
4. Verify the document was uploaded.

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.

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 **Permanent**.
9. Select a priority for the document.
10. Do not click the **Create distribution rules on publish** check box.
11. 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**.
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.

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.

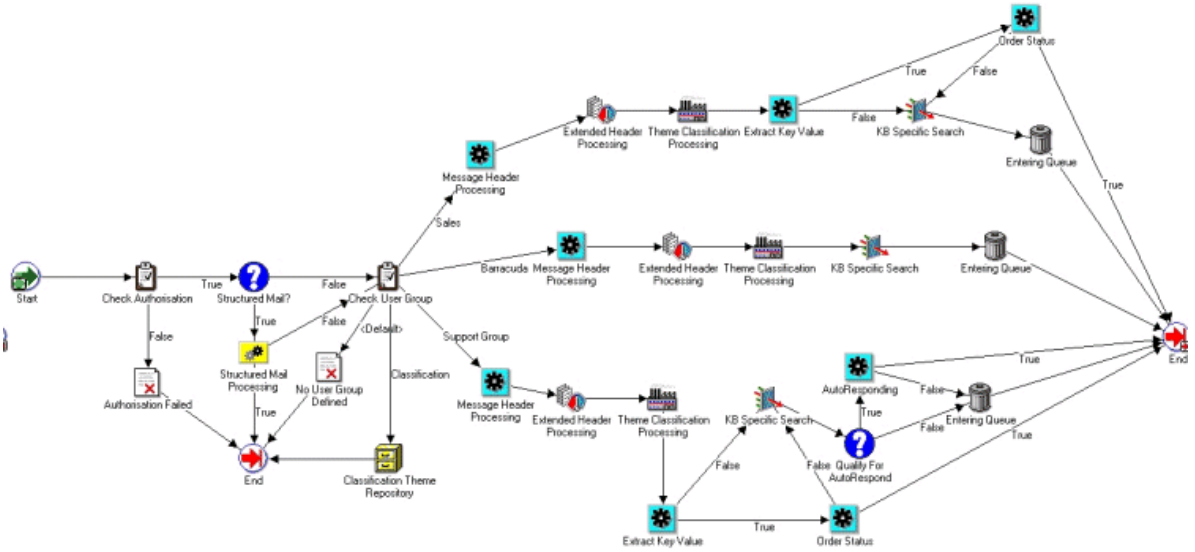
The error process can include branches based on error codes, send notifications, and attempt to deal with the error using automated rules for resetting, retrying, or skipping the failed activity. Once you define your error process you can associate it with any activity.

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.
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.

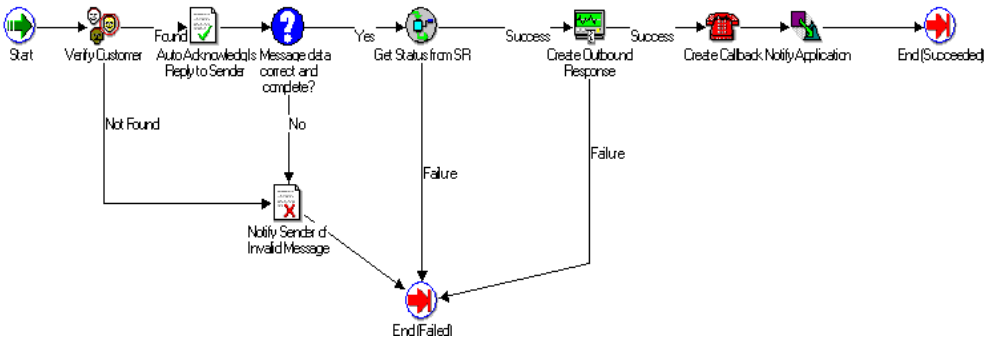
In contrast, structured workflow has 12 different paths shown here, plus one path for invalid messages. Those 12 paths are labeled:

- New Customer
- Tell Me More
- Bug Report
- Service Request Status
- Call Me
- Customer Service Request (How may we help you?)

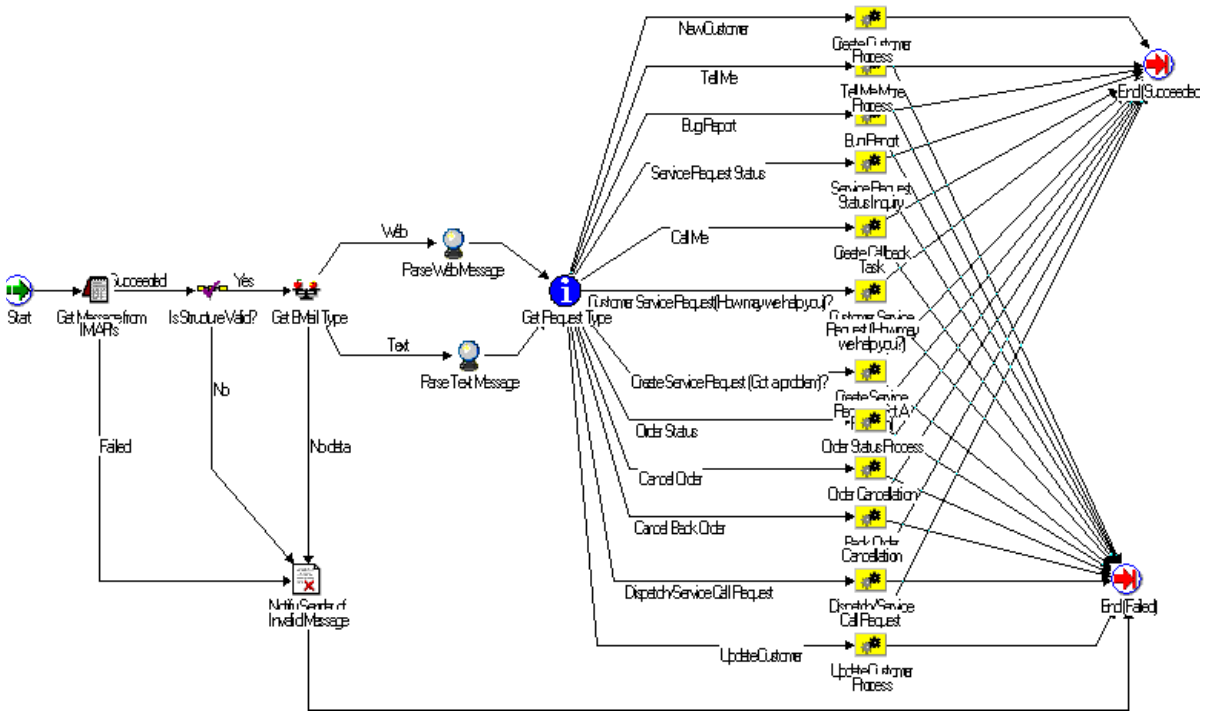
- Create Service Request (Got a problem?)
- Order Status
- Cancel Order
- Cancel Back Order
- Dispatch / Service Call Request
- Update Customer

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.

Service Request Status (example)



Structured Email Processing



Node Name	Function
Get Message from IM APIs	Extracts the message content from the email server
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**
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 = 'IEM_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	Currently picking up five extended headers that come with a message. The headers are pre-seeded with the following values: Extended Header 1: MESSAGE-ID Extended Header 2: ORGANIZATION Extended Header 3: MAILER Extended Header 4: LANGUAGE Extended Header 5: CONTENT-TYPE These attributes are retrieved from the messages and passed to the eMC Server. These values can be changed to meet user requirements.
Value For Key	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. If customers want to send something different, this value must be changed.
Service Request User ID	Defines a valid fulfillment user ID. Before setting this value, check with the fulfillment service group to locate a valid user ID.
Service Request Document ID	Defines a valid fulfillment document ID. Before setting this value, check with the fulfillment service group to locate a valid document ID.

- 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 Inbound 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.

Starting

Unable to launch desktop

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\JInitator\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, MCM 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 IM 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 Console* 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).

Desktop

Unable to compose/create message

Classifications are not being displayed.

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

Performance

The maximum system browser cache is inadequate for your memory

Clear your cache.

The desktop 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.

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

MCM - Multi Channel Manger

MES - Marketing Encyclopedia System

NLS - National Language Support

OES / IM - Oracle Email Server / Internet Messaging

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

Glossary

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 - 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 IM are installed in different databases

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

Single Instance - CRM and IM 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*
- *Installing Oracle Applications, Release 11i*
- *Implementing CRM Applications*
- *Oracle eMail Center Technical Reference Manual*
- *Oracle eMail Center Concepts and Procedures*
- *Oracle Call Center Applications Setup*
- *Oracle CRM Foundation Components Concepts and Procedures*
- *Oracle Email Server 5.1*
- *Oracle Fulfillment*, Release 11i
- *Oracle iMarketing Concepts and Procedures*
- *Oracle Marketing Concepts and Procedures*
- *Oracle Marketing Encyclopedia System Concepts and Procedures*
- *Oracle Marketing Encyclopedia System Technical Reference Manual*
- *Oracle Applications System Administrator's Guide*

- *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