Infor Email Marketing Administration Guide

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Introduction

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Infor Email Marketing 10.1 allows you to create personalized, permission-based email campaigns that communicate with your organization's customers. You create an email campaign by defining a campaign in an Marketing Web page, and then attaching email content files to communications in that campaign. This chapter describes:

- How you can create an email content file and use it within a campaign.
- How Infor Email Marketing 10.1 executes an email campaign once it has been defined and scheduled.

Infor Email Marketing Configuration

Prior to creating and running a campaign, you will need to configure Infor Email Marketing using the Configuration Manager (See "Using the Configuration Manager" on page 77 of this manual. Once you have configured Infor Email Marketing using the configuration manager, then you must run the ConfigUpdate job to synchronize the configuration between Marketing and the Outgoing Service. At this time all the configured from addressees, language/locales, unsubscribe languages, etc. Get imported into the meta so that they will be available in the Marketing Front End.

Email Campaign Creation

To create an Email campaign, you must first create one or more Email content files. An Email content file defines the content and format of an Email that you want to send to your customers. You can also create a set of offers to be inserted into the personalized Email.

Email File Components

Each Email campaign consists of the following types of components:

- A list of Email recipients

- One or more Email template files (possibly in different languages)
- A set of header fields
- Ancillary files that contain an optional set of offers
- Optional attachment files.

The recipient list and template files determine the content of the Email body, while the header fields determine the To, From, and Subject headings of the Emails that you send to campaign recipients. The header fields are in the etc file or are generated when the campaign is submitted. Each component is described in further detail below.

Recipient List

Recipient lists contain references to attributes, measurements, and URLs that you can include in your Email content. When a new substitution field is defined, Infor Email Marketing 10.1 creates a string that can serve as a placeholder for the substitution field in Email header fields or template files. Immediately before the Outgoing Services sends the message, the Content Generator replaces the substitution-field string with the value of the attribute, measurement, or URL that applies to each recipient.

Substitution fields can be the following:

- Demographic Field

  Refers to an attribute stored within an Marketing data mart (EpiMart). Examples of demographic substitution fields that you might wish to use are Email Address, Customer Name, or Profession.

- Transactional Merge Group

  Allows you to include measurement values and transactional information within their Email templates. For instance, you might include a reference to the name of the last product a recipient bought from your company, or the total number of purchases a recipient has made in the past year.

  A transactional merge group is not a substitution field itself, but a collection of attributes and measurements from dimensions in the fact's star schema in your Marketing EpiMart. When you want to use transactional information within your Email templates, you must first select the fact table that you want to use, optionally apply a filter, and then select the attributes and measurements from that fact table that you want to use as substitution fields.

The removal of duplicate addresses (de-duping) occurs during the list processing step in Infor Email Marketing while the mailing job is being set up (see "Removing Duplicate Addressees" on page 35). This process is carried out automatically.

Email Template Files

An Email template file contains the message that you want to send to your campaign recipients. Infor Email Marketing 10.1 supports plain text and HTML formats. You can use a plain-text or HTML editor to compose your Email template files.

When you compose Email content in plain text or HTML, you can use substitution-field strings to personalize (“Dear Janet”) and customize (“your 3 purchases this year”) the Email. You can use substitution-field strings to perform response tracking. You can access additional options with Email Markup Language (EML), which is documented in the chapter "Email Markup Language" on page 293 of this manual.

Template files include:

- Click-through Tracking Field

  A placeholder for a URL that you might include in an Email template file. When you include a click-through tracking URL, it enables your Infor Email Marketing Incoming Services to track whether an individual Email recipient followed a link in their Email to the specified Web site. You can then analyze this information in web pages in your Marketing system.

- Unsubscribe Language

  A placeholder for a set of text that informs Email recipients about how they can change their Email preferences. This text generally appears at the bottom of an Email, but can be placed anywhere in the message by using the unsubscribe language tag. See "UnsubscribeLanguage" on page 328.

Email Header Fields

The Email header fields allow you to specify the **To**, **From** and **Subject** fields for your Email. The **To** field is likely to be a demographic substitution field that refers to the Email address of an individual.

You can specify these fields in text boxes in the Import Email Content Web page.

Email Content File Creation

To create an Email content file, go to the Marketing Tools section of an Infor Email Marketing 10.1-enabled Marketing topic and select Import Email Content. In the Import Email Content Web page, define an Email content file:

Defining an Email Content File

1. Specify substitution fields. You can import a pre-defined substitution field collection from the Report Gallery, or define substitution fields on the fly.
2. Upload plain-text Email templates that correspond to each of the following Email content types:
   - Text
   - HTML
3. Specify the header fields for the Email. Infor Email Marketing 10.1 automatically inserts your campaign recipient's Email address in the **To** field.
4. Preview the Email content.

   Note: The SMTP standard stipulates that only 7-bit ASCII characters be used in constructing Email messages, including the body and header. Our experience shows that, in most cases, 8-bit characters can be used in the Email body.

   You can use the preview feature to ensure that your Email template files are correct before initiating the mailing. We recommend that you make the following verifications:

   - Test each link by clicking through.

- View messages for each type of format (HTML and Text) in the most common Email client software for that format. Plain-text and HTML-formatted messages should be viewed with Email clients bundled with popular Web browsers.
- Test various content combinations (i.e. remote content, attachments, offers etc.).
- Test the survey pages (Unsubscribe, Change of Address, and so forth). Any actions that you take during preview are not logged. For example, if you unsubscribe an Email address from a preview Email, this information is not transferred to your data mart. You should manually test each content combination, communication, XML lookup, file insert, and so forth.

5 Save the Email content file in the Report Gallery.

Using Email Content Files in Campaigns

When you have defined and saved an Email content file in the Report Gallery, you can attach that content file to communications within a campaign. The communications can then be assigned to campaign segments in order to specify the campaign members who are to receive email.

When you attach an email content file to a campaign treatment, an output file is automatically created. This non-deletable output file contains the campaign members who are assigned to email communications within the campaign. You can schedule both the date of their campaign export, as well as the date and the time of day that you wish to send the campaign's email messages. To ensure that campaign emails are mailed on the specified date, you should schedule your campaign export to take place well in advance of the email mailing date.

Note: Create as short a name as possible for the communication code. This is especially important for large lists. The code appears in every row of the list.

Additionally, do not use illegal XML characters such as "&" and "<" in campaign names. If you must use them, make sure they are doubly encoded: for example, "Dance & Sing" should be doubly encoded as "Dance & Sing."

Campaign Execution Data Flow

The Infor Email Marketing system is divided into two parts:

- Infor Email Marketing Outgoing Services generates the email and sends it to the recipients you have designated. It also collects incoming replies and other web traffic from the Infor Email Marketing Incoming Services and takes appropriate action.
- Infor Email Marketing Incoming Services receives reply Email (change-of-address, unsubscribe, and so forth), recipient click-throughs, and other information. It returns this information to the Infor Email Marketing Outgoing Services when queried. Infor Email Marketing Incoming Services contains a minimum of logic to allow it to perform its function. It exists to collect incoming data and send it to the Infor Email Marketing Outgoing Services. If Infor Email Marketing Incoming Services and Infor Email Marketing Outgoing Services are located on different machines, the Infor Email Marketing Incoming Services can be referred to as "remote."

Infor Email Marketing is divided into these two parts to allow Infor Email Marketing Incoming Services(s) to be installed in your company's DMZ, or elsewhere, while the Infor Email Marketing Outgoing Services (and all of its associated data) are located safely behind your firewall. Infor Email Marketing Incoming Services sends its acquired data to the Infor Email Marketing Outgoing Services for processing only when queried and the Infor Email Marketing Outgoing Services sends its acquired data to Marketing only when queried.

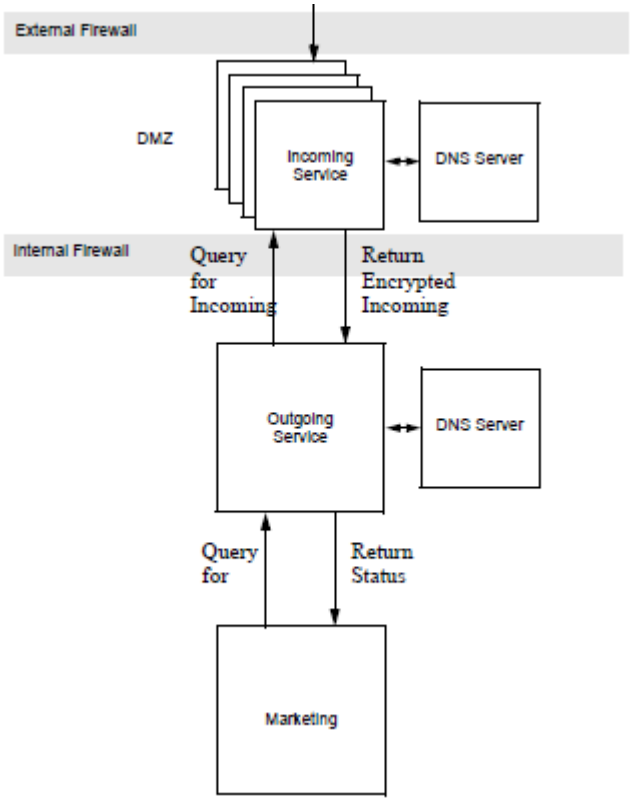


Figure 1: Email Campaign Services Flow

Infor Email Marketing Outgoing Services and Infor Email Marketing Incoming Services can be located on separate machines or on the same machine. Multiple Infor Email Marketing Incoming Services machines can service a single Infor Email Marketing Outgoing Services.

When the Infor Email Marketing Incoming Services and Infor Email Marketing Outgoing Services are located on different machines, incoming data can optionally be encrypted. Additionally, the system supports SSL communication between the two machines, so that the data will remain encrypted until it arrives on the Outgoing Service.

When you have scheduled an Email campaign, Infor Email Marketing 10.1 executes the campaign and feeds its results back into the Marketing system as follows:

1. Campaign Emails are sent to recipients.
2. Recipients respond by selecting click-through links in the Email or by replying to the Email. This information is logged by the Infor Email Marketing Incoming Services and stored in the incoming and HTTP files.

3 Infor Email Marketing Outgoing Services queries Infor Email Marketing Incoming Services for the information.

4 The Marketing queries the Infor Email Marketing Outgoing Services for the information and updates the data mart with the information extracted from Infor Email Marketing 10.1 job files.

The sections that follow expand upon each of the steps listed above.

Note: For additional information on Infor Email Marketing components and campaign execution, see "System Design" on page 23.

Sending Campaign Emails to Recipients

1 On the date that an Email campaign is scheduled to be exported, the Scheduler (in Object 1, in "Figure 2: Email Campaign Data Flow Overview" on page 19) creates the following files:

- One or more Email content files that describe the actual content of any Emails that are to be sent as part of the campaign.
- A recipient list file that contains information about each individual who is to receive an Email, along with the data needed to replace any existing substitution fields in the individual's designated Email template file.
- A header file that describes the campaign and includes the full path reference to the export file and the Email content files. This includes settings that indicate whether to perform the various kinds of logging, use MPA format, HTML detection, and so forth.

2 After the files have been created, the Scheduler runs a fulfillment script that is attached to the Infor Email Marketing 10.1 Output Processor. This script calls the EmailMarketingDispatcher executable, and passes it the name of the campaign's header file.

3 The Infor Email Marketing Dispatcher program transfers the header file and its associated export and Email content files to the Infor Email Marketing Outgoing Services using a secure SSL link if it is enabled.

4 After the files are transferred to the Infor Email Marketing Outgoing Services, Infor Email Marketing Dispatcher invokes commands to build a mail job file (Object 2, in "Figure 2: Email Campaign Data Flow Overview" on page 19). This step involves reading the header file and opening the indicated Email content and export files. If no errors are encountered, the mailing is scheduled for the specified day and time.

Note: You should always perform a preview mailing before your campaigns begin to ensure that Email messages appear as expected. All Web pages that might be accessed from Web links incorporated in the content file should therefore be active prior to preview. The Infor Email Marketing Outgoing Services verifies that each of the tracked URLs is active before approving the campaign for that URL. If tracked URLs are not active, neither preview nor campaign execution can occur.

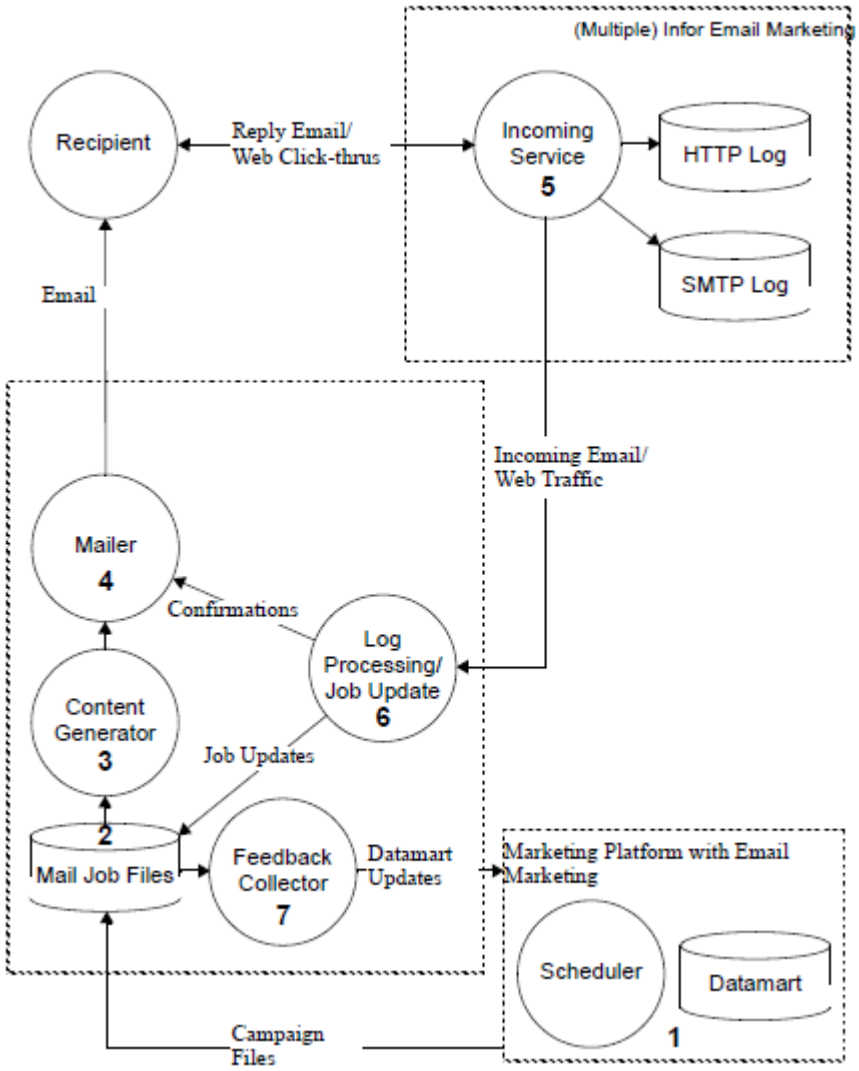


Figure 2: Email Campaign Data Flow Overview

5 The Infor Email Marketing 10.1 Scheduler initiates the mailing at the scheduled date and time. If a delivery date was not provided, the mailing occurs immediately. The Content Generator (Object 3, in "Figure 2: Email Campaign Data Flow Overview" on page 19) creates a personalized Email for each Email recipient by replacing the substitution fields in the original Email template file with the attributes, measurements, or URL values specific to the recipient.

6 As each Email message is prepared, it is passed to the Mailer (Object 4, in "Figure 2: Email Campaign Data Flow Overview" on page 19) which then sends the Email to the recipient.

Just in Time Suppression

Overview

Just-In-Time suppression is a feature whereby the Email Delivery Engine will re-check for suppressions just before delivering an Email. This is most useful for campaigns that are scheduled to start delivery some time in the future or for campaigns that are long running. For example if you schedule a campaign to start delivery one week from the submission time (time that the campaign is submitted to EM) then it's possible that some users in the campaign may unsubscribe from another campaign after submission but before the new campaign starts delivery. Consider the following sequence:

1. Submit campaign A
2. Campaign A starts delivery
3. Campaign A completes delivery
4. Submit campaign B
5. Some users in campaign A and B unsubscribe via campaign A Email.
6. Campaign B starts delivery
7. Campaign B completes delivery.

   The problem occurs because suppressions (unsubscribes) are checked at the time of campaign submission. If any unsubscribes occur after this point in time, they will not be reflected in the job file. In order to comply with state and federal laws, some customers have requested Just-In-Time suppression to prevent the delivery of Email to users who have unsubscribed. Enabling this feature will have a negative impact on performance so it may be enabled or disabled. If a customer always runs campaigns ASAP without scheduling delivery to start at a future time then JIT suppression may not be required.

Enabling JIT Suppression

JIT Suppression is enabled via the configuration manager tenant info page. The setting has 3 possible values: Disabled, Enabled, Scheduled. If enabled, it applies to all newly created campaigns for the tenant. The Scheduled value means that campaigns that are scheduled for more than 1 day in the future will have JIT Suppression enabled.

Processing Recipient Responses

1. The Infor Email Marketing Incoming Services (Object 5, in "Figure 2: Email Campaign Data Flow Overview" on page 19) tracks the response of recipients to the Emails they receive:

   - If HTML detection is enabled, the Infor Email Marketing Incoming Services records whether HTML-content or lightly formatted MPA Email is viewed by the recipient, and logs this information for future analysis. See "Email Format Selection" on page 36 for more information.

- If a click-through-tracking field is included in the Email, Infor Email Marketing Incoming Services is contacted when this link is clicked by the recipient. The Infor Email Marketing Incoming Services directs the recipient's browser to the specified Web page, and records the click-through action in the Infor Email Marketing Incoming Services log file.
- If the recipient clicks-through to survey pages for unsubscribe, change of address, or format specification changes, the Infor Email Marketing Incoming Services logs these requests. This information is another source for the HTTP log that is later extracted into the EpiMart data mart.

2 The Infor Email Marketing Incoming Services logs Emails, including bounces. This mail is saved in an SMTP batch log file for later processing.

3 Periodically the Log Processing program (Object 6, in "Figure 2: Email Campaign Data Flow Overview" on page 19) queries the Infor Email Marketing Incoming Services for any received Email accumulated in the SMTP batch log file and digests it. This program automatically processes as much of this Email as possible. Customer service personnel should monitor incoming Email in a timely manner.

Auto-replies and bounces are logged and filtered out of the batch file. Unsubscribe requests are also logged and filtered, and confirmation Emails are automatically mailed back to the unsubscriber to acknowledge receipt of their request.

4 The log process periodically queries the Infor Email Marketing Incoming Services for events in which the recipient visited the survey Web pages to perform an unsubscribe, resubscribe, change of address, or format change. The Infor Email Marketing 10.1 Job Update process then updates the mail job files on the Infor Email Marketing Outgoing Services with this information.

Note: For the unsubscribe, resubscribe, and change of address requests, confirmation Email messages are automatically generated using configurable templates. Confirmation messages are not sent for format change requests or manual process messages.

Updating the Marketing Data Mart

1 The EMExtract job periodically requests feedback from the Infor Email Marketing Outgoing Service. This log contains the latest status information for the campaign and is delivered with the EmailMarketingFeedbackCollector (Object 7, in "Figure 2: Email Campaign Data Flow Overview" on page 19). The data mart update log file is built from status updates saved to the Infor Email Marketing Outgoing Services mail job files. Once this log file is created, it is downloaded and extracted into the Marketing data mart.

2 After Marketing extracts the log, you can analyze the results of Email campaigns and refine future campaigns by using the Infor Email Marketing Analysis topic provided with the application. The Infor Email Marketing topic allows you to analyze the effectiveness of campaigns by:

- Campaign
- Cell
- Promotion
- URL
- Recipient response

The Infor Email Marketing topic can also generate detailed reports on click-through activity.

Error Processing

The Infor Email Marketing Outgoing Services uses Email to report error conditions. Error conditions include problems relating to content generation that may occur during either preview or a campaign mailing.

Both content generation and system errors are sent to the list of alert Email addresses specified in the Configuration Manager. This error alert list consists of:

- Email address of the preview recipient (for errors during preview only)
- Marketing system administrator Email addresses (stored in EpiMeta)
- Infor Email Marketing Outgoing Services error Email list

A Note on Editing Files

If you edit text files that include UTF-8 characters, make sure to edit them with a UTF-8 editor so non-ASCII characters are properly recognized. Note that known problems exist with some Windows-based editors that insert UTF-8 signatures at the beginning of a file.

Caution: Do not copy and paste commands, scripts or code from this document. Line breaks and some other characters picked up when you copy from the PDF can cause errors in the pasted text.

Contacting Customer Support

You may contact the Infor Customer Support center by submitting your incident via the web 24x7 at http://www.inforxtreme.com, or by placing a call during our scheduled business hours. For a complete listing of our support centers with web addresses and phone numbers, access our support site at http://www.inforxtreme.com.

System Design

2

This chapter provides a detailed overview of the Infor Email Marketing system design. "Figure 2: Email Campaign Data Flow Overview" on page 19 summarizes the design described in this chapter.

System Design Diagrams

The figures in this section summarize the general Infor Email Marketing system design:

- "Figure 3: High-Level Campaign Data Flow" on page 24 illustrates the highest level of campaign data flow.
- "Outgoing Email Generation" on page 25 describes how outgoing campaign email is generated.
- "Figure 5: Processing Recipient Requests" on page 27 illustrates how Infor Email Marketing receives and records Email recipient Emails and click-throughs.
- "Figure 6: Sending a Campaign to the Infor Email Marketing Outgoing Services" on page 32 illustrates how Infor Email Marketing responds to recipient requests.

High-Level Campaign Data Flow

"Figure 7: Email Generation Logic" on page 36 shows how data is traded between Marketing and Infor Email Marketing Outgoing Services:

1. Initially, the Marketing scheduler runs a fulfillment script that results in transporting campaign data and commands to the Infor Email Marketing Outgoing Services.
2. The Infor Email Marketing Outgoing Services then assembles the pieces into a job file, ready to be mailed.
3. Once a campaign is mailed, the Marketing pulls Infor Email Marketing feedback and updates the data mart. This feedback includes a record of Email recipient actions such as Web click-throughs and requests to unsubscribe or change their Email address.
4. As the campaign proceeds, the marketer can begin to analyze the results and plan the next campaign.

   See the section "Security" on page 28 for additional information about the secure link between Marketing and the Infor Email Marketing Outgoing Services.

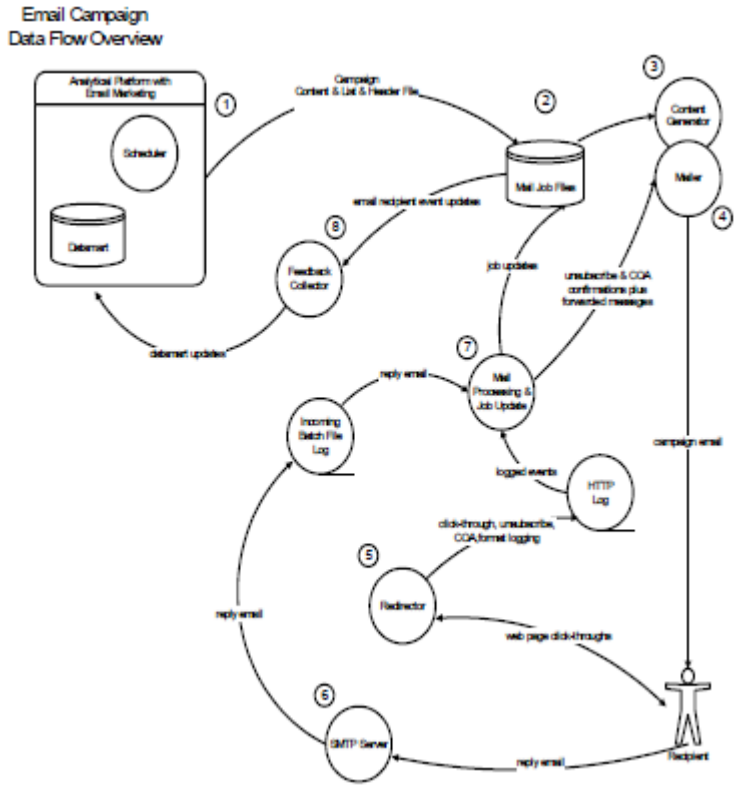


Figure 3: High-Level Campaign Data Flow

Common Database Usage

Infor Email Marketing 10.1 is installed and maintained on a single, common database for use by all email marketing servers. In a multiple server environment, all outgoing and incoming servers within the system will use a single database as the system of reference. This will allow a user to unsubscribe once, and the system will ensure that email preferences are updated across all potential touch points.

When installing the software, the administrator will be able to choose whether to use an embedded Derby database or an external database, as both are common and shared by all users. The installer will look for, and detect, the presence of an existing Derby database and, if present, will ask if you would like to copy the data to the new common database. The database must be running before you start the installer. The installer will not let you continue until a valid database connection has been defined.

If you are upgrading from one version to the next, you should not lose any information that may have already been saved to the database. This information includes email queues, and unsubscribe information.

Support for the common database includes the following enhancements:

- Apache Derby database, Version 10.8+, running in network mode.
- The system will be packaged with an embedded version of Apache Derby, running in network mode. However, in place of the embedded Apache Derby database, the system will allow the administrator to configure an external database using standard JDBC settings.
- Microsoft SQL Server 2005 and 2008, maintaining consistencies between Outbound Marketing and Email Marketing.
- The system will ensure that data belonging to one tenant is not readable by any other tenants.

Outgoing Email Generation

When Infor Email Marketing receives an Email campaign export file from Marketing it generates a collection of files that describe the campaign. With these files, Infor Email Marketing then creates a job file. This job file is used to record the details of the campaign to the level of individual click-throughs and unsubscribe requests. "Figure 4: Outgoing Email Generation" on page 25 provides an illustration of how the Infor Email Marketing send engine generates outgoing Email:

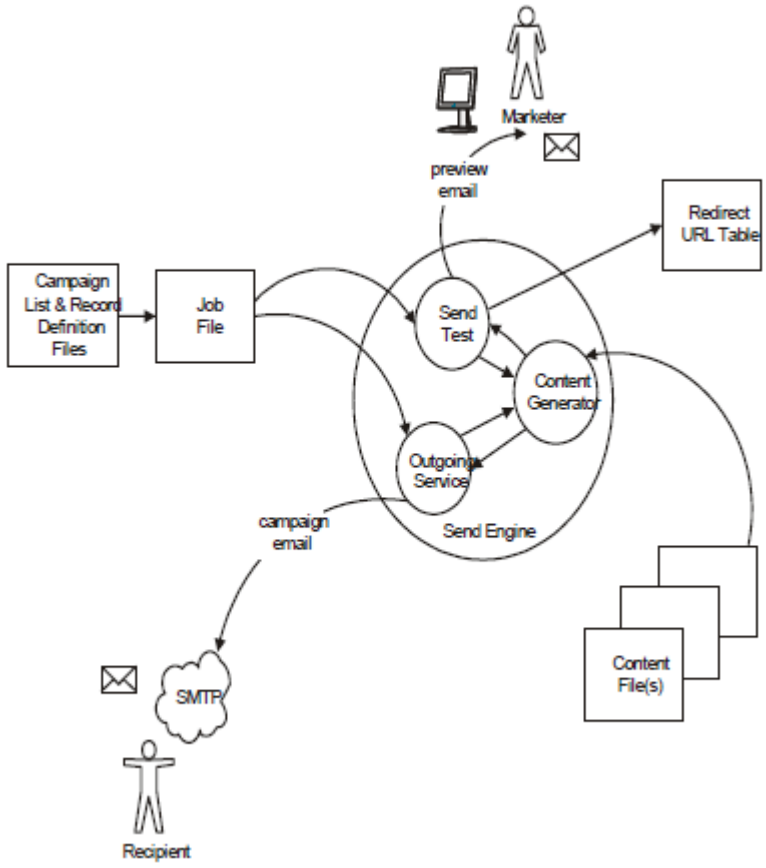


Figure 4: Outgoing Email Generation

Both TestJob and the Infor Email Marketing Outgoing Services use the Content Generator to dynamically personalize email, based on the appropriate content files.

TestJob, which executes the preview mailing (described in the topic "Mailing the Job" on page 48), scans the job file in order to validate each content file. It also verifies and assembles a table of all trackable URLs. This table is used later by the Infor Email Marketing Incoming Services to handle click-throughs by Email recipients, sending recipients to the appropriate Web page destination.

The Infor Email Marketing Outgoing Services generates the personalized messages and delivers them with Infor Email Marketing's built-in SMTP server software. As messages are delivered, the Infor Email Marketing Outgoing Services records information about the transmission. This information is then sent back to Marketing server.

Outgoing Service checks the outgoing Email address for common errors such as a missing @, and attempts to correct them if possible.

When Infor Email Marketing is unable to deliver Email to its addressee, the Infor Email Marketing Outgoing Services increases the existing undeliverable count for that addressee by one but never beyond a maximum value of 99. The undeliverable count is only incremented once per job. If Infor Email Marketing is able to deliver mail to the addressee, the count is set to zero. If an Email address is determined to be invalid and unfixable at job setup time, Infor Email Marketing sets the undeliverable count to 99. See "SMTP Errors" on page 212 for more information.

You are responsible for setting up a filter to exclude addresses that are undeliverable after the number of tries you select.

Additional steps are taken in the Email generation process that are not sketched here in detail. Note that the job file is dual purpose, serving both as the collection of all Email recipient data and control settings necessary for producing a mailing, and also as a simple database for storing Email recipient actions, such as unsubscribes or click-throughs.

Receiving and Recording Email Recipient Actions

"Figure 5: Processing Recipient Requests" on page 27 illustrates how the Infor Email Marketing Incoming Services handles Email recipient actions, including reply Email and click-throughs:

- The receiver collects response Email in a daily batch. This batch file is periodically processed by Infor Email Marketing to handle automatic unsubscribe requests, bounces, and out-of-office replies. All other Email is forwarded to the Email account specified in your installation, from which further automated processing or human handling must take place.
- The Infor Email Marketing Incoming Services handles all click-throughs and Web survey requests, such as unsubscribe, change of address, and change of message format.
- The top-most data flow shows the IDENT server that provides identity challenge and response services. To send Email to many SMTP servers on the internet, the Infor Email Marketing Incoming Services must also respond to Internet Identification Protocol requests that it identify itself. The IDENT Server listens to TCP port 113, as documented in RFC 1413.

Note: Infor Email Marketing ships with its own built in SMTP server for both Windows and UNIX platforms. The Administrator has the option of using an external SMTP server but this will not be automatically configured by the installation.

For each **From** address configured, a separate forwarding address exists.

Processing Recipient Requests

"Figure 5: Processing Recipient Requests" on page 27 illustrates how Infor Email Marketing processes Email recipient requests. Requests can come from either of two sources:

- The HTTP log, where Email recipient activity such as click-throughs and visits to the Web survey pages are stored
- The incoming batch file, where all reply Emails are received

Log Processing responds to the information stored in these logs by:

- Appending an update record to the job update file
- Using message templates to create unsubscribe and change-of-address confirmations, and writing these messages to the outbox file for later transmission by the Infor Email Marketing Outgoing Services

The job update process continuously updates the job file. The job file, in turn, is the source for the feedback logs, which are pulled into the data mart. A related role of the job update process is discussed in "Suppression Database" on page 33 in this chapter.

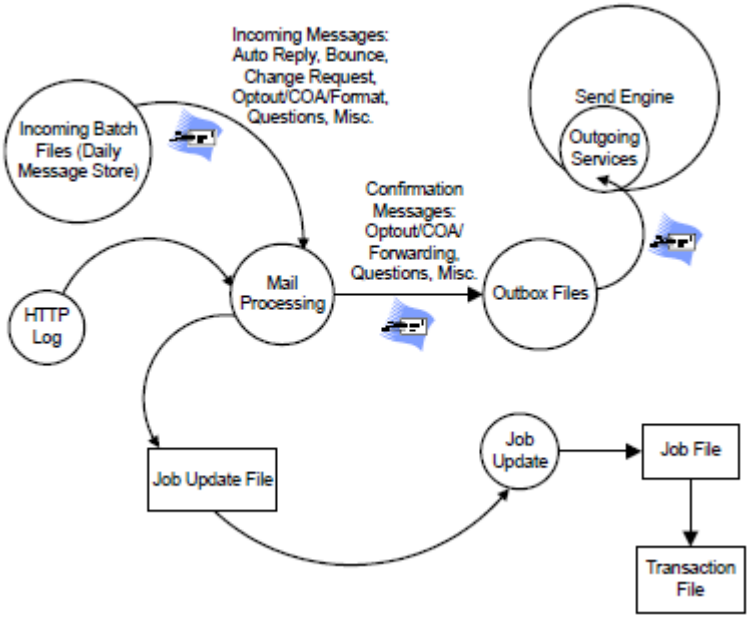


Figure 5: Processing Recipient Requests

System Interface

This section describes the interface between your Marketing and the Infor Email Marketing installation.

Security

Infor Email Marketing spans two or possibly three platforms: the Infor Campaign Management Server, Infor Email Marketing Incoming Services, and the Infor Email Marketing Outgoing Services. While the Infor Campaign Management Server and Infor Email Marketing Outgoing Services are securely behind your corporate firewall, the Infor Email Marketing Incoming Services is more exposed to the Internet. Accordingly, a Secure Socket Layer (SSL) link exists between the system(s) behind the firewall and the system(s) outside the firewall. This linkage is illustrated in "Figure 7: Email Generation Logic" on page 36. Log files can be encrypted on the Incoming Service and transmitted across the firewall in encrypted form.

The SSL connection uses digital certificates installed on your Infor Campaign Management Server, Infor Email Marketing Incoming Services, and the Infor Email Marketing Outgoing Services. A recognized IP address and valid username and password are also required to log onto the Infor Email Marketing Outgoing Services.

Note: SSL is optional and disabled by default. Perform the following procedure to enable SSL:

How to Enable SSL

Server

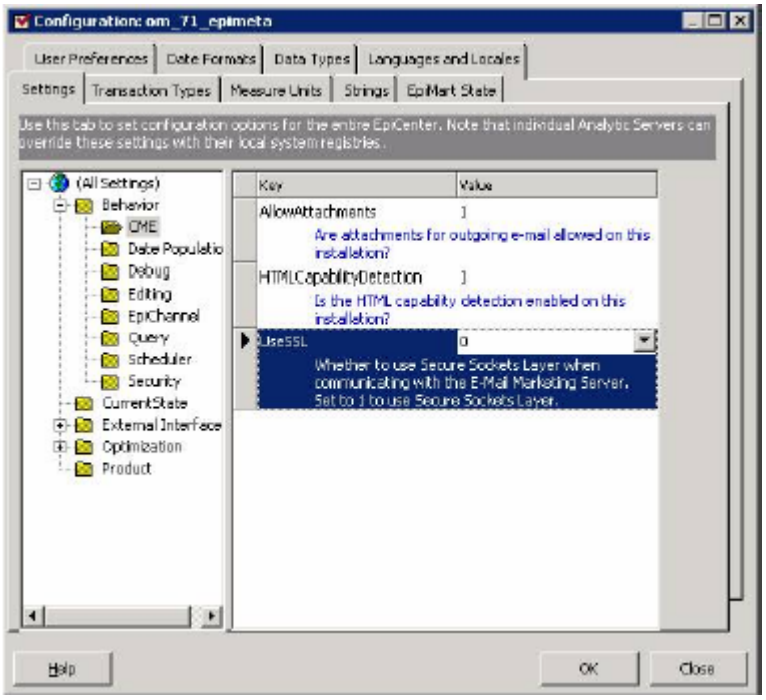
1. Enable SSL in the Configuration Manager - Outgoing Mailing Settings page.
   a. Make sure that the “HTTPS Enabled” checkbox is selected.
   b. Specify the port that should be used for HTTPS connections.
   c. Specify the location of the Java Keystore file (JKS) containing the server certificate to be used.
   d. Specify the password for the Java Keystore file.
   e. You may also disable non-SSL access on this same page. However it is best to make sure SSL is working before you do this.
2. Restart the outgoing service.

Client

1. Ensure that the root authority certificate associated with your server certificate is installed in the JRE.

   Note: The most common root authorities come pre-packaged with the JRE (i.e. Verisign, Thwate, etc.). If your root authority certificate is not part of the standard Java distribution, then you can import it by following the instructions at: http://docs.oracle.com/javase/6/docs/technotes/tools/windows/keytool.html

2 Set the “UseSSL” option to a value of “1” in the CME settings in the EpiManager. If you have any custom scripts or job steps that are used to call Infor Email Marketing client components, then you will need to manually add the “-ssl” argument to the line that launches the client.



To support an ssl-enabled client, you also need to make the following changes to `OM_HOME\EM\bin\client.bat` or `client.sh` file: These steps should be done manually by you in your production environment.

Note: Steps 1 and 2 immediately below are only necessary if you want to use a certificate store other than the default JVM certificate store.

1 Uncomment the following lines (Remove rem keywords in bat file or remove # symbol in client.sh)

```
rem set SSL_CERTIFICATE=%EM_HOME%/config/.keystore
```

```
rem set SSL_PASSWORD=password
```

```
#SSL_CERTIFICATE=${EM_HOME}/config/.keystore;export SSL_CERTIFICATE
```

```
#SSL_PASSWORD=password;export SSL_PASSWORD
```

2 Give the correct keystore file path and password in `client.bat/client.sh` as (here password is “password”)

```
set SSL_CERTIFICATE=D:\certs\.keystore
```

```
set SSL_PASSWORD=password
```

```
SSL_CERTIFICATE=/data/certs/.keystore;export SSL_CERTIFICATE
```

```
SSL_PASSWORD=password;export SSL_PASSWORD
```

3 Now run the client with the –ssl flag.

Note: The "-ssl" argument needs to be added to the Infor Email Marketing command used to launch the client. If you're running the client from the command line, then this would be an additional command line argument. If the command is being executed from Marketing, then you would have to modify the system call steps that define the job or output processor etc.

Also, note that if the server is using a standard certificate which is issued by one of the main certificate authorities such as Verisign then only step 3 is necessary.

Additionally, if you are using a certificate that is NOT signed by one of the main certificate authorities, you may also choose just to import the CA certificate into the JVM trust store. Again if they do this then only step 3 is necessary.

Transport

A proprietary transport layer ensures that files are compressed and transmitted without error between the Marketing and Infor Email Marketing Outgoing Services. Should communications be interrupted, file transfer can restart automatically without data loss.

Dispatch and Job Processing

The Marketing Scheduler initiates the transfer of campaign data and job control commands to the Infor Email Marketing Outgoing Services at the campaign's scheduled start time. This transfer is executed by a fulfillment script that directs the Infor Email Marketing dispatch program. Once the Infor Email Marketing Outgoing Services receives campaign data, the Job process control program assembles the campaign data into a ready-to-transmit Email job. The dispatch program is also used by the Infor Campaign Management Server to periodically retrieve Infor Email Marketing log files for data mart updates.

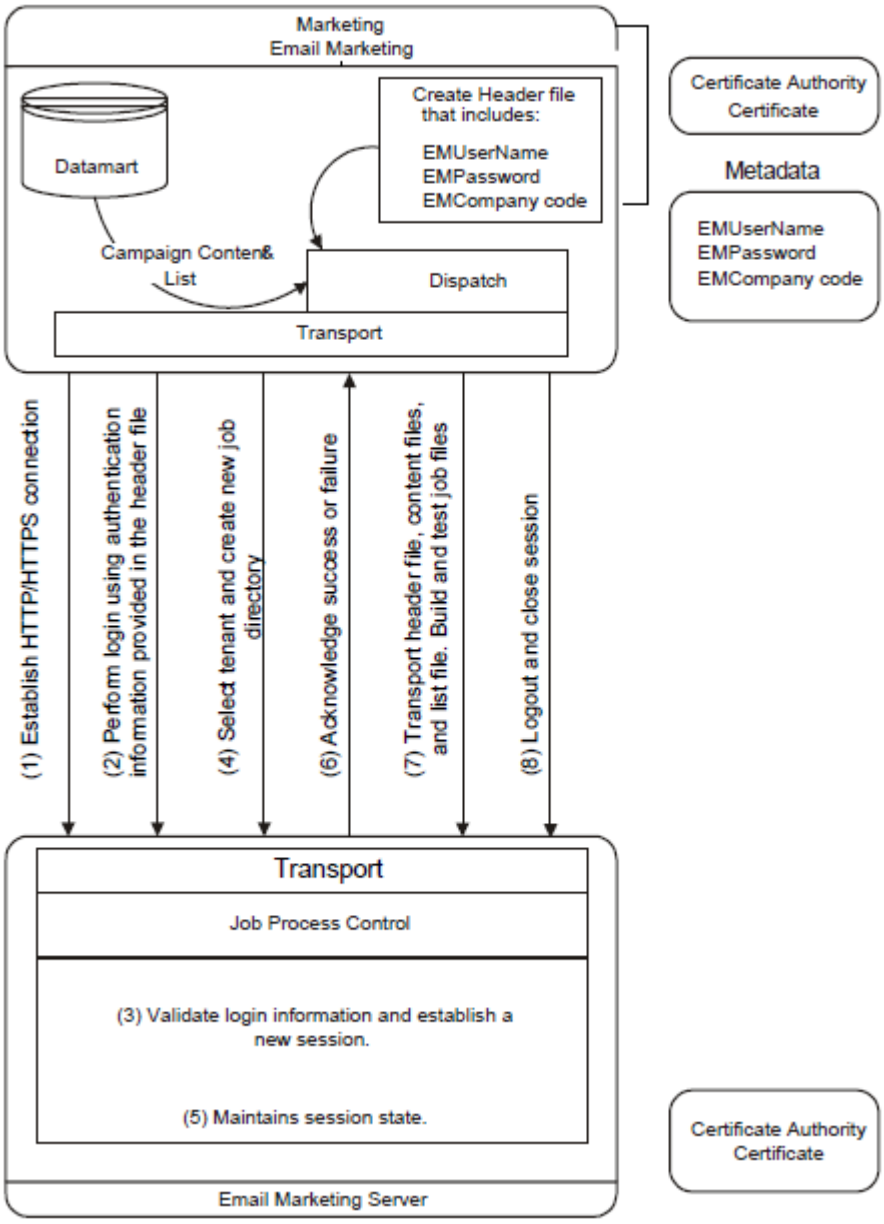


Figure 6: Sending a Campaign to the Infor Email Marketing Outgoing Services

Job Files

A job file contains a list of Email recipients and required pa rameters for Email transmission. Job files are built immediately after all related campaign files are sent from the Marketing server to verify that the campaign information is complete and correct.

Suppression Database

All Email Marketing installations include a suppression database that contains the Email addresses of all Email recipients who have unsubscribed from Email campaigns. Every time a job file is created, the list of potential Email recipients is compared with the suppression database. If an email address is recognized as an active email suppression in the database, it is removed from the mailing.

The suppression database is automatically updated when an email recipient performs an unsubscribe on either the Infor Email Marketing unsubscribe survey page or via reply Email handled by the automated response handling system. Updates to the suppression database take place within one business day when incoming processing runs, and are also reflected in the EpiMart after extraction.

Requests to unsubscribe performed outside of the Infor Email Marketing Incoming Services facility, such as by sending an Email directly to a sales or marketing organization, are not reflected in the suppression database. Proper handling of such a request involves performing an update in the originating system for customer Email preferences, and takes effect upon the next Marketing server extraction. See the “Setting Up Feedback Acknowledgement” section of the Infor Email Marketing Installation Guide for more information.

The Infor Email Marketing Outgoing Services also contains a global suppression file. This file can be populated with Email addresses of individuals and domains who have made it clear that they do not wish to receive any commercial Email. See the “Populating the Global Suppression List” section of the Infor Email Marketing Installation Guide for more information.

If you are using a source system other than Marketing , and you are re-enabling certain recipients to receive your campaigns (for example, they have requested to be added back to your mailing list), you must create an ASCII list of these recipients (one recipient per line) and manually execute the Infor Email Marketing Feedback Acknowledgement command using this file as an argument. Alternatively the unsubscribe database can be updated using the Administration Manager.

Repairing Faulty Addresses

The following steps are taken to check and/or repair Email addresses:

- Verify that the Email address has an '@' in it.
  - If not, and the address ends with ACME.COM, repair (“xyz.acme.com” becomes “xyz@acme.com”).
  - If not, and the address does not end with ACME.COM, it's invalid.
- Repair cases where the address is surrounded by angle brackets (“<xyz@abc.com>” becomes “xyz@abc.com”).
- Remove any extraneous spaces after the @ (“xyz@ abc.com” becomes “xyz@abc.com”).
- Remove any extraneous spaces around dots in the domain name (“xyz@abc . com” becomes xyz@abc.com).
- Remove any extraneous dots in the domain name (“xyz@abc…..com” becomes “xyz@abc.com”).

- Several users are always illegal: anything with “spam”, “postmaster”, “abuse”, or “root” in the user part.
- Several domains are always illegal: “domain.com”, “example.com”, “example.org”, and “example.net”.
- Ensure that the domain contains at least one dot. If not, it is illegal.
- Any domain ending with “.test”, “.invalid”, “.localhost”, or “.example” is illegal.
- Remove any extraneous spaces before the @ (“xyz @abc.com” becomes “xyz@abc.com”).
- Deal with common error cases in the domain:
  - “:.” becomes “L”
  - “;.” Becomes “L”
  - “>” becomes “.”
  - “_” becomes “-”
  - “,” becomes “.”
  - “/” becomes “.”
- Remove any occurrences of “]” in the domain.
- Remove any occurrences of “(” in the domain.
- Remove any occurrences of “)” in the domain.
- Remove any leading “.” or “#' characters in the domain.
- Remove any trailing “:”, “+”, “,”, “.”, “]”.
- Repair common typos in the domain:
  - “c.om”, “.c0m”, “.coom”, “.ocm”, “con”, “.cim”, “.cm”, “.c”, “ccom”, “.vom”, “.cpm”, “.cpom”, “.conm”, “.dom”, “.xom” all get translated to “.com”.
  - “.ed”, “.e”, “.ecu”, “.edcu”, “.edc”, “.eddu”, “.edy” all get translated to “.edu”.
  - “.go” and “.g” get translated to “.gov”.
  - “.mi” and “m” get translated to “.mil”.
  - “.nwt”, “.n”, “.neet”, “.ent”, “.ner”, “.ney”, “.nnet” all get translated to “.net”.
- Remove extraneous characters after “.com”, “.edu”, “.gov”, “.org” (for example, “.comm” becomes “.com”).
- Add missing dots for common root level domains (for example, “xyz@abccom” becomes “xyz@abc.com”).
- Repair common data entry problems:
  - Remove leading “email:”, “mailto:”, “smtp:”, … in user part.
  - “hot mail.com” becomes “hotmail.com”.
- An empty user part is illegal.
- Apply domain repairs from DomainInfo.txt.
- Allow spaces in the user part for AOL Email address. In other domains this is illegal.

Modify the existing list located in <InstallDir>/Config/DomainFixup.txt using any text editor capable of editing a text file. For instance, if a mailing list frequently contains a misspelling such as ALO.com for

AOL.com, you can tell the Infor Email Marketing Outgoing Services to repair this bad address domain name by putting the correction in the address_fix.txt file.

The format of the DomainInfo.txt.file is:

Misspelled_Domain_Name <tab> Correct_Domain_Name

which, in the case of the example, is:

```
ALO.COM <tab> AOL.COM
```

The file consists of one mapping per line with a tab character in between the misspelled and correct domain names.

DomainInfo.txt is located in <InstallDir>/Config directory. Be sure to make a backup of this file so you can recover in the event modifications to this file are made in error. Infor Email Marketing Outgoing Services behavior is undetermined if this file contains bad mappings.

Feedback will check to determine if a repaired address was successfully sent. If so, it will report the new address as a change-of-address event and the address is updated in the data mart accordingly.

Removing Duplicate Addressees

The removal of duplicate addresses occurs during the list processing step in Infor Email Marketing while the mailing job is being set up. This process is carried out automatically.

The list is de-duped without regard to the capitalization of the address. Thus user@aol.com, USER@AOL.COM, and so forth are all recognized as the same Email address.

The de-duping occurs after the faulty domain names are repaired. The repair logic fixes domain-level problems (for example, changing ao1.com to aol.com). Thus, if both user@ao1.com and user@aol.com are in the list, one of them is deleted from the final transmission.

After the list is sorted, the first instance of the Email address on the list is the one that will be mailed. This matters only because of the source code/reporting. Duplicate addresses are reported back to Marketing , and the source code is used to identify which address was considered by Infor Email Marketing to be the duplicate.

Content Generator

The Infor Email Marketing Content Generator is a smart mail-merge engine capable of creating fully personalized Email content. It performs substitution based on information included in the lists created by the Marketing Infor Email Marketing topic. This section describes features of the content generator that can aid sophisticated users of Infor Email Marketing.

Note: We recommend that you use a plain text editor to edit Content Generator files. In the Microsoft windows environment, it is safe to use a programmer's editor such as UltraEdit by IDM Computer Solutions, Inc. In the Unix environment, use emacs, vi, or another plain text editor.

Email Format Selection

The Infor Email Marketing Content Generator makes the final decision as to which Email format to send to an individual recipient. The Content Generator bases this decision on the available content files, the recipient's Email preference and Email reader capability, and the type of message generation requested by the marketer through the Infor Email Marketing topic. The following logic is used by the Content Generator to select the content format:

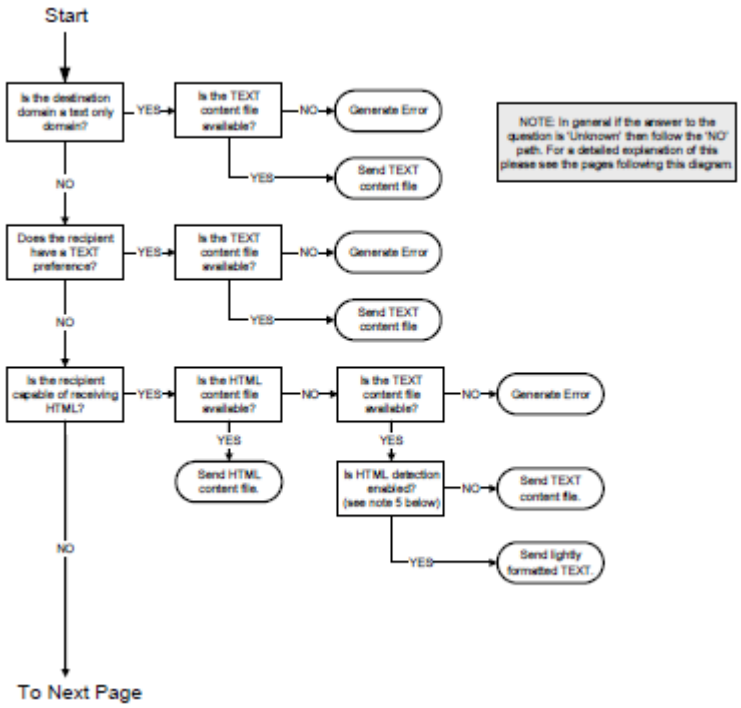


Figure 7: Email Generation Logic

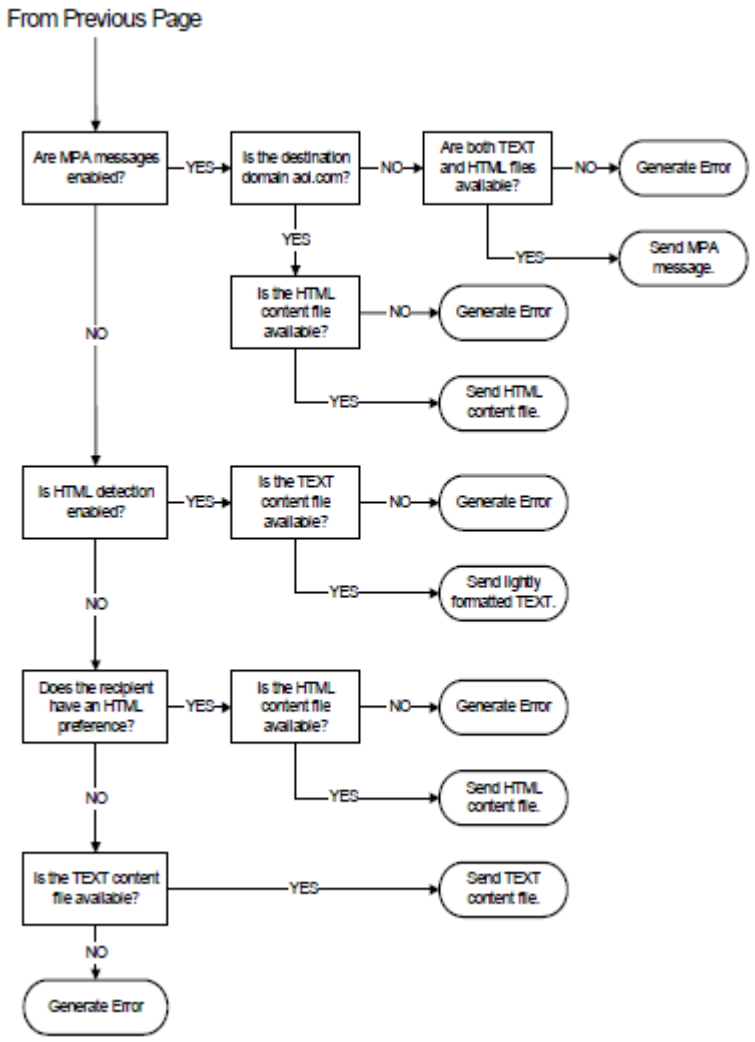


Figure 8: Email Generation Logic (continued)

When you set a dimension as the Infor Email Marketing dimension (select the checkbox, then click Apply), you see a dialog box that asks you which columns you want to use for the various Infor Email Marketing columns. By default, two of the columns are email_format_pref and email_html_capability , but this is configurable. If you want to know how these are set, look at either the corresponding attributes (how it is set outgoing) or to the Populate Dimension extraction SQL (how it is set incoming).

See "Preference Web Page Chart" on page 222 for more information about how text preferences are determined.

Message Types Supported

The Content Generator can generate plain text, HTML, and multi-part alternative (MPA).

MPA is a two-part message: one part is text, and the other part is HTML. If the recipient of a MPA message has a modern Email reader, the HTML part is displayed. If the recipient has an older Email package, the text portion of the message is displayed first, though it is followed by the code from the HTML section of the message.

A lightly formatted text message is an MPA message. It consists of the text message as the first part, and an Infor Email Marketing-generated, light HTML formatting based on the text content as the second part. The lightly formatted HTML uses the text unsubscribe message.

Problems with Older Email Readers

The Infor Email Marketing Outgoing Services is configured to handle most Email reader packages. However, there are several older packages that do not handle multi-part alternative (MPA) messages very well. Such packages include Outlook97 and older versions of Netscape. In addition, the older Novell Groupwise packages and many Unix Email clients only handle MIME/Text format. These packages do not support HTML.

Other formatting problems can occur with MailBeamer, an SMTP, POP3, and Web gateway that integrates with MS Mail. When you encounter formatting problems for a given recipient, you should mark that recipient as text only to avoid further problems.

HTML Detection

Infor Email Marketing is designed to send the best message format possible based on the ability of the recipient's Email reader package to view content. In support of this, a marketer can send Email with HTML detection enabled.

With HTML detection, Email messages include a reference to a transparent, one-pixel image. If a recipient is using an Email reader package that is capable of displaying HTML messages (nearly all packages today are capable of doing this), the image is pulled from the Infor Email Marketing Outgoing Services when the recipient views the Email, and the event is logged.

This information reveals two pieces of information:

1. The user opened the email.
2. The email program is capable of displaying HTML content.

   If the recipient did not open the email, you know nothing. Similarly, if the user opened the email, but used a simple text-only Email reader package, used an HTML-capable email reader while not connected to the internet, or is blocking the HTML image downloads, you also know nothing about their activity.

   HTML detection is activated in the Infor Email Marketing part of the Marketing metadata. If enabled, every HTML and MPA message for every campaign includes the reference to the transparent, one-pixel image. Campaign implementers can choose whether HTML detection data is included in their campaign results, but this choice does not remove the one-pixel image from their campaign email.

The Infor Email Marketing Outgoing Services allows you to perform HTML detection with text-only content by sending a lightly-formatted MPA message with the detection pixel instead of plain text. If a recipient opens such a message with an HTML-capable email viewer, the message appears to be text-only, but the Infor Email Marketing Incoming Services can detect the one pixel image and record that the recipient can view HTML messages.

Attachments

Although attachments can be essential to some campaigns, there are some considerations to bear in mind when it comes to using them. Attachments increase delivery time for you, and they will also use recipient mailbox space and bandwidth (the latter being less of an issue nowadays with the increasing pervasiveness of faster internet connections).

If you suspect that using attachments in your campaigns is contributing to increased unsubscribe rates, lower message-open rates, and or message blocking due to anti-spam countermeasures, then we recommend that you provide a URL in your campaign Email. This will give the recipient the option to view or download content of interest, with none of the potential downsides of attaching that content directly.

To allow attachments, set AllowAttachments to 1 in Marketing Manager. This setting is located in **Configuration > Settings > Behavior > CME**.

An attachment can be any file type listed in the table below. The system will treat it as a BLOB with an associated MIME type. The MIME type is determined from the file type of the uploaded attachment file. No modification of the attachment is done by the system (No code conversion or replacement of embedded substitution fields, for example).

Content Type	File Extension
application/msword	doc
application/pdf	pdf
application/postscripts	ai eps ps
application/rtf	rtf
application/vnd.ms-excel	xls
application/vnd.ms-powerpoint	ppt
application/x-bcpio	bcpio
application/x-bzip2	bz2
application/x-cpio	cpio
application/x-csh	csh
application/x-gtar	gtar
application/x-gzip	gz tgz
application/x-latex	latex

Content Type	File Extension
application/x-sh	sh
application/x-shockwave-flash	swf
application/x-tar	tar
application/x-tcl	td
application/x-tex	tex
application/x-texinfo	texinfo texi
application/x-troff	t tr roff
application/x-troff-man	man
application/zip	zip
audio/basic	au snd
audio/midi	mid midi kar
audio/mpeg	mpga mp2 mp3
audio/x-aiff	aif aiff aifc
audio/x-mpegurl	m3u
audio/x-pn-realaudio	ram rm
audio/x-realaudio	ra
audio/x-wav	wav
image/bmp	bmp
image/gif	gif
image/ief	ief
image/jpeg	jpeg jpg jpe
image/png	png
image/tiff	tiff tif
image/vnd.wap.wbmp	wbmp
image/x-rgb	rgb
text/css	css
text/html	html htm
text/plain	asc txt
text/richtext	rtx
text/rtf	rtf
text/sgml	sgml sgm
text/tab-separated-values	tsv

Content Type	File Extension
text/vnd.wap.wml	wml
text/vnd.wap.wmlscript	wmls
text/x-setext	etx
text/xml	xml xsl
video/mpeg	mpeg mpg mpe
video/quicktime	qt mov
video/vnd.mpegurl	mxu
video/x-msvideo	avi
video/x-sgi-movie	movie

Creating an attachment involves three steps:

1. Moving the attachment to the Report Gallery
2. Creating a substitution field for the attachment
3. Entering the substitution field in the Email content

Moving the Attachment to the Report Gallery

Uploading the attachment file to the Report Gallery allows you to use the same attachment for multiple substitution fields.

1. In the Marketing topic, go to **Tools > Uploaded File**.
2. Select an attachment file to be uploaded either by entering the file path directly into the text box or browsing for the file.
3. Click **Upload File**.
4. The file is saved as an **Uploaded File** object in the Report Gallery.
5. Save the uploaded file using **File > Save As** menu entry.

Creating the Substitution Field for the Attachment

1. In the Marketing topic, go to **Tools > Email Substitutions**.
2. Select **Attachment** from the **Substitution Field Type** drop-down list box.
3. Enter a label name in the **Label** text box.

   The label name uniquely identifies the substitution field in the substitution field collection and is used as a placeholder in the Email template files.
4. Click **load**.
5. Select the attachment file to be associated with the label from the Report Gallery.
6. Enter the **Filename as shown in Email** .

This is the file name referenced in the MIME headers.

The substitution field for the attachment can now be entered in the Email content template file. At campaign export time, the substitution field in the content files is converted to the appropriate EML tags.

In order to display the **Define Uploaded File** node in the Marketing topic, you must perform the following procedure:

Enabling the Define Uploaded File Node

1. In Marketing Manager, go to **Presentation > Topics**.
2. Double-click **Marketing** in the right pane.
3. In the **General** tab, select the **Marketing Template** as the **Template** topic.
4. Click **Update** next to the **Template** topic.
5. Click **Update** in the**Topic Update Options** dialog box.
6. Click **OK**.
7. Click **OK**.
8. Double-click **Marketing** in the right pane.
9. Go to the **Navigation Nodes** tab.

   You should see the**Email-Define Uploaded File** navigation node in the **Name** column.
10. Refresh the Infor Campaign Management Server.

    The link should be available in the **Email Tools** page.

Images in the Email

Wit h the exception of the one pixel image used for HTML detection, the Infor Email Marketing Outgoing Services does not serve images. You can include images in your content, but the image must be placed on your corporate Web server or another Web server, and a link to that location must be placed in the content.

For example, Computers4You.com uses Infor Email Marketing and wants to include their logo in the Email. If a logo graphics file by the name of logo.gif exists on their Web server, then the content file can contain the HTML command:

```
<img src=http://www.computers4you.com/logo.gif>
```

Email Markup Language

The content generator understands a markup language called Email Markup Language (EML) that is proprietary to Infor. Chapter 13, "Email Markup Language" on page 293 , provides an EML command reference, including examples.

Note that EML commands can be deeply nested, as much as twenty levels deep. Also, EML can be placed in the body of a message and in the SMTP header lines, such as **To**, **From**, and **Subject**.

Unlimited Tracked URLs

With Email campaigns becoming more and more complex, the need for recording an unlimited number of tracked URLs has become an industry priority. A tracked URL is a URL that is specified by the marketer to be a tracked URL (by enclosing the URLs to be tracked within an URLTrack EML tag), and is then is tracked by the Infor Email Marketing system. When an Email recipient clicks on a tracked URL, the URL, the Job File Record, and other information is recorded in the job file.

The job file also contains information on RedirectURLs. The RedirectURLs file is an XML file that contains mappings for all of the tracked URLs. Each URL is mapped to an index which is used as an offset into the URL bitmap.

For each job file created, Infor Email Marketing also creates a job-Transaction file. The job-Transaction file is a new data file that contains transactional information about an Email campaign. All information about tracked URLs is stored to a separate job-Transaction file. This allows for the storage of unlimited URLs, timestamps, distinct clicks, IP address of clicker, and many other events of interest.

Overview of How Unlimited Tracked URLs Works

The following overview describes how the Infor Email Marketing system records tracked URLs:

1. Infor Email Marketing Campaign content files are set up by the marketer to specify the URLTrack EML tags that indicate the desire for a given URL to be tracked. At campaign submission time, a test (using the TestJob executable) is executed over the campaign to verify that all content pieces are in place. All possible URLs are discovered at this time. These URLs are saved to the RedirectURLs.xml file which maps each URL to an index number..
2. The Content Generator loads the RedirectURLs.xml file and uses it to generate encoded URLs within the outbound Email messages. These messages are then delivered to remote SMTP servers where they can be downloaded and viewed by the Email recipients.
3. As Email recipients click on URLs and generate other types of response events, this information is written to the *.smtp.log and *.http.log files under the Infor/Inbox directory. This information is read by MailProcessing and converted to job update events.
4. The outgoing service processes job update events and records this information back to the job file and job transaction file.
5. The feedback utility reads through the job file and job-Transaction file to generate new feedback events. This information is stored in a local file in the tenant feedback directory. When all records in the job have been processed the transaction file is updated with the new feedback file position.
6. The feedback information is then transferred to Marketing. When the transfer is complete an acknowledgement is sent back to the Infor Email Marketing server and the data is then loaded into the mart where it can be used to drive future campaigns and to determine marketing effectiveness.

Tracked URL Validation

The TestJob program performs an HTTP GET operation for every tracked URL to confirm that the URL is valid and that the specified Web page or image can be served. Therefore tracked URLs must be in place before a preview or campaign is sent to the Infor Email Marketing Outgoing Services. If a tracked URL is not available, the TestJob generates a 'Page Not Found', timed-out or other type of error message. Untracked URLs are not validated.

A URL is considered successful when it returns a code between 200 and 399 inclusive. You can use the Configuration Manager to set the number of times a URL can be redirected before being considered invalid.

This validation is also possible for HTTPS. Any 401-type validation requiring a user to log in at a pop-up dialog box causes this validation to fail.

Under some DMZ network environments, the Infor Email Marketing Outgoing Services is not able to get the external NATed IP address from the DNS server. Instead, it resolves the external address. The URL validation fails due to DMZ connectivity issues.

Note: Tracked URLs can be verified through a proxy server. See "Network Configuration" on page 85 for information about configuring the proxy server.

Unsubscribe Message

To ensure that Infor Email Marketing is used only for permission-based marketing, the Infor Email Marketing Outgoing Services only transmits Email if an unsubscribe message is provided. Marketers can select from prebuilt unsubscribe messages using the EML markup language.

A default unsubscribe language set is created at install time. If unsubscribe EML is omitted, the Infor Email Marketing Outgoing Services automatically uses the default unsubscribe message. If the default is used, it is important that the last line in the message is left blank so that the default unsubscribe message appearing at the end of the message flows well with the rest of the Email.

See the section "Unsubscribe Messages" in the Infor Email Marketing Installation Guide for information on configuring the unsubscribe message feature.

Text Wrap

When an HTML m essage is displayed, Email reader software ignores forced line breaks, using only HTML commands such as `<BR>` to create whitespace. Line breaks are recommended, however, to ensure that messages can pass safely through Email gateways, some of which do not handle long lines. Accordingly, the content generator automatically forces line breaks every 70 characters (or earlier) for the following two message types:

- All HTML-only messages
- Both parts of an HTML detect message (both the plain text and the lightly formatted HTML part that accompanies the plain text).

Text-only messages are not wrapped. This allows you to wrap text appropriately for the size of your Email window.

Standards for SMTP Message Headers

According to RFC 822 “Standard for ARPA Internet Text Messages,” characters in the SMTP header, such as the Subject, From and To lines, are limited to 7-bit characters to ensure passage through all mail gateways. This rule limits usage to ASCII characters with decimal value 0 through 127. Accordingly, Infor Email Marketing generates an error for any Email that includes the high bit set in SMTP headers. Infor Email Marketing automatically encodes the subject line as per RFC 2047, to ensure that only valid characters are used.

The same limitation applies to the body of the email; however, experience has shown that 8-bit characters generally produce no problems.

SMTP From Line Validation

The Infor Email Marketing Outgoing Services validates the Email address provided in the **From** line (used for replies) of all campaign Emails. This validation guarantees a return path for any Email response.

Validation occurs with two checks. First, the Email address in the **From** line is checked against the set of potential choices stored in the Infor Email Marketing Outgoing Services configuration data. Second, a DNS lookup for the domain part of the **From** address is performed to determine whether the address includes a valid sending domain. If either check fails, the Infor Email Marketing Outgoing Services does not mail the message.

A valid sending domain (domain part of the **From** address) is one that has the necessary DNS configuration such that response Email can be received by the Infor Email Marketing Incoming Services. The following checks are performed on the sending domain:

- The DNS A record points to the Infor Email Marketing Incoming Services.
- At least one DNS MX record exists for the sending domain.
- All DNS MX records point to the Infor Email Marketing Incoming Services.
- If the Infor Email Marketing Incoming Services resides on an integrated Infor Email Marketing server, the DNS used for the query is the one specified in the Configuration Manager Network Configuration settings (**DNS Server IP Addresses**).
- If the Infor Email Marketing Incoming Services is remote, the DNS used for the look up is defined in the Configuration Manager of Infor Email Marketing Incoming Services Configuration for that Infor Email Marketing Incoming Services (**Incoming Service DNS Server IP Addresses**).

The validation of the DNS server occurs for TestJob and for each Infor Email Marketing Outgoing Services pass over a job.

DNS check procedures are shown in the following flow charts:

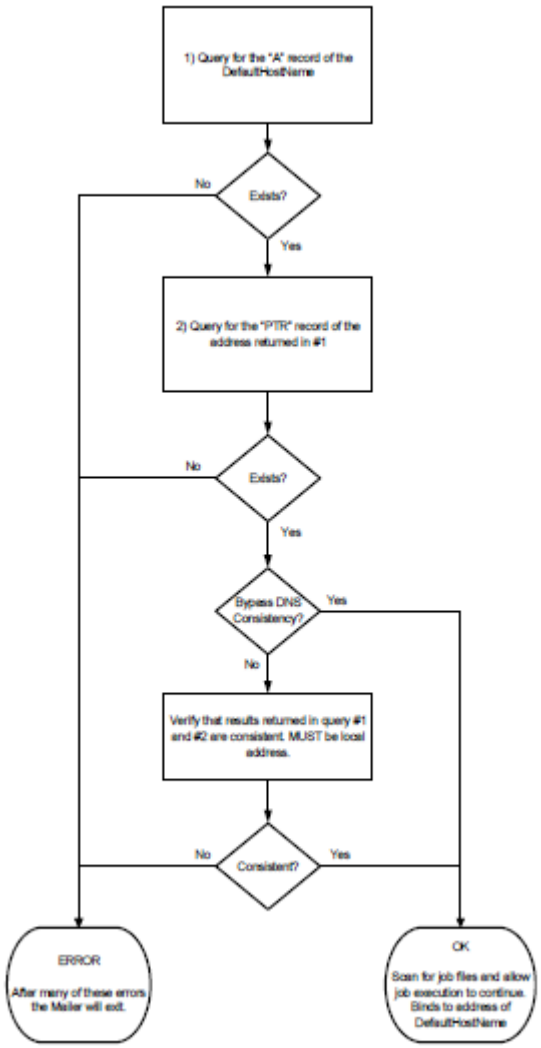


Figure 9: Basic DNS Check

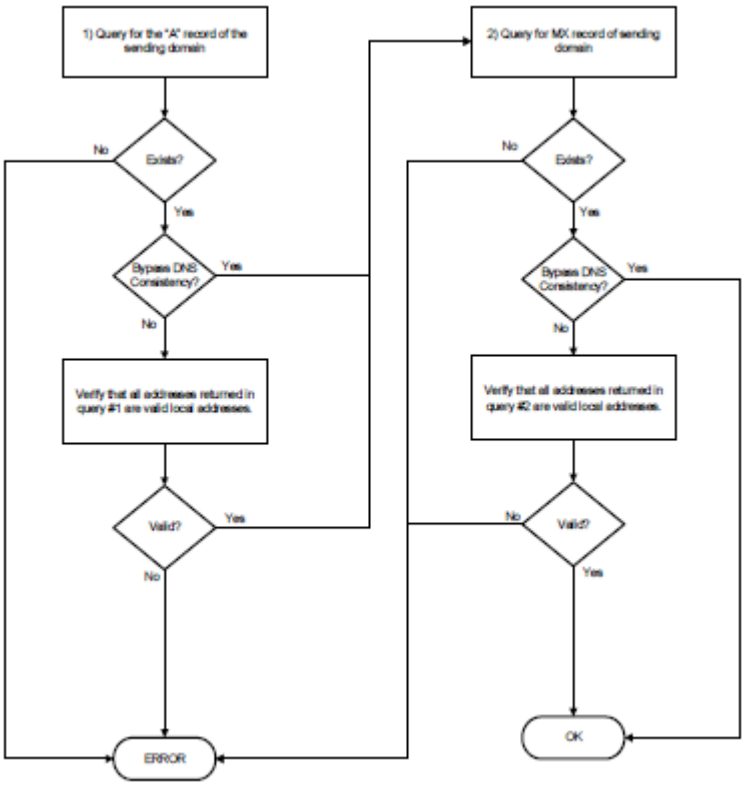


Figure 10: DNS Check for Integrated Server

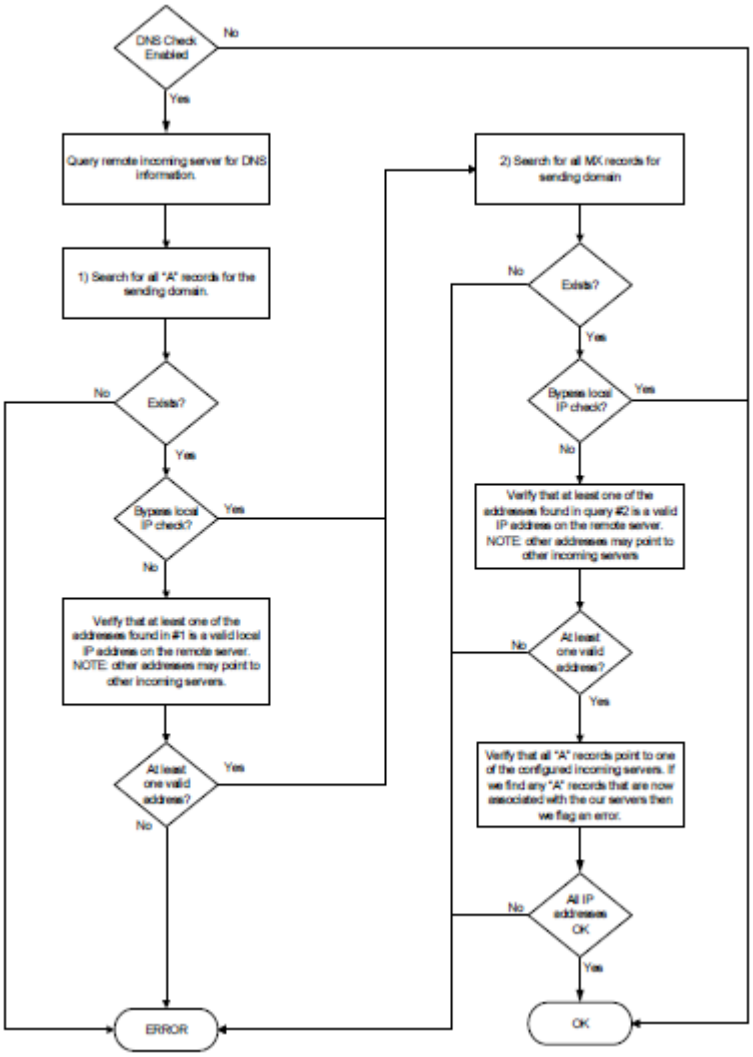


Figure 11: DNS Check for Remote Incoming Servers

Mailing the Job

When an Email job is started, the Email addresses to which Email is to be sent are sorted into domain name alphabetical order. A number of threads are started to send the Email. Each thread manages a single connection to a remote SMTP server, thus the number of threads is the maximum number of concurrent SMTP sessions. Each thread takes a group of Emails to send to a single domain name. During the first pass, each thread takes a maximum of 100 Emails. During subsequent passes, each thread takes a maximum of ten Emails. Thus, the first thread takes the lesser of 100 Emails or all the Emails in the first domain in the list. The second thread takes the lesser of the next 100 Emails or the next domain in the list, and so forth.

Each thread has a single connection to the domain to which it is sending Email. The connection is dropped when the thread has completed delivery on it's current group and the domain for the next

group is different (that is, if the first group is AOL and the second group is also AOL, it keeps its current connection). The system ensures that no more than a default of six connections to a single resolved IP address is maintained at any time. The default maximum number of connections can be set in the Configuration Manager (**Maximum Concurrent Connections per Destination IP Address**). The maximum number of connections per IP address can be set for each domain in the DomainInfo.xml file. See "Setting the Maximum Number of Sessions Per Destination" on page 49 for additional information.

A DNS configuration with multiple receiving mail servers is common for larger ISPs, such as MSN, Yahoo, AOL, and Hotmail. Thus, when Infor Email Marketing asks for a resolution of a domain name, it can receive a group of IP addresses. It is also possible that multiple queries for the same domain may result in a different set of IP Addresses.

The resolver library handles multiple IP addresses for a given domain. If a connection to one of the resolved IP addresses fails, that record (or block of records) is marked to retry at a later time (default of 1/2 hour later). Failures are retried up to 96 times (approximately two days). There is a small chance that the same set of records could resolve each of the 96 times to the bad IP address, and thus not be sent for that campaign. If the first address in a domain group fails the DNS resolution, then the remaining addresses in the group will remain untried.

Setting the Maximum Number of Sessions Per Destination

A DomainInfo.xml file is located in < installDir >\Config. This file contains parameters that override default connections. The parameters in the file that affect sessions and connections are:

Maximum Connections Per Destination

Maximum Concurrent Sessions Per Destination: Sets the maximum number of connections Infor Email Marketing will open to this destination. A destination is defined as a combination of an IP address + domain name. So AOL.com at some IP address `xxx.xxx.xxx.xxx` can have MCSPD connections. The default value is 6 if the domain/IP address is not explicitly listed in the file.

Maximum Messages Per Session

Maximum Messages Per Session: Sets the maximum number of Emails delivered per connection. Useful for domains that have a spam policy that tracks the number of Emails a sender delivers with each connection. A value of 0 means unlimited (send as many as the domain will accept). Any other positive number limits the number of Emails per connection to that number. The default value is unlimited if the domain/IP address is not explicitly listed in the file.

Error Reporting

A Infor Email Marketing topic allows marketers to avoid error conditions in their Email campaigns by:

- Checking campaign information for completeness and correctness before exporting data to the Infor Email Marketing Outgoing Services
- Supporting campaign preview, in which an actual one-recipient mailing is tested
- Correcting corrupt job files automatically

If an error does take place, one or more of the following actions can occur:

- An Email is sent to one or more system administrators.
- An error is written to the server log.

When an error occurs, the error message is always sent to the list of Error Alert Addresses set up in Configuration Manager. If the error occurs during the time the process is under the control of Marketing Manager, the error message is sent to both the Infor Email Marketing and AS error alert lists.

System Administrator Alert Email

The following cond itions lead to the automatic dispatch of Email to the system administrator(s) specified in your Infor Email Marketing Configuration Manager:

- Content generator errors (at test job time).
- Job processing errors
- Mail processing errors

Examples of reported error conditions include:

- Invalid EML used in content (at test job time).
- Inadequate disk storage capacity
- DNS error
- A mismatch between “recipient” (the reply-to address in an Email) domain and the Infor Email Marketing Incoming Services domain name
- Missing unsubscribe language

Note that the marketer who exports the campaign to the Infor Email Marketing Outgoing Services does not see these error messages unless he or she is added to an error alert list.

Preview

A preview consists of a test mailing for one or more Email recipients. These messages are sent to every address listed in the **Test Message Addresses** configuration parameter in the Configuration Manager. Preview mailings can be created at the campaign or content master level from within the Marketing UI. At the campaign level, the list is analyzed to find all unique combinations of content components. Sample values for substitution fields are chosen from the list and segmentation information defined in the campaign. Information about the selected records will be displayed and the user can select which records should be previewed. Previews at the content master level will include a single

receipient and sample values for substitution fields, including the Email address of the recipient, are typed into the Infor Email Marketing topic preview screen, and passed to the Infor Email Marketing Outgoing Services. TestJob validates the content file, checking referenced URLs, EML, and the consistency of the message format requested against the content files supplied.

Note: TestJob validates each trackable URL by attempting an HTTP GET. Make sure that all of your destination Web pages are in place before attempting a preview.

If no errors are encountered, the test message is mailed to the provided recipient Email address. This mailing allows the marketer who is working on the campaign to see the Email as it might appear to a campaign recipient. The subject line of the test message is optionally prefixed with the treatment code defined by the content master. This behavior is controlled by the 'Panel Key in Subject' tenant setting in the Configuration Manager.

If an error occurs, TestJob terminates and an error message is sent to the error alert Email list. This list consists of the Marketing system administrator Email address, and the error Email list configured in the Configuration Manager. In some cases, there may be a communication error sending the campaign to the EM server. In this case, an error alert message will be sent to the administrator using the email settings specified in the Marketing Manager.

Note: If your test includes more than one content file, some preview Email might be sent before an error occurs. If your test includes only one content file, no Email is sent if an error is generated. By default, TestJob uses the Infor Email Marketing Outgoing Services to send the test messages, but this is configurable. The Content Generator creates the -mail content, which TestJob then relays through the SMTP server specified in the configuration.

Note: While an invalid Email address generates an error message, using an incorrect Email address for preview results in the appearance of nothing happening. In reality, the preview email is sent to an unsuspecting third party.

Nothing relating to this test message is logged by Infor Email Marketing. For example, if a preview recipient clicks-through to an unsubscribe survey page, the unsubscribe mechanics work but the event is neither logged nor reported back to the data mart.

Note: You can control the amount of time before preview jobs or invalid jobs are deleted by changing the parameters using the Admin Console Manager. See "Garbage Collection" on page 164 for more information.

It is a good practice to send preview email messages before a live campaign is scheduled. This will give you the opportunity the test for and fix any errors in the content or associated web services, before the email messages are received by the actual campaign recipients. In addition to validating the format of the content, you should click-through all tracked URLs to verify that remote web service is functioning as expected. You can also click-through the Infor Email Marketing preference pages to verify correct operation. Make sure to verify the content in both TEXT, and HTML formats.

Infor Email Marketing Outgoing Services

The Infor Email Marketing Outgoing Services operates in tandem with the Content Generator to produce outgoing campaign Email with its integrated SMTP capability. The Infor Email Marketing Outgoing

Services keeps track of success ful and unsuccessful transmissions, logging every event to an SMTP transmission log.

Retry Methods

In case of unsuccessful transmissions, these Retry methods can be implemented:

INTERVAL retry: The retry occurs at a set interval as specified by the job Retry Interval configuration setting. The retry interval is the time interval (in minutes) between the start of one pass and the start of the next pass. If the first pass lasts longer than this time interval, the job is eligible for the next pass, as soon as the first pass is completed.

REGRESSIVE retry: The time interval between the passes increases after each pass (30 minutes, 1 hour, 2 hours, 4 hours, 6 hours, 8 hours, and so on) and the total number of passes is generally less. The configuration setting to control the Regressive retry is called Regressive Retry Intervals (This value is set to the number of minutes between each pass).

Note: The configuration ‘minimum rest period’ setting controls the minimum time period between passes. This setting overrides the retry interval if shorter than the rest period.

The setting for controlling the maximum number of passes can be found in the configuration manager on the ‘Outgoing Mailing Settings’ page under ‘Maximum number of retries’. The maximum number of retries value that you specify applies to both INTERVAL and REGRESSIVE retry methods. If a job does not have any more passes to execute, then the job will be moved to the InactiveQueue and will no longer be eligible for execution.

The Infor Email Marketing Outgoing Services runs continuously as a service, checking all staged Email jobs to determine if any are due for delivery. The Infor Email Marketing Outgoing Services can deliver more than one Email job at a time.

The Infor Email Marketing Outgoing Services is designed to send Email as fast as possible. Its performance can be limited by either the bandwidth of its internet connection, or the read performance of the disk drive assembly. Performance can also be affected by the cleanliness of your list (the number of deliverable addresses) and by the size of the Email content.

Time Synchronization

Time synchronization software must be deployed on both the Outgoing Service and on each Incoming Service. Properly synchronized timestamps on the incoming data are critical to ensure correct order processing of incoming events.

SMTP Relay

To add SMTP relay to the Infor Email Marketing Outgoing Services, modify the SMTP relay IP address. The presence of one or more addresses signals the Infor Email Marketing Outgoing Services to operate in relay mode.

- Active relay servers are listed on the Admin Console in the “**Relay MX Destination Address**” field.
- Connection pool information reflects actual relay servers and not destination domain servers (difference between relay and test mode).
- Relay servers are marked as “RELAY” instead of the destination host name.
- The Infor Email Marketing Outgoing Services makes connections to multiple relay servers in round robin fashion, however connection allocation rules still apply. The maximum connections per relay server can be controlled by making an IP Address entry in the DomainInfo.xml file. Maximum connections cannot be controlled by domain name when operating in relay mode. The default maximum is 6.
- The Infor Email Marketing Outgoing Services does normal DNS lookups and does not deliver mail for a domain that does not resolve correctly.

Note: DNS must be configured correctly even if the Infor Email Marketing Outgoing Services is operating in relay mode.

You can use the Configuration Manager to edit this setting.

Throttling

The Outgoing Service provides basic support for throttling of Email messages. The throttling settings allow you to control either the number of messages sent or the number of bytes sent (bandwidth). Throttling may be controlled by domain or by time as follows:

- Max messages per day
- Max bytes per day
- Time of day throttling for the number of messages sent (in increments of 30 minutes)
- Time of day throttling for the number of bytes sent (in increments of 30 minutes)
- Domain based throttling for the number of messages sent
- Domain based throttling for the number of bytes sent.

The Outgoing Service has multiple levels of throttling. The global settings for "Max messages per day" and "Max bytes sent per day" will provide an upper limit for the number of messages or bytes that can be sent in a given day. Time-based throttling will control the maximum number of messages/bytes that can be sent at different time periods of the day. Domain based throttling controls the maximum number of messages/bytes that can be sent to a specific domain per hour.

Because throttling has some overhead, time-based throttling and domain- based throttling can be disabled using the configuration manager.

Incoming Services

A single service handles the HTTP, SMTP and IDENT traffic. This service has been designed for ultra-high performance and stability since it must keep up with the Infor Email Marketing Outgoing Services and Email bounces. For information on monitoring and controlling the Infor Email Marketing Incoming Services through Console Manager, see "Administration Console" on page 129 for additional information.

Incoming Service settings can be accessed using the Configuration Manager.

Forward to a Friend

The forward to a friend feature allows the recipient of an email campaign to forward the message to one or more friends whom may be interested, or benefit from the message. This provides additional functionality beyond what the forward button in your email client provides.

A landing page is available in the Incoming Service for forward to a friend. Using this page the initiator of the forwarded message will have the opportunity to create a short introduction message to include with the email. The marketer will have the ability specify the placement of that message in the email.

After a forward to a friend page has been successfully submitted, a confirmation page will be displayed. The confirmation page will have a simple message that says "Thank you for forwarding this message to your Friends" and a ‘continue’ button will guide the user to the home page of the company/product/service marketed in the email.

The details of Forward to a Friend can be customized with the Configuration Manager. The Introduction Message uses components and tags to assist the user in building reusable content that can be inserted into the content. In addition to allowing customized placement of the introduction message in the forwarded email, the Forward to Friend functionality can include Captcha for spam protection should the admin choose to add it.

Social Networking

The social networking feature is sometimes referred to as the next generation of "forward to a friend". Social networking lets the friend's identity stay anonymous while still spreading the message to a potentially larger group and maintains the tracking capabilities provided by "forward to a friend". The social networking feature also goes a step further because, in addition to allowing you to post a message, it will allow the email recipient to ‘Join your Group’ or ‘Become your Friend’. This provides another communication channel with the customer.

The social networking feature allows your email recipients to interact with several social networking sites. The social networking feature will include several components as part of the default installation. Users of the social networking feature also have the ability to add their own or edit existing components. The components that are included in the default installation (each descibed below) are:

- Facebook share link
- Facebook send button
- Facebook Like button
- Twitter tweet button
- Twitter tweet link
- Twitter follow button
- Twitter follow link
- Myspace share button
- Linkedin share button
- Linkedin Recommend button

The **Facebook share link** posts a message to the wall of the recipients existing Facebook account. This is an attractive capability because the initiator does not have to share the email address of their friend; in addition, the message can reach a large number of their friends very quickly. The message the user posts will include a link to the company's site, or separate social networking page.

The **Facebook send button** initiates a private message between the original email recipient and the friends with whom the recipient chooses to share the message. The recipient and Facebook message initiator will have the ability to add Facebook contacts to the message, and customize the private message. The Social Networking feature will auto-populate the message field with a URL which can lead the friend (Facebook message recipient) to the company's web site or other customizable page.

The **Facebook like button** interacts with the initiator’s Facebook profile. When the user clicks the 'Like' button, Facebook will post a 'Like' action on the email recipient's wall with a link to the Web Site/Product/Content that was liked. The post, link, and like action will be visible to the user's friends.

The **Twitter tweet button** and **twitter tweet link** will initiate a tweet from the recipients existing twitter account. Upon clicking the button or link, the user’s twitter profile will appear and the user will be prompted to log in, if they are not already. The URL (which size is customizable for the 120 character limit) will appear in the tweet window.

The **Twitter follow button**, and **twitter follow link** will allow the user to follow the company/product/service represented in the email. Upon clicking on the follow button or link, the user will be taken to the twitter profile of the company/product/service, and the email recipient will also become a follower at the same time.

The **Myspace share button** allows users to easily share a URL or message with their friends on MySpace. This should not be used directly in email content because it makes use of JavaScript and will be rejected by most email clients. Instead use this tag as part of the content for a Social Networking Event.

The **Linkedin share button** allows users to easily share a URL or message with their friends on Linkedin. This should not be used directly in email content because it makes use of JavaScript and will be rejected by most email clients. Instead use this tag as part of the content for a Social Networking Event.

The **Linkedin Recommend button** allows users to recommend a product or company to others on Linkedin. This should not be used directly in email content because it makes use of JavaScript and will be rejected by most email clients. Instead use this tag as part of the content for a Social Networking Event.

URL Shortening Service

Infor Email Marketing provides a simple URL Shortening service that can be used to shorten URLs that are posted to social networking sites such as twitter. A mapping of the short URL and target URL is stored in the Infor Email Marketing database. See details for the EML tag "ShortUrl" on page 322", for more information on usage.

Robot Detection

The Infor Email Marketing system will make a best effort to ignore requests coming from robots (i.e. search engine spiders, etc). These requests will still be logged but will not cause any forwarded emails to be generated. They will also be ignored by LogProcessing for feedback purposes. Robots are detected in the following different ways:

- The system will search a configurable list of known robot user-agents.
- The system will search a configurable list of known robot IP addresses.

Robot detection is necessary to prevent search engines from adversely affecting feedback.

The information used for robot detection is configured in a file called ‘robots.xml’. For example:

```
<?xml version="1.0" encoding="UTF-8"?>
<robots>
    <robot id="1" name="Google" user.agent="googlebot" />
    <robot id="2" name="MSN" user.agent="msnbot" />
    <robot id="3" name="Bing" user.agent="bingbot" />
    <robot id="4" name="Yahoo" user.agent="yahoo! slurp" />
    <robot id="5" name="Google1" ip.address="216.339.33.96"/>
    <robot id="6" name="Google2" ip.address="64.233.173.0"
     mask="255.255.255.0"/>
</robots>
```

Note that the application doesn't currently ship with any robot IP addresses because they change frequently and many search engine providers do not publish a list of IP addresses. Because of this, the preferred method for robot detection is done using the user-agent. However, detection by IP addresses is supported for cases where the robot does not use an identifying user-agent.

Robots.txt

In addition to robot detection, the Infor Email Marketing software also handles requests for a standard ‘robots.txt’ file which is used to give instructions to search engine robots regarding the pages that should

(or should not be) indexed on the site. For Infor Email Marketing, you generally do not want a search engine to index the site at all. This can be accomplished by placing a file called ‘robots.txt’ in the root WebPages directory (i.e. `<mailerdata>\WebPages`). The content of this file should be something similar to the following:

```
User-agent: *
Disallow: /
```

This should stop all well-behaved robots from indexing the Infor Email Marketing web site.

Ignore URLs

The ‘IgnoreUrls.txt’ file (note filename case sensitive on UNIX platforms) should be found in the <installation directory>\config directory. If the file doesn't exist, then you can create it with any text editor. The file should contain one URL (or partial URL) per line. URLs are NOT case sensitive. For every URL that TestJob validates, it will first check to see if the URL BEGINS with any URL (or partial URL) found in the ignore list. If a match is found then validation will be skipped for that URL.

So, for example, if "http://www.example.com" is listed in IgnoreUrls.txt, then any URL that BEGINS with "http://www.example.com" will be skipped. The URL in the file may be as complete as you want it to be. If you put "https" in the file it' will skip any URLs that begin with "https".

By default, it will look for the file under the config directory. To specify a different location, you can use the ‘testjob.ignoreurls.file’ property (via the `EM.properties` file). For example, in EM.properties it would be added like the following:

```
testjob.ignoreurls.file=\\<machine_name\<path to file>
```

Note: UNC style path names are supported on windows systems.

Remote Incoming Service

The Outgoing Service will automatically synchronize any preference pages to each of the remote incoming services.

Integrated SMTP

Both the Infor Email Marketing Outgoing Services and Incoming Services use an integrated, proprietary SMTP Server to handle campaign-related Email. This proprietary SMTP Server is designed for ultra-high performance. It should be noted that this SMTP Server is for Infor Email Marketing use only, and is not accessible for general Email usage.

Outbox Content Generation

Log processing is given the supplemental task of using a trimmed down Content Generator to prepare confirmation Email messages. These are simple Email messages sent back to an Email recipient in acknowledgement of their request to unsubscribe or change their Email address. These messages are written out to the outbox file, and are then dispatched by the Infor Email Marketing Outgoing Services. The text of these confirmation messages can be revised through the configuration management tool. These files are located in < MailerData >\Infor\Outbox. As with campaign mailings, a log is kept of the SMTP conversations with recipient systems.

Feedback Collection and Log Interface

The Marketing Scheduler periodically downloads campaign results from the Infor Email Marketing Outgoing Services using the Feedback Collector program. Every time the Infor Email Marketing Outgoing Services is polled, it collects Email recipient event information for all campaigns still open and bundles it into a single log. This log is downloaded by Marketing server through a secure SSL link and the results are extracted into the EpiMart.

The Infor Email Marketing topic interface provides a check box that controls collection of sent log information. Sent log information records the successful transmission of individual Email. Should a large campaign be executed, this log might contain millions of entries. Loading sent log information into your data mart can create an unacceptable burden for Marketing , causing the Marketing nightly extraction to take too long. Accordingly, the check box mechanism is provided to control whether sent log information is included or excluded in the log files generated by Infor Email Marketing.

Blacklist Monitoring Service

The Blacklist Monitoring Service is a service that monitors the integrity of the IP addresses emails are sent from. The Blacklist monitoring service is an optional service that is included with the most recent versions of Infor Email Marketing.

The Blacklist Service settings can me modified or edited within the Configuration manager. After entering Configuration Manager, locate your current Network Settings located in the Outgoing Settings section. Ensure that you have all of the appropriate IP addresses listed as an External IP Address. The Blacklist monitoring will search for the listed IP addresses in the services you define. Also, within your Network Settings, define the interval in which you would like the monitor to check the blacklists for your listed IP addresses. The blacklist update interval can be set from 1 to many minutes.

After defining properties in the Configuration Manager, an XML document needs to be modified to store the details about the services with which you would like to work. You will need to have the following details for your service ready: Service Name, Service URL, and Service IP Address. The XML file can be found in the Config file, and is called 'dnsbl.xml'.

The Blacklist monitoring page is located within the Admin Manager. You will find a summary of the blacklist services you are working with and a status stating whether or not your IP address was found in their list. Within the summary table, the Service Name is listed first, followed by a current status icon, and message. The Status Icon displays green for OK, red if an owned IP was found on a blacklist and yellow if the connection timed out. In addition, if the service has any additional information about the owned IP address, it will be listed in the message section. The administration of Infor Email Marketing will also receive an email, should their IP address be found on any service’s blacklist.

System Logging

Infor Email Marketing uses the log4j tool for all system logging. This tool allows very granular control over the types of messages that are logged and how they are logged.

XML-based configuration files are used to specify the logging level and behaviors for both the Outgoing and Incoming Services. The configuration files allow you to control the type and level of messages logged, format of the log message, the destination filename and location, and how log files are rolled. The Outgoing and Incoming server each have their own configuration file. The Outgoing Service configuration file is called `OutgoingServiceLogConf.xml` and the Incoming Service configuration file is called `IncomingServiceLogConf.xml`. These configuration files are located in the "config" sub-directory of your installation.

If the Outgoing or Incoming service detects that the log configuration file has changed, it will be reloaded on-the-fly and any changes will take affect within 15 seconds of the change. The service does not need to be restarted for logging changes to be made.

There are 6 different levels of log messages that can be written to the log output. These are:

- FATAL - Severe errors that cause premature termination.
- ERROR - Other runtime errors or unexpected conditions.
- WARN - Events that are 'almost' errors, other runtime situations hat are undesirable or unexpected, but not necessarily "wrong".
- INFO - Interesting runtime events (startup/shutdown).
- DEBUG - detailed information on the flow through the system.
- TRACE - more detailed debugging information.

Note that the amount of system logging that occurs will have an impact of performance and disk usage. In general only INFO - FATAL messages are logged. However, if you need to troubleshoot a problem, then if may be necessary to increase the level of logging.

Log4j has three general types of object that may be configured. These are:

1. Loggers are the logical log names. Each logger may control the level of log messages that are included in the output.
2. Appenders specify the actual output of the log message. Generally this will be a file but it can also be the console, a socket, syslog, etc. Multiple appenders can be attached to a single logger. This allows messages to be written to multiple destination locations.
3. Layouts are used by appenders to control the format of the log message.

   An example of the Outgoing Service configuration follows:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE log4j:configuration SYSTEM "log4j.dtd">
<log4j:configuration xmlns:log4j="http://jakarta.apache.org/log4j/">

    <appender name="OutgoingService" class="org.apache.log4j.Daily
RollingFileAppender">
        <param name="File" value="C:/INFOR/EM/log/OutgoingService.
log" />
        <param name="datePattern" value="'.'yyyy-MM-dd" />
        <param name="append" value="true" />
        <layout class="org.apache.log4j.PatternLayout">
           <param name="ConversionPattern" value="%d [%t] %-5p %C{1}
 - %m%n"/>
        </layout>
    </appender>
   <appender name="LogProcessing" class="org.apache.log4j.DailyRolling
FileAppender">
        <param name="File" value="C:/INFOR/EM/log/LogProcessing.log"
 />
        <param name="datePattern" value="'.'yyyy-MM-dd" />
        <param name="append" value="true" />
        <layout class="org.apache.log4j.PatternLayout">
           <param name="ConversionPattern" value="%d [%t] %-5p %C{1}
 - %m%n"/>
        </layout>
    </appender>
   <appender name="Console" class="org.apache.log4j.ConsoleAppender">

        <layout class="org.apache.log4j.PatternLayout">
            <param name="ConversionPattern" value="%-5p %C{1} - %m%
n"/>
        </layout>
        <filter class="org.apache.log4j.varia.LevelRangeFilter">
            <param name="AcceptOnMatch" value="true"/>
            <param name="LevelMin" value="warn"/>
```

```
            <param name="LevelMax" value="fatal"/>
        </filter>
    </appender>
    <logger name="com.infor.logprocessing" additivity="false">
        <level class="org.apache.log4j.Level" value="info" />
        <appender-ref ref="LogProcessing" />
        <appender-ref ref="Console" />
    </logger>
    <logger name="com.infor" additivity="true">
        <level class="org.apache.log4j.Level" value="info" />
        <appender-ref ref="OutgoingService" />
    </logger>
    <root>
        <priority class="org.apache.log4j.Level" value="warn"/>
        <appender-ref ref="Console" />
    </root>
</log4j:configuration>
```

For more details about log4j please see the following web site:
http://logging.apache.org/log4j/1.2/index.html%20

Tenant Specific Logging

Infor Email Marketing has the ability to run in a multi-tenant environment. Many tenants may be accessing the system at the same time and the current logging scheme writes everything to a single file. Log messages for a single tenant will be intermixed with messages for other tenants. Because of this it may be difficult to track a single tenant's activity though the system. To make troubleshooting easier the application allows the log file to be split into a set of tenant specific logs and a global log file. Log messages that are not specific to a tenant are logged in the global file. The tenant specific logs will be stored in sub-directories named after the tenant.

The TenantSpecificDailyRollingFileAppender is configured similar to DailyRollingFileAppender. For example:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE log4j:configuration SYSTEM "log4j.dtd">
<log4j:configuration xmlns:log4j="http://jakarta.apache.org/log4j/">
    <appender name="OutgoingService"
       class="com.infor.multitenantlog4jtest.TenantSpecificDailyRolling
FileAppender">
        <param name="directory" value="C:/INFOR/EmailMarketing/
mailerdata/INFOR/Logs" />
        <param name="filename" value="OutgoingService.log" />
        <param name="datePattern" value="'.'yyyy-MM-dd" />
        <param name="append" value="true" />
```

```
        <layout class="org.apache.log4j.PatternLayout">
            <param name="ConversionPattern" value="%d [%t] %-5p %C{1}
 - %m%n"/>
        </layout>
    </appender>
   <appender name="Console" class="org.apache.log4j.ConsoleAppender">

        <layout class="org.apache.log4j.PatternLayout">
           <param name="ConversionPattern" value="%-5p %C{1} - %m%n"/
>
        </layout>
        <filter class="org.apache.log4j.varia.LevelRangeFilter">
            <param name="AcceptOnMatch" value="true"/>
            <param name="LevelMin" value="warn"/>
            <param name="LevelMax" value="fatal"/>
        </filter>
    </appender>
    <logger name="com.infor" additivity="true">
        <level class="org.apache.log4j.Level" value="info" />
        <appender-ref ref="OutgoingService" />
    </logger>
    <root>
        <priority class="org.apache.log4j.Level" value="error"/>
        <appender-ref ref="Console" />
    </root>
</log4j:configuration>
```

The appender configuration provided in the log4j configuration file will be replicated for each of the tenant specific child appenders created by the application.

Services

The following processes run as services:

- Infor Email Marketing Outgoing Services (Windows or Unix). This service includes Log Processing, Storage Management, and the Email Delivery Engine (SMTP). It also includes and embedded web server for Campaign Submission, an optional embedded database, Configuration Management, and the Administrative Interface.
- Infor Email Marketing Incoming Services (Windows or Unix), which includes: incoming HTTP, IDENT, and incoming SMTP protocol handlers. This service handles all incoming responses for Infor Email Marketing.

Note: Infor Email Marketing now has the same two services (Incoming and Outgoing) that run on all platforms. The startup method will be different but the services themselves are the same.

Note: The Microsoft SMTP Service is no longer configured on windows machines.

Note: The Syslog service is no longer used.

Note: IIS and Apache are no longer used. Instead, there is an embedded web server that runs as part of the Outgoing Services.

Note: `Spawnd` is no longer needed.

Unix Commands

The following commands can be used to control Infor Email Marketing in a Unix-based command line (you should be superuser to execute these commands). To determine if these processes are running, search the process table (use the `ps` command) for the operating process name.

Object	Command	Operating Process
Infor Email Marketing Outgoing Services	`outgoingsvc <start | stop>`	Infor Email Marketing Outgoing Services
Infor Email Marketing Incoming Services	`incomingsvc <start | stop>`	Infor Email Marketing Incoming Services

On remote installations (Infor Email Marketing Outgoing Services and Infor Email Marketing Incoming Services on the different machines), the username:password can be different on each Infor Email Marketing Incoming Services.

Note: Local system resources can be inserted in email content using the EML tag FileInsert (ctg.allowLocalSystemResources=true in EM.properties) only if the servers (Outgoing and Incoming) use the same operating system, that is, Unix or Windows.

Limited Content Hosting

The Infor Email Marketing Incoming Services includes a limited HTTP Web service that is used to handle click-through requests and survey pages. It can also serve arbitrary HTML pages and images. This Web server runs under the context of the Infor Email Marketing Incoming Services software and is commonly referred to as a WWW service.

The WWW service is NOT a full blown Web server but it can serve images or Web pages that are associated with Infor Email Marketing campaigns and survey pages.

Additionally, the WWW service has a few restrictions for content that it hosts:

- It is only aware of the following file types: HTML, HTM, HTTP, GIF, PNG, and JPG.
- All URLs or image references must be generated by the URLGenerate EML tag. This ensures that the URLs are properly encoded so that the requests can be re-associated with the campaign and recipient that made the request.
- No built-in mechanism exists to put arbitrary content into the proper folders on the Infor Email Marketing Outgoing Services. You must therefore put these files into place manually.

All files that the WWW service hosts should be located in the `WebPages` directory or `identity` sub-directory. The following image is an example of what the directory structure should look like:

To generate a link to a file located in the tenants WebPages directory you must use the URLGenerate EML tag which has the following syntax:

```
`URLGenerate(/<FileName>)`
```

In this example, the WWW service searches for the file in the <Mailerdata>\<WebPages>, <Mailerdata>\<tenant>\<WebPages> , <Mailerdata>\<tenant>\<Job>\<WebPages> & <Mailerdata>\<tenant>\<WebPages>\<Identity> directories.

After you submit a new campaign, it can take the WWW service up to 5 minutes to load information about the new job files. The hosted files for the new campaign will be unavailable until the WWW service loads this information. The Infor Email Marketing Administrative console page can be used to determine whether information has been loaded for a given job.

Processing Incoming Responses

This section describes how log processing handles incoming email and HTTP activity.

Recipient Types

Log processing has several different methods that can be used when processing incoming email. The method is chosen based on the recipient type of the 'FROM' address. The following types are possible:

- Normal – Messages are processed using rules based categorization.
- Blackhole – All messages addressed to this recipient will be ignored.
- Not Monitored - All messages with a valid Message-Id which are not categorized as Auto-Reply, Undeliverable, or Ignore will be sent the "Not-Monitored" reply message. Auto-Reply and Undeliverable messages should be processed as normal. However, incoming messages that normally would be categorized as 'unsubscribe' or 'manual process' should only generate the 'Not-Monitored' message. Manual process messages should not be forwarded and unsubscribe messages should not be unsubscribed.

- Forward - All messages, except those that would be categorized as Auto-Reply, Undeliverable, or Ignore should be forwarded for manual processing.

Filtering Incoming Email

When log processing runs it attempts to categorize incoming Email into one of the following categories (not necessarily in this order):

- Auto-reply – An out of office reply or other type of automatically generated email.
- Undeliverable – Notification that an email delivery attempt was not successful (i.e. bounce)
- Unsubscribe – An email based request to unsubscribe from future mailings.
- Postmaster – Any email addressed to postmaster@your.domain.
- Abuse – Any email messaged addressed to abuse@your.domain.
- Ignore – The email message should be ignored.

If the mail is not found to be in one of these categories, the message is forwarded on to the appropriate forwarding address. If the message is not found to have an “appropriate” forwarding address, the message is forwarded to the administrative forwarding address. If no identifiable job is associated with the incoming activity, the mail is also forwarded to the administrative forwarding address.

Processing Rules

Log processing uses a set of rules to categorize incoming email and HTTP activity. These rules are fully configurable in the Log Processing page of the configuration manager. Each rule has the following attributes:

- Channel – specifies the channel that the rule applies to. Can be either HTTP or SMTP.
- Category – specifies how the message should be categorized, if the rule matches.
- Location – specifies what part of the email is searched.
- Bytes to Search – specified the number of bytes that should be searched.
- Filter String – specifies the text that is searched for.
- Is regular expression – indicates that the Filter String is a complex regular expression.
- Is case sensitive – indicates that the Filter String is case sensitive.
- Is anti-rule – indicates that if a message matches this rule it should NOT be categorized using the specified category.

You can create both positive and negative rules (anti-rules). A positive rule means that, if a match is found, it should be categorized in the specified way. A negative rule means that, if a match is found, it should NOT be categorized in the specified way. A message is only tested against the negative rules if a match is found for a positive rule. Consider the following example:

```
Subject: Unsubscribe
Vs.
Subject: Unsubscribe Confirmation
```

We may want to create a rule that says if we find the word “Unsubscribe” in the subject line of an email message, then categorize that message as an unsubscribe request unless the subject actually says “Unsubscribe Confirmation”. The latter case would be an anti-rule that would over-ride the first positive rule.

Rules are processed in the following way:

1. Search the message starting with the first processing rule. Stop when the first match is encountered. This will be the category for the message.
2. If a match was found in step 1, then search all anti-rules for the given category. If an anti-rule match is found then go back to step one and continue searching starting at the next rule. This overrides any previously selected category.
3. If a match was not found, then forward the message to the configured forwarding address.

Out of the Box Processing Rules

Out of the box the following processing rules will be installed:

ID	Category	Search Location	Bytes to Search	Anti Rule	Filter String	Channel
1	Unsubscribe	Subject	100	FALSE	Unsubscribe	smtp
2	Unsubscribe	N/A	0	FALSE	Unsub-scribe.html	http
3	COA	N/A	0	FALSE	ChangeOfAd-dress.html	http
4	COF	N/A	0	FALSE	ChangeOfFor-mat.html	http
5	Open	N/A	0	FALSE	blankpixel.gif	http
6	Unsubscribe	Subject	100	FALSE	unsubscribe	smtp
7	Unsubscribe	Subject	100	FALSE	unsuscribe	smtp
8	Unsubscribe	Subject	100	FALSE	unscribe	smtp
9	Unsubscribe	Subject	100	FALSE	un-subscribe	smtp
10	Unsubscribe	Subject	100	FALSE	unsubscrbe	smtp
11	Unsubscribe	Subject	100	FALSE	remove	smtp
12	Unsubscribe	Subject	100	FALSE	usubscribe	smtp
13	Unsubscribe	Subject	100	FALSE	unsubsrcibe	smtp

ID	Category	Search Location	Bytes to Search	Anti Rule	Filter String	Channel
14	Unsubscribe	Subject	100	FALSE	unsubcribe	smtp
15	Unsubscribe	Subject	100	FALSE	un subscribe	smtp
16	Unsubscribe	Subject	100	FALSE	unsubsribe	smtp
17	Unsubscribe	Subject	100	FALSE	unsunscibe	smtp
18	Unsubscribe	Subject	100	FALSE	unsubscrib	smtp
19	Unsubscribe	Subject	100	FALSE	unsusbscribe	smtp
20	Unsubscribe	To	100	FALSE	abuse@	smtp
21	Unsubscribe	To	100	FALSE	postmaster@	smtp
22	Unsubscribe	Subject	100	TRUE	unsubscribe onfirmation	smtp
23	Unsubscribe	Subject	100	TRUE	unsubscribed onfirmation	smtp
24	Unsubscribe	FirstBody	100	FALSE	unsubscribe	smtp
25	Unsubscribe	FirstBody	100	FALSE	take me off your	smtp
26	Unsubscribe	FirstBody	100	FALSE	please take me off	smtp
27	Unsubscribe	FirstBody	100	FALSE	no more mail	smtp
28	Unsubscribe	FirstBody	100	FALSE	do not solicit	smtp
29	Unsubscribe	FirstBody	100	FALSE	do not mail	smtp
30	Unsubscribe	FirstBody	100	FALSE	remove	smtp
31	Unsubscribe	FirstBody	100	FALSE	account has been nactive	smtp
32	Unsubscribe	FirstBody	100	FALSE	has been closed	smtp
33	Unsubscribe	FirstBody	100	FALSE	your mail message as sent to a deleted ccount	smtp
34	Undeliver-able	From	100	FALSE	daemon	smtp
35	Undeliver-able	From	100	FALSE	admin	smtp

ID	Category	Search Location	Bytes to Search	Anti Rule	Filter String	Channel
36	Undeliverable	From	100	FALSE	postmaster	smtp
37	Undeliverable	From	100	FALSE	gateway	smtp
38	Undeliverable	From	100	FALSE	mailer-daemon	smtp
39	Undeliverable	From	100	FALSE	administrator	smtp
40	Undeliverable	From	100	FALSE	mailer	smtp
41	Undeliverable	From	100	FALSE	unknown_user	smtp
42	Undeliverable	Subject	100	FALSE	undeliverable	smtp
43	Undeliverable	Subject	100	FALSE	user not found	smtp
44	Undeliverable	Subject	100	FALSE	mci mail reject notice	smtp
45	Undeliverable	Subject	100	FALSE	ccmail smtplink undeliverable message	smtp
46	Undeliverable	Subject	100	FALSE	returned mail	smtp
47	Undeliverable	Subject	100	FALSE	failed mail	smtp
48	Undeliverable	Subject	100	FALSE	non-delivery notification	smtp
49	Undeliverable	Subject	100	FALSE	not found	smtp
50	Undeliverable	Subject	100	FALSE	undelivered mail	smtp
51	Undeliverable	Subject	100	FALSE	delivery has failed	smtp
52	Undeliverable	Subject	100	FALSE	unable to deliver mail	smtp

ID	Category	Search Location	Bytes to Search	Anti Rule	Filter String	Channel
53	Undeliverable	Subject	100	FALSE	mail failure	smtp
54	Undeliverable	Subject	100	FALSE	smtp delivery error	smtp
55	Undeliverable	Subject	100	FALSE	failed message	smtp
56	Undeliverable	Subject	100	FALSE	failed mail	smtp
57	Undeliverable	Subject	100	FALSE	cannot deliver	smtp
58	Undeliverable	Subject	100	FALSE	delivery failure	smtp
59	Undeliverable	Subject	100	FALSE	mail delivery failed	smtp
60	Undeliverable	Subject	100	FALSE	user unknown	smtp
61	Undeliverable	Subject	100	FALSE	delivery-report (failure)	smtp
62	Undeliverable	Subject	100	FALSE	unrecognized recipient in message	smtp
63	Undeliverable	Subject	100	FALSE	nondeliverable mail	smtp
64	Undeliverable	Subject	100	FALSE	delivery status notification (failure)	smtp
65	Undeliverable	FirstBody	100	FALSE	this message was undeliverable	smtp
66	Undeliverable	FirstBody	100	FALSE	not delivered to	smtp
67	Undeliverable	FirstBody	100	FALSE	unable to deliver mail to	smtp
68	Undeliverable	FirstBody	100	FALSE	not able to accept delivery	smtp
69	Undeliverable	FirstBody	100	FALSE	could not be delivered	smtp

ID	Category	Search Location	Bytes to Search	Anti Rule	Filter String	Channel
70	Undeliverable	FirstBody	100	FALSE	unrecognized recipient name	smtp
71	Undeliverable	FirstBody	100	FALSE	delivery failure report	smtp
72	Undeliverable	FirstBody	100	FALSE	message not delivered	smtp
73	Undeliverable	FirstBody	100	FALSE	remote execution [uucp job	smtp
74	Undeliverable	FirstBody	100	FALSE	sent to a deleted	smtp
75	Undeliverable	FirstBody	100	FALSE	failed recipient	smtp
76	Undeliverable	FirstBody	100	FALSE	delivery to the following recipients failed	smtp
77	Auto Reply	Header	100	FALSE	x-autoreply	smtp
78	Auto Reply	Header	100	FALSE	x-autoresponder	smtp
79	Auto Reply	Header	100	FALSE	x-auto-reply	smtp
80	Auto Reply	Subject	100	FALSE	out of office	smtp
81	Auto Reply	Subject	100	FALSE	automated response	smtp
82	Auto Reply	Subject	100	FALSE	autoresponse	smtp
83	Auto Reply	Subject	100	FALSE	auto reply	smtp
84	Auto Reply	Subject	100	FALSE	message delivery delayed	smtp
85	Auto Reply	Subject	100	FALSE	auto-reply	smtp
86	Auto Reply	Subject	100	FALSE	auto response	smtp
87	Auto Reply	Subject	100	FALSE	auto-response	smtp
88	Auto Reply	Subject	100	FALSE	away from my mail	smtp

ID	Category	Search Location	Bytes to Search	Anti Rule	Filter String	Channel
89	Auto Reply	Subject	100	FALSE	on vacation	smtp
90	Auto Reply	Subject	100	FALSE	away from the office	smtp
91	Auto Reply	Subject	100	FALSE	out of the office	smtp
92	Auto Reply	Subject	100	FALSE	autoreply	smtp
93	Auto Reply	Subject	100	FALSE	automatic response	smtp
94	Auto Reply	Subject	100	FALSE	warning: could not send	smtp
95	Auto Reply	Subject	100	FALSE	auto-respos-ta	smtp
96	Auto Reply	Subject	100	FALSE	confirmation of receipt	smtp
97	Auto Reply	Subject	100	FALSE	extended absense	smtp
98	Auto Reply	Subject	100	FALSE	pager to	smtp
99	Auto Reply	Subject	100	FALSE	not read:	smtp
100	Auto Reply	Subject	100	FALSE	repondeur de	smtp
101	Auto Reply	Subject	100	FALSE	warning: could not send message for past	smtp
102	Auto Reply	Subject	100	FALSE	has been received	smtp
103	Auto Reply	Subject	100	FALSE	automatisch antwoord bij afwezigheid	smtp
104	Auto Reply	Subject	100	FALSE	Abwesenheitsnotiz	smtp
105	Auto Reply	From	100	FALSE	sleonard@util-inc.com	smtp
106	Auto Reply	FirstBody	100	FALSE	on vacation	smtp
107	Auto Reply	FirstBody	100	FALSE	away from my mail	smtp

ID	Category	Search Location	Bytes to Search	Anti Rule	Filter String	Channel
108	Auto Reply	FirstBody	100	FALSE	out of the office	smtp
109	Auto Reply	FirstBody	100	FALSE	out of my office	smtp
110	Auto Reply	FirstBody	100	FALSE	out of office	smtp
111	Auto Reply	FirstBody	100	FALSE	this is notification that charles schwab has received your	smtp
112	Auto Reply	FirstBody	100	FALSE	out of town	smtp
113	Auto Reply	FirstBody	100	FALSE	this is an auto responder	smtp
114	Auto Reply	FirstBody	100	FALSE	characters of your message will be sent	mtp
115	Auto Reply	FirstBody	100	FALSE	you've just received a yahoo! greeting	smtp
116	Auto Reply	FirstBody	100	FALSE	thanks very much for contacting us about juno	smtp
117	Auto Reply	FirstBody	100	FALSE	this is an automatic reply	smtp
118	Auto Reply	FirstBody	100	FALSE	will be away	smtp
119	Auto Reply	FirstBody	100	FALSE	received your mail.	smtp
120	Auto Reply	FirstBody	100	FALSE	this is an auto-generated system message. please do not reply to this	smtp
121	Auto Reply	FirstBody	100	FALSE	your message has been re-	smtp

ID	Category	Search Location	Bytes to Search	Anti Rule	Filter String	Channel
					ceived on the ker & downey server	
122	Auto Reply	FirstBody	100	FALSE	thank you for subscribing to my email list	smtp
123	Auto Reply	FirstBody	100	FALSE	your recent message to this server re-garding	smtp
124	Auto Reply	FirstBody	100	FALSE	fehler beim email ver-sand	smtp
125	Auto Reply	FirstBody	100	FALSE	i will respond as soon as possible	smtp
126	Auto Reply	FirstBody	100	FALSE	i got your email	smtp
127	Auto Reply	FirstBody	100	FALSE	i will return your email soon	smtp
128	Auto Reply	FirstBody	100	FALSE	a message that you sent has not yet been deliv-ered	smtp
129	Auto Reply	FirstBody	100	FALSE	unable to de-liver; will try up to one week	smtp
130	Auto Reply	FirstBody	100	FALSE	attempts to deliver the message will continue	smtp
131	Auto Reply	FirstBody	100	FALSE	ausente do escritório	smtp
132	Auto Reply	FirstBody	100	FALSE	de férias	smtp
133	Auto Reply	FirstBody	100	FALSE	estarei ausente	smtp

ID	Category	Search Location	Bytes to Search	Anti Rule	Filter String	Channel
134	Auto Reply	FirstBody	100	FALSE	ausência temporária	smtp
135	Auto Reply	FirstBody	100	FALSE	fora do escritório	smtp
136	Auto Reply	FirstBody	100	FALSE	Abwesenheitsnotiz	smtp
137	UnsubscribeCancel		0	FALSE	UnsubscribeCancel.html	http
138	VIEWINBROWSER		0	FALSE	ViewInBrowsr	http
139	CUSTOMLINK		0	FALSE	CustomLink	http
140	SOCIAL_NETWORKING_EVENT		0	FALSE	SocialNetworkingEvent	http

Note: None of these rules are case sensitive, or are regular expressions, so these two attributes are not shown to conserve space.

Response Handling

Infor Email Marketing collects all reply Email from Infor Email Marketing recipients and by default processes it every ten minutes. It can automatically handle routine bounces, out-of-office auto-replies, and unsubscribe requests with the word “unsubscribe” (or other phrases and words described in the section "Filtering Incoming Email" on page 65) in the subject line or message body. All messages that cannot be processed automatically are forwarded to the Email account specified in Configuration Manager.

Email Confirmations

Confirmation messages are generated in response to the following requests:

- Change of Address (via Web preference page)
- Change of Format (via Web preference page)

- Resubscribe (via Web survey page if an Email recipient chooses to unsubscribe and then clicks **Undo** at the Unsubscribe Confirmation Web page.)
- Unsubscribe (via Web preference page)
- Unsubscribe (via reply Email)

In the case of a change of address, the confirmation Email is sent to both addresses. The confirmation messages are short, fixed-text messages that are typically mailed within a few hours after the action takes place.

This confirmation message system is a fully automated process built into the Infor Email Marketing Incoming Services. It is possible to use a custom profile management system rather than the provided Infor Email Marketing Web survey system. To do so, the unsubscribe message should contain a link to that custom system rather than to Infor Email Marketing's built-in system. However, the Infor Email Marketing Incoming Services continues to process incoming Email. If someone unsubscribes via an Email, it is processed normally.

Handling Viruses

When sending mass Email, it is completely normal to have virus-infected Email sent to your Infor Email Marketing Incoming Services. Most Email viruses only work if you run the virus script by opening the attachment. Infor Email Marketing passes this attachment along, so if the mail goes to the forwarding address unfiltered, the person accessing the forwarded mail will need to be educated on how to safely deal with that Email. This is, don't open the attachment, and use a mail client with "safe" reading abilities.

Simply opening a virus-infected file in a bare-bones text editor, such as Notepad (Windows) or vi (Unix), does not infect your machine. For instance, any one of the .vbs viruses requires the user to execute those viruses.

The way that viruses "enter" Infor Email Marketing is through the Infor Email Marketing Incoming Services. This process accepts incoming mail for **From Email** addresses configured on the Infor Email Marketing Outgoing Services, and stores these messages on disk in:

```
InBox/<YYYY_MM_DD>*.log
```

Incoming processing then reads this file, and performs a text-based scan over that file, attempting to match against the filtering criteria. (See "Filtering Incoming Email" on page 65 for additional information).

Infor Email Marketing must be able to completely process the incoming Email and to forward that Email as described above. Virus checkers can inhibit this activity by moving these files from where Infor Email Marketing expects them to be for processing. By moving the relevant files from Infor Email Marketing's view, Infor Email Marketing is unable to process important conversations with your customers, such as unsubscribes.

We recommend that you place a mail filter or other virus scanning software on the forwarding address to clean the messages as they go through to the end user.

You may still wish to have virus-checking software running on your Infor Email Marketing Incoming Services. This is recommended. However, you need to make sure that your software is configured to

leave the Infor Email Marketing Incoming Services files in the `< MailerData >/Infor/InBox`, Outbox, and Logs directories alone and accessible to Infor Email Marketing's Incoming Processing.

You can safely remove a day's incoming files once you have confirmed that they have been processed completely, and once you are sure that you will not need these files for later reference. For instance, if you have a customer dispute about an unsubscribe, these are important records to have—both the intact original Email, and how that Email was processed by the Infor Email Marketing Incoming Services. KB article #11641 on “Manual File Decimation” provides information on how to safely remove logs.

Any anti-virus software can read byte-by-byte over any file on the system, perform byte-pattern matching, and find that a file is infected. Often, with viruses, they will actually insert their commands into an executable, such that the executable then is infected by the virus. In the case of the incoming file, it is likely that the Email does actually have a virus contained in it. But, since Log Processing is only doing a character scan of the text, it's not likely that it will be infected by text-parsing the incoming messages. You could run a virus scan over MailProcessing.exe in the **<** MailerData **>** directory to ensure its integrity.

We recommend that you leave the inbox/outbox files alone until they have been properly handled by the Infor Email Marketing system. These depend on very specific things to be in place.

Using the Configuration Manager

3

Introduction

The Configuration Manager is a Web-browser-based utility that you use to set parameters related to Infor Email Marketing campaigns. You can configure the Infor Email Marketing system and set up Email parameters for Email campaigns.

To log into the Configuration Manager, enter this URL into your browser:

```
http://<yourMachineName><yourConfiguredPort>/configmgr/faces/pages/
index.xhtml
```

This will launch the login screen:

Figure 12: Infor Email Marketing

Figure 13: Config Manager Login Page

Login using the name/password you specified during the installation for Config manager access. Upon successful validation, the following screen will launch:

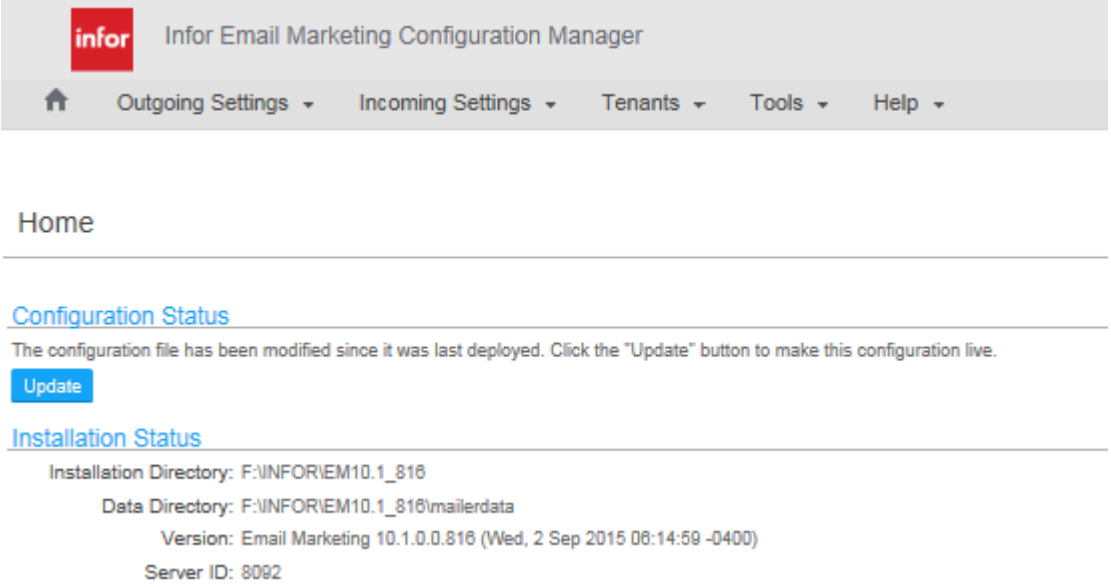


Figure 14: Config Manager Home Page

The Infor Email Marketing Configuration Manager includes four areas, Outgoing, Incoming, Tenant, and Work Area:

- Server Configuration Area —This area contains links to the major divisions of server configuration:
  - Config Status (Home Page)
  - Network Configuration
  - Security Settings
  - Email Notifications

  - Advanced Settings
  - Log Processing
  - Outgoing Service Settings
  - Storage Management Settings
  - Incoming Service General Settings (Note: the Incoming Service configuration is available in the configuration manager regardless of where the incoming service installed).
  - Incoming Server Configuration

- Tenant Info Area —This area contains information about the tenant. The tenant configuration includes these major divisions:
  - Tenant Info
  - Locales
  - Unsubscribe Messages
  - Identities
  - Reply Confirmation Messages
  - Manual Processing Forward Addresses
  - Mailbox Behaviors
  - From Addresses

- Main Work Area —When you click a link in the Server Configuration area, the options you can configure for that selection appear here. These options are grouped into three different navigation sections: ‘Outgoing Service Settings, ‘Incoming Service Settings’, and ‘Tenant’. To make changes to any of the parameters, click on the appropriate link in any of these sections.

When you have finished editing parameters in the work area, click **Home > Update** to save the edits you have made. (Note that there are actually two different configuration files: one for the ‘live’ configuration and another for the ‘edit configuration’. All configuration changes you make go to the ‘edit’ configuration file. However, it is only when you click on **Home > Update** that the edit configuration becomes live). Before the Configuration Manager allows you to apply any changes to your installation parameters, it checks the parameter values for correctness. An advisory message is displayed for every field in which Configuration Manager detects a problem or omission.

Next to the parameter name is the value field where the parameter’s contents can be viewed and edited. The right-most field, when used, indicates the type or units of the parameter (for example, “Days” or “MB”).

EM settings

The EM settings include:

- checksum.file.size.threshold.limit - (limit in bytes) Sets the maximum file size for normal checksum calculations used when synchronizing files between the outgoing and incoming servers. Files larger than this threshold use an Adler32 algorithm instead of the typical CRC32 algorithm. (Default is 1048576)

- checksum.disable.adler - (TRUE or FALSE) Enables or disables the usage of the Adler32 algorithm for checksum calculations, when synchronizing files between outgoing and incoming servers. If disabled, files larger than the given threshold do not include checksum calculation. (Default is TRUE).
- logprocessing.pause.enabled - (TRUE or FALSE) Enables or disables a pause during the log processing of multiple files when the processing of an input file is completed. This is used for synchronized processing between multiple incoming servers. (Default TRUE).
- logprocessing.start.with.old.logs - (TRUE or FALSE) Indicates if log processing must re-process the configured log files when you access the application again.
- logprocessing.categorizeonly - (TRUE or FALSE) Indicates that log processing must categorize incoming replies only and must execute other processes or record the event for feedback. (Default FALSE, normal processing)
- jobupdate.hideemailaddress - (TRUE or FALSE) Indicates if log processing must include email addresses in the job update files. (Default FALSE, do not hide email addresses)
- jobupdate.hideipaddress - (TRUE or FALSE) Indicates if log processing must include IP Addresses in the job update file. (Default FALSE, do not hide IP addresses)
- jobupdate.hidetargeturl - (TRUE or FALSE) Indicates if log processing must include target URLs in the job update file. (Default TRUE, do not hide target URL)
- logprocessing.processUnsubscribeWithMissingMessageId - (TRUE or FALSE) Indicates if log processing must process unsubscribed requests that do not include a valid message ID. (Default TRUE, process unsubscribe requests with unknown message ID)
- jobupdate.enabled - (TRUE or FALSE) Indicates if job update must run. If false then log processing is initiated to generate job updates that are not recorded in the job file. (Default TRUE, job update is enabled)
- DisallowReferersFromViewInBrowser - (TRUE or FALSE) If true, the incoming ViewInBrowser request, that contains a Referer header, is rejected. The Referer header is an indicator that the click did not originate from an email but may have been posted to some website. This causes problems because ViewInBrowser links that become public can be traced by search engines. (Default TRUE)
- dkim.debug - (TRUE or FALSE) If true, then verbose debug logging is enabled for DKIM message processing. (Default FALSE)
- testjob.ignore.certificate.errors - (TRUE or FALSE) Indicates if SSL Certificate validation errors must be ignored when validating tracked URLs.
- testjob.ignoreurls.file - Used to specify the filename containing URLs that must be ignored when validating tracked URLs.
- DefaultSecretKey - Specifies the Base64 encoded / encrypted default secret key used for encryption, within the content generator.

Note: The general format of properties file is documented here: http://docs.oracle.com/javase/6/docs/api/java/util/Properties.html#load%28java.io.Reader%29

Configuration Field List

Because Infor Email Marketing is highly configurable, you must specify values for a number of parameters before you can run your first job. See ‘Permission Commands’ in the section ’ "Access Lists" on page

82. The ‘Tenant Parameters’ table "Table 1: Tenant Parameters" on page 111 also contains lists of these parameters, with descriptions of the values that must be assigned to each one.

Configuring the Server

A complete table of server configuration parameters follows at the end of this section. Additional information is provided before the list about the following configuration parameters:

- Domain Name System (DNS) IP Addresses
- Host Name Fields
- Test Message Address List
- Permission Lists

Domain Name System (DNS) IP Addresses

This field on the Outgoing Settings / Network page contains the IP address for each Domain Name System. We recommend that your DNS servers be placed on dedicated systems other than on the Infor Email Marketing Incoming Services or Infor Email Marketing Outgoing Services machines.

If you are using a Windows-based installation, you can test the status of your DNS Server with the following procedure:

Testing the Status of the DNS Server

1. From a command prompt (or UNIX shell) run the " `nslookup` " command
2. At the prompt, type server **<** DNSHostName **>**, where DNSHostName is the IP address or network name that you intend to use. If there is a problem with your DNS server, this action produces an error message.
3. Enter the DNS host name of your Infor Email Marketing Outgoing Services machine. Verify that the response is correct.

Host Name Fields

The following three fields should be set to the same value. Typically this value should be the domain name of your Infor Email Marketing Outgoing Services machine (for example: `info.cru.com`):

- **Outgoing Service Host Name** —Domain name used by the Infor Email Marketing Outgoing Services in SMTP conversations. A lookup to the DNS specified previously must reflect an IP address configured on this server. It identifies the local interface Infor Email Marketing should use to send out Email.
- **Incoming Host Name** —Domain name used to receive mail
- **Internal Host Name** —Domain name used by Marketing to connect to Infor Email Marketing. This must be the domain name on the Infor Email Marketing Web server.

Refer to “Subdomain Name Selection” section of the *Infor Email Marketing Installation Guide* for information about using single-dot domain names (for example, www.infor .com). Refer to “Dedicated Subdomain Name Requirement” section of the Infor Email Marketing Installation Guide for more information on the DNS requirements of these domain names.

Caution: If you are using SSL on your server and the internal host name is changed, you must obtain and install another SSL certificate. For this reason, we recommend against performing test installations with different Infor Email Marketing Outgoing Services domain names. This is an inward-facing domain name that can be different from your other hostnames. If you must change your internal host name, obtain and install another SSL certificate.

Test Message Address List

The members of this list receive a copy of every preview message appropriate for their domain. The email address itself (with a few exceptions) doesn't have any indications of whether is a TEXT or HTML domain. The exceptions are noted here:

1. The Domain Information settings (Outgoing Settings / General / Domain Information) may indicate a TEXT or HTML preference for a domain. This is the preference that should be taken if the users preference is unknown (i.e. a recipient’s preference, if available, takes precedence). For example, we know that Hotmail supports HTML so we can indicate an initial HTML preference for any HOTMAIL users.
2. AOL email addresses have an automatic HTML preference based on the content selection rules.

   Place each Email address on its own line. You specify this list on the **Outgoing Settings / Email** page.

Access Lists

Navigate to **Configuration > Manager > OutgoingSettings > Security > General**:

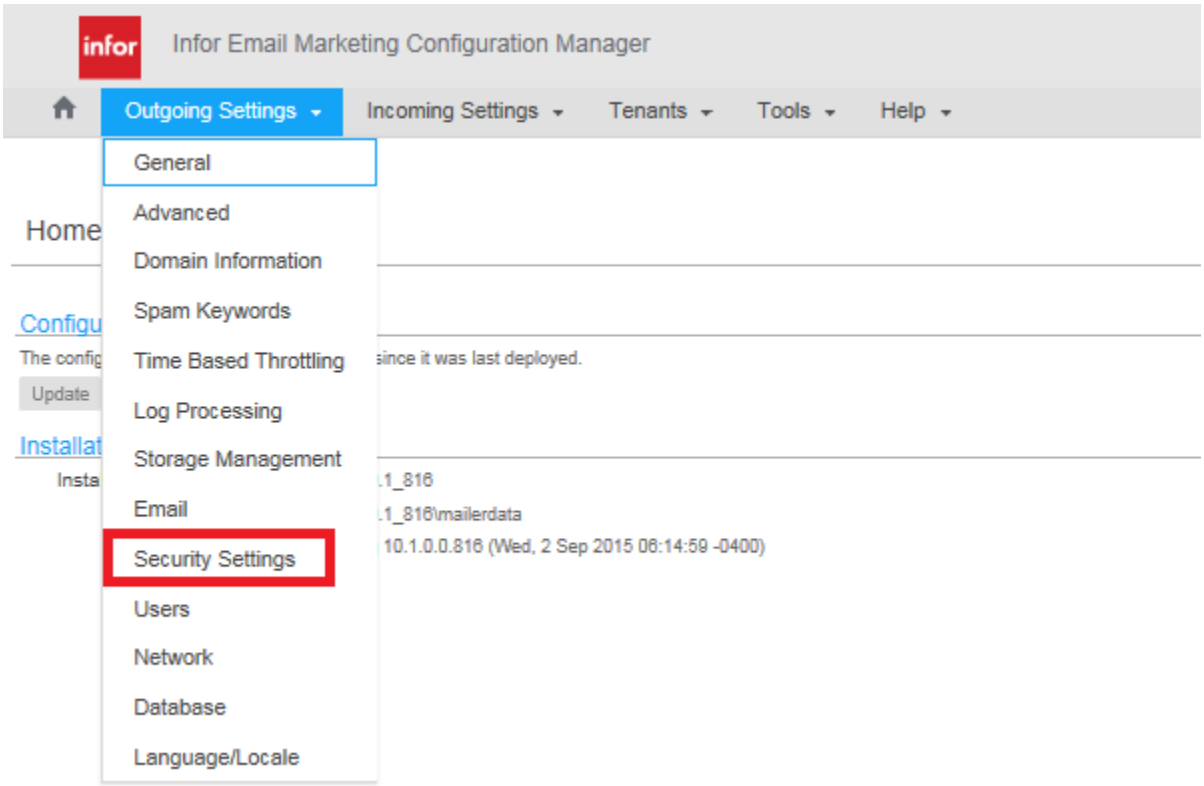


Figure 15: Access Lists General

Access Lists control which computers have access to a particular web application and which computers are explicitly or implicitly denied access. These access lists are available in the Configuration Manager on the 'Security Settings' page. Note that you can configure access for the Configuration Manager, Admin Manager, and Job Processing separately. Access is defined in two lists, an 'allow' list and a 'deny' list. Each of these lists may include IP addresses and may also include regular expressions.

For example, you could define the following:

:

Allow:

```
127.0.0.1
10.1.1.*
```

Deny:

```
10.1.2.*
10.1.3.*
```

Note: the dot character has special meaning in regular expressions. It is used to match ANY character. To explicitly match a dot character you must insert a slash character before the dot. For example: 127\.0\.0\.1

In some cases the application may not be able to distinguish between the regular expressions used for IP Addresses and host names. To explicitly identify an entry as a IP Address you may prefix it with "IP:". Likewise to explicitly identity an entry as a host name you my prefix it with "HOST:".

For example you could define the following:

Allow:

IP:127\\.0\\.0\\.1	Permits loopback address
IP:10\\.1\\.1\\.*	Permits any computer on the 10.1.1 subnet

Deny:

HOST:known.hackers.com	Denies access to any connection coming from known.hackers.com

It is recommended that you use the "IP:" or "HOST:" identifiers to minimize parsing errors in your access lists.

The access checking is done in the following order:

1. If no ‘allow’ or ‘deny’ expressions are configured, then allow the request to pass through.
2. If there are any 'deny' expressions configured, the IP Address and/or Hostname will be compared to each such expression. If a match is found, the request will be rejected. Note: do not use wildcards to deny everyone because the allow list will never be evaluated.
3. If there are any 'allow' expressions configured, the IP Address and/or Hostname will be compared to each such expression. If a match is found, then this request will be allowed access (unless rejected for some other reason).

   Note: if one or more 'allow' expressions are defined then everything else is implicitly denied access.

4. If one or more deny expressions was specified but no allow expressions, allow this request to pass through (because none of the deny expressions matched it).
5. Finally if we reach this point the request will be rejected.

   Note: If you are accessing the Infor Email Marketing Outgoing Services from behind a proxy for transport or configuration, you may need to add the proxying address in the relevant permission list.

Configuring Server Parameters

The following table describes the parameters you can modify in the Configuration Manager to control your Infor Email Marketing installation. Unless otherwise noted in the description, changes to these parameters will take effect when the next job is run.

Parameter Name	Description	Default
Configuration Status		
Installation Directory	The directory where your Infor Email Marketing Outgoing Services is installed. This is determined when you installed your system and cannot be edited.	
Data Directory	The directory where your Infor Email Marketing mail data is located. This is determined when you installed your system and cannot be edited. This directory is sometimes referred to as the mailerdata directory.	
Version	The version number of the Infor Email Marketing software you are using. Cannot be edited.	
Server ID	A number that uniquely identifies email generated from a specific Infor Email Marketing Server. Also used to make tracked URLs unique.	
Home		
Active Configuration Last Updated at	The date and time of when the live configuration was updated.	`None`
Network Configuration		
Blacklist Update Interval	The interval in minutes of when the configured blacklist services are polled to check if any external IP Addresses are listed.	`10 (minutes)`
DNS Server IP Addresses	IP address for each Domain Name System. We recommend that your DNS server(s) be dedicated to handling Infor Email Marketing queries, and not be part of your normal, corporate DNS system. Regardless of whether you are running a Windows or UNIX-based installation, you can use the following procedure to test DNS Server status:	`None`

Parameter Name	Description	Default
	From the Start menu select **Run** and enter **nslookup** . At the prompt, type server < DNS Host Name >, where DNS Host Name is the IP address or network name you wish to use. If there is a problem with your DNS server, this action produces an error message. Changes to this configuration parameter take effect the next time the Infor Email Marketing Outgoing Services is restarted.	
DNS Monitor Frequency	The frequency in seconds that the DNS server should be tested to verify it is responding correctly. Set in seconds.	`10`
External IP Addresses	The external IP Addresse(s) of the email sending system. Blacklist services are monitored to check if any of these IP Addresses are listed and if so an alert message will be sent to the system admin.	
Outgoing Service Host Name	The domain name used by your DNS Server to identify the Infor Email Marketing Outgoing Services. Technically, this is the domain name used by the Infor Email Marketing Outgoing Services when communicating with SMTP servers receiving outgoing campaign Email. This name must be fully qualified. Example: info.infor.com This setting requires A and PTR records on your Infor Email Marketing DNS server. The PTR record for this domain name must identify an IP address configured on one of the Infor Email Marketing Outgoing Services's local interfaces.	`None`

Parameter Name	Description	Default
	Changes to this configuration parameter take effect the next time the Infor Email Marketing Outgoing Services is restarted.	
Bypass DNS Consistency Checks	Specifies whether you wish to configure your Infor Email Marketing Incoming Services to bypass the automatic network consistency check (selected to bypass the test, unselected to leave it in place). This check requires that the outgoing host name have a consistent DNS A and PTR record. Note: In either case, the DNS A record must map to an IP address configured on one of the outgoing servers' local network interfaces (an address that is bound to a local network interface). We strongly recommend that you perform this check. Network validation verifies that click-throughs, unsubscribe requests, and other Infor Email Marketing Incoming Services-based traffic is getting processed by Infor Email Marketing Incoming Services. You should bypass this check only if you wish to place Infor Email Marketing Incoming Services behind a address-translating firewall. If you configure your system in this way, we recommend that you implement daily network checks to verify your network. Changes to this configuration parameter take effect the next time the Infor Email Marketing Outgoing Services is restarted.	`Unselected`
Use Proxy Server	Select if you want to use the proxy server. If this checkbox is not selected, the proxy server is not used.	`Unselected`

Parameter Name	Description	Default
Proxy Server Requires Authentication	If selected, then the proxy requires authentication and the username and password will be used.	`Unselected`
Proxy Server HostName ([HostName]/[IPAddress]):	The IP Address or host name of the proxy server. If a proxy server is to be used, this is the Hot Name or IP address. The form of the information entered here is <HostName | IPAddress >:< PortNumber >. For example, `10.1.1.0` or `MySystem.`	
Proxy Server Port	The port number to use when connecting to the proxy server.	
Proxy Username	The user name to be used to access the proxy server.	`None`
Proxy Password	The password to be used to access the proxy server.	`None`
Proxy Ignore List	A list of domains that do not require a proxy server. These are generally internal domains. Matching should be done on the tail end of the domain. For example '.ibm.com' should match 'www.ibm.com' and everything else that ends with '.ibm.com'	`None`
URL Validation Timeout	The timeout value TestJob uses when validating tracked URLs. If a positive response is not received within this timeout period, then URL validation will fail.	`45 seconds`
Email Notifications		
Error Alert From Address	The Email address used in the **From** field of an error message alert. If this address uses the same domain as From Address , it must be exactly the same address.	`None`

Parameter Name	Description	Default
Error Alert Address List	A list of Email addresses that are notified of a system error. Note that no address in this list can use the same domain as the From Address .	None
External SMTP Host Name	The host name of the external SMTP server which should be used to deliver admin or test messages.	None
External SMTP Port	The port number of the external SMTP server which should be used to deliver admin or test messages.	25
Max Test Messages to Send	The maximum number of test messages that TestJob will send when validating a campaign.	150
Test Message Address List	A list of Email addresses to which all preview messages are sent. These addresses are used in addition to the Email address specified in the preview message itself. This list can be left blank. No address in this list can have the same domain as the From Address.	None
Use External SMTP Server	If selected, then any email notifications or test messages should be delivered via an external SMTP server. If not enabled, then Emails will be delivered directly by the Outgoing Service.	Unselected
Advanced Settings		
JobProcessing Session Timeout	The maximum time that a Job Processing session can be idle before it is removed from the session table.	10 (minutes)
In Group	Indicates that the Outgoing Server is part of a group.	Unselected
Outgoing Server Count	The number of Outgoing Servers in the group.	1

Parameter Name	Description	Default
External ID	The external ID of this Outgoing Server. Once set this number must remain consistent because it is encoded into URLs and Message-IDs. It is used to route replies back to the appropriate Outgoing Server.	`1`
Is Master	Indicates if this Outgoing Service is the group master. If checked then this Outgoing Server will synchronize it's configuration with all remote incoming servers.	`Unselected`
Server in Test Mode	If selected, then the outgoing service will operate in test mode. All job files that are created will be marked as test jobs. And all outbound email will be redirected to a test server.	`Unselected`
Test Server Addresses	A set of test addresses that should be used as test servers.	`None`
Test Server Greetings	A sub-string that MUST be found in the greetings message of a test server before any test messages will be sent. This is use to prevent accidental delivery of test messages to non test servers.	`None`
Outgoing SMTP Port	The TCP/IP port number used for outgoing SMTP connections.	`25`
Domain Fixup File	The full path to the domain fixup file. This file provides domain name substitutions for email address cleanup.	`${EM_HOME}/Config/DomainFixup.txt`
Job File Scan Rate	The interval (in seconds) at which the Outgoing Service Scheduler should scan for new job files.	`60`
Moving Average Interval	The interval in seconds at which the Outgoing Service records rate statistics.	`1`
SMTP Connection Timeout	The number of seconds before an idle SMTP connection will be closed.	`60`
Log Processing		

Parameter Name	Description	Default
Enable Log Processing	If enabled, then Log Processing is enabled.	`Selected`
Log Processing Retry Days	The number of days that the outgoing service will continue to reprocess an incoming batch log file.	`10`
Log Processing Interval	The frequency (in minutes) that incoming batch log files should be processed.	`10`
Log Processing Rules		
Process Rule Category	The category of the response, if this rule matches.	
Process Rule Location	The search location for this rule. Possible values include: HEADERS, SUBJECT, TO, FROM, and BODY.	
Bytes to Search	The number of bytes to search in the selected location. For example, a value of 300 might indicate only to search the first 300 bytes of the message.	
Is Case Sensitive	If enabled, then the filter string is case sensitive.	`Disabled`
Is Anti Rule	If enabled, this is an anti-rule. An anti-rule means that this isn't really a match.	`Disabled`
Filter String	The substring to search for in the message.	
Regular Expression	If enabled, then the filter string is a regular expression.	`Disabled`
Processing Rule Channel	The response channel that this rule applies to. Possible values include: HTTP, and SMTP.	
General Outgoing Settings		
Jobs List Size Per Page	The number of items that will be displayed in a job details list.	`5`
Enable DomainKey	Indicates if all outbound emails should include a DKIM Signature.	`Unselected`

Parameter Name	Description	Default
Unsubscribe on Unknown User Error	Indicates if an SMTP delivery attempts that fails with a "No Such User" error, should automatically generate an unsubscribe request.	`Unselected`
Time Based Throttling	Indicates if time based throttling should be enabled. This allows the admin to control bandwidth and the number of messages sent by time of day.	`Disabled`
Domain Based Throttling	Indicates if domain based throttling should be enabled. This allows the admin to control bandwidth and the number of messages allowed to be send per hour for specific domains.	`Disabled`
Disk Space Quota	The amount of disk space (in megabytes) that must be available for normal processing. If the available space falls below this threshold, normal processing is suspended, and the system is set to an alert condition. Changes to this configuration parameter take effect the next time the Infor Email Marketing Outgoing Services is restarted.	`600`
Allow Connections To Private Network Addresses	If enabled, then connections are allowed to private network addresses (i.e. `10.x.x.x`, `192.168.x.x`, etc.). This helps to prevent mail loops.	`Disabled`
Max Messages Per Day	The maximum number of message that can be sent per day. Specifying zero means unlimited.	`None`
Max Bytes Per Day	The maximum number of bytes that can be sent per day in megabytes. Specifying zero means unlimited.	`None`
Use Email Relay Server	If enabled, then all campaign email should be relayed through the configured set of relay servers.	`Unselected`

Parameter Name	Description	Default
Email Relay Server Addresses	A list of zero or more addresses through which all email should be relayed. Note: can be a compound field with port number at the end separated by a colon.	None
Retry Method	The scheduling method to be used for campaign retries. (Choices are either: INTERVAL or REGRESSIVE).	INTERVAL
Default Number of Retries	When INTERVAL based scheduling has been specified, this is the default number of passes that should be executed on a campaign job file.	96
Retry Interval	When INTERVAL based scheduling has been specified, this is the number of minutes between each pass.	30
Regressive Retry Interval	When REGRESSIVE based scheduling has been specified, this is a list of integer values that represent the number of minutes between each pass.	None
Minimum Rest Period Between Campaign Retries	Minimum number of minutes between campaign retries.	10
Max Concurrent Connections Per Destination	The default maximum number of concurrent SMTP connections allowed per destination IP Address. Note a domain may have many SMTP servers each with different IP Addresses.	6
Max Concurrent Running Jobs	The maximum number of jobs that are allowed to run in parallel.	20
Max Total Sessions	The maximum number of session that can be connected at any point in time for all campaigns. Specifying zero means an unlimited number of sessions.	20
Enable Partial Sendtest	If enabled, then some test messages may be sent by sendtest even if the campaign fails as a whole.	Selected

Parameter Name	Description	Default
Save Preview Email Content	If enabled, then Sendtest saves a copy of the generated Emails for debugging purposes.	`Selected`
HTTP User Agent	Specifies the user-agent to be used for all HTTP connections.	`NGEM/7.1.0`
Outgoing HTTP Port	HTTP Port of the Outgoing Service.	`8080`
Outgoing HTTPS Port	HTTPS Port of the Outgoing Service.	`443`
Custom Mime Headers	A list of custom mime headers with possible embedded EML tags.	
Validate Tracked URLs	If enabled, then tracked URLs will be validated at TestJob time.	`Enabled`
HTTPS Server Enabled	If enabled, then the HTTPS port should be enabled.	`Disabled`
SSL Certificate	The path to the Java Key Store containing the server certificate to be used by the outgoing service.	
SSL Password	The password for the SSL Certificate	
IDENT Port Number	The TCP/IP port number to use for the IDENT protocol.	`113`
IDENT Response User	The fixed response for the IDENT protocol.	`UNIX:Mailer`
Status Probe Port	The port number of the status probe port.	`8888`
Enable Session Log	Enables detailed logging of SMTP activity. When enabled, this information will be written to the job directory in a file called `<jobid>.job.log` . Note that enabling session logging will have a negative impact on performance and disk space usage so normally this should be disabled.	
HTTP Server Enabled	Controls if the HTTP server used for campaign submission, config-	

Parameter Name	Description	Default
	uration manager, and admin manager is active.	
Max Number of Http Redirects	When validating tracked URLs, TestJob may be redirected to another URL by the remote web server. This can happen up to the maximum number of times specified by this value.	`10`
Outgoing Mailing Settings (Domain Information)		
Domain/Address	The domain or IP address to which this special domain rule applies.	
Type	Choose either "Address" or "Domain" then enter the value in the input field below.	`Domain`
Text Only	If checked then the domain will receive text only emails.	`False`
Max Messages Per Session	The maximum number of emails that may be delivered on each connection before the connection is terminated.	`0 - Unlimited`
Max Connections Per Destination	The maximum number of connections that will be established to an SMTP server in this domain. If the domain has more than one SMTP server then each server will have no more than the maximum number of connections.	`6`
Max Messages Per Hour	The maximum number of messages to be sent to this domain in any given hour.	`0 - Unlimited`
Max Bytes Per Hour	The maximum number of bytes to be sent to this domain in any given hour.	`0 - Unlimited`
HTML Preference	Indicates that emails to this domain should have an HTML preference.	`False`
SMTP Authentication Required	Indicates that SMTP Authentication is required when sending emails to this domain. You will also need to enter the values for	`False`

Parameter Name	Description	Default
	Username, Password, and Realm.	
User ID	The username that should be used when authenticating with a remote SMTP server for this domain.	None
Password	The password that should be used when authenticating with a remote SMTP server for this domain.	None
Realm	The realm that should be used when authenticating with a remote SMTP server for this domain. Usually, you will use the domain name as the value for this field but it may vary by domain.	None
Outgoing Mailing Settings (Spam Keywords)		
Keyword	Spam Keyword or phrase to search for in the SMTP protocol response.	None
Regular Expression	If checked, then the keyword will be matched as a regular expression.	False
Case Insensitive	If checked, then the keyword will be treated as case insensitive.	False
Outgoing Mailing Settings (Time-Based Throttling)		
Start Time	The start time for a time based throttling block.	None
End Time	The end time for a time base throttling block.	None
Messages/Hour	The maximum number of messages per hour for the specified time period.	0 - Unlimited
Mbytes/Hour	The maximum number of bytes in megabytes per house for the specified time period.	0 - Unlimited
Storage Management Settings		
Enable Storage Management	If enabled, then Storage Management is enabled.	Enabled

Parameter Name	Description	Default
Schedule Time	A list of one or more time of day values (in 24hr format) when storage management should be executed	1:00:00 (A.M)
Ignore Filters	String List of wildcard expressions that specify the files that should be ignored by STM (for example: /firehose/2007_02_*). In general, this will be used to handle special cases where the customer does not want a certain job or other files to be deleted. By default, this list is empty.	Don't Delete
Need Archive	If enabled, then Storage Management should archive job files before deleting them.	Enabled
Need to Retain Archive	If enabled, then job archive files should be kept indefinitely.	No
Storage Management Batch Retention Period	The period of time (in days) that incoming batch files should be kept, assuming that they are completely processed.	30
Storage Management Log Retention Period	The period of time (in days) that log files should be kept.	30
Storage Management External Tracked URL Period	The period of time that the server should continue to track URLs, after a job has been archived.	90
Storage Management Job Data Archive Delay	The number of days after a job is complete that all files in the job directory should be archived. After archiving them, most files in the job directory can be deleted.	30
STM Job Archive Retention Period	The number of days after the job has been archived when the archive should be deleted.	14
STM Delete Incomplete Jobs	If enabled, then incomplete jobs (i.e. those that have not been approved) will be considered for deletion. Note: these jobs are not subject to archival.	Enabled
STM Incomplete Jobs Retention Period	The number of days that incomplete jobs should be kept. Note	14

Parameter Name	Description	Default
	these jobs are not subject to archival.	
STM Preview Job Retention Period	The number of days the preview jobs should be kept. Note: these jobs are not subject to archival.	`14`
STM Outbox Job Retention Period	The number of days that an outbox job should be kept after it has completed delivery. Note: these jobs are not subject for archival.	`30`
STM Temp File Retention Period	The number of days that temp files such as those in the mailerdata temp directory should be kept.	`14`
Database		
Use Embedded Derby Database	Indicates if the system should use an embedded derby database. If selected then the Outgoing Service will start the database automatically when the service is started. Since the database is shared between all machines in the system it means that the Outgoing Service must be running at all times. If not selected then settings for an external database must be provided.	`Yes (selected)`
JDBC Driver Class	The JDBC Driver class name to use for an external database.	
Connect URL	The JDBC Connection URL to use for an external database.	
Username	The username to use when connecting to the external database.	
Password	The password to use when connecting to the external database.	
Security Settings (Users)		
User ID	The login username.	`None`
Password	The login password (both password fields must match).	`None`
Confirm Password	The login password (both password fields must match).	`None`

Parameter Name	Description	Default
Roles	One or more roles that should be assigned to this user.	None
Incoming Service General Settings		
Remote to Outgoing Service	Indicates that all incoming servers are remote.	False
Use Default Port Numbers for Generated URLs	Use the standard default port numbers for generated URLs even if they are different from the configured port numbers.	False
Encrypt Incoming Logs	Encrypt incoming log files on the incoming server.	False
Synchronization Interval	The frequency (in minutes) that the outgoing service will synchronize changes to each of the incoming services. Only recently updated files on the outgoing service are considered.	10
Full Synchronization Rate	The frequency (in minutes) that the outgoing service will do a full directory reconciliation with each of the incoming services.	60
Synchronization Ping Rate	The frequency (in seconds) that the outgoing service will ping each outgoing service to verify that it is up and running.	60
Synchronization Retry Count	In the event of a synchronization failure, this is the number of times that the outgoing service should retry before reporting an error.	3
Incoming HTTP Enabled	Selecting this checkbox enables the Incoming Service on the defined HTTP port.	Enabled
Incoming HTTPS Enabled	Selecting this checkbox enables the Incoming Service on the defined HTTPS port.	Disabled
Incoming HTTP Admin Enabled	Selecting this checkbox enables the Admin Service on the defined HTTP port.	Enabled
Incoming HTTPS Admin Enabled	Selecting this checkbox enables the Admin Service on the defined HTTPS port.	Disabled

Parameter Name	Description	Default
Incoming Service Specific Settings		
Name	The internal name of the incoming service.	`(no default)`
File Prefix	The file system prefix to be used for log files that come from this incoming service.	`(no default)`
Host Name	The host name of this incoming service.	`(no default)`
User ID	The admin username to be used when connecting to this incoming service for statistics and control information.	`(no default)`
Password	The admin password to be used when connecting to this incoming service for statistics and control information.	`(no default)`
Console Manager Access List	An access list specifying what IP Addresses Can and Cannot connect.	`127.0.0.1`
DNS Server IP Addresses	The IP Address of the DNS server that should be used by this incoming service.	`(no default)`
Admin Port	The TCP/IP port number to be used for unsecure admin connections.	`8085`
Admin Secure Port	The TCP/IP port number to be used for secure admin connections.	`44385`
SMTP Port	The TCP/IP port number to be used for incoming SMTP connections.	`25`
WWW Port	The TCP/IP port number to be used for incoming HTTP connections.	`80`
WWW Secure Port	The TCP/IP port number to be used for incoming HTTPS connections.	`443`
Online	Indicates if the incoming service is online or offline, for the purpos-	`true`

Parameter Name	Description	Default
	es of campaign file synchroniza-tion.	
Mailer Data Directory	The remote mailer data directory on the incoming server. This will most likely be different from the mailer data directory used.	`(no default)`
Certificate File Name	The name of the Java Key Store containing the SSL certificate to be used by the incoming service, when HTTPS connections are enabled.	`(no default)`
Certificate Password	The password associated with the Java Key Store containing the SSL certificate to be used by the incoming service, when HTTPS.	`(no default)`

Configuring Tenant Pages

A complete table of server configuration follows at the end of this section. Additional information is provided before the list about the following configuration parameters:

- Tenant Locales
- Transfer Encoding
- Unsubscribe Messages
- Identities
- Replies
- Manual Processing Forward Messages
- From Addresses

Note: You must configure the Domain Assignment field in the tenant settings. Else, the validation for the configuration parameter fields such as From Addresses and Replies fails.

Locales

Tenant Locale records define a language profile that is used when sending Email. It tells Infor Email Marketing what language a particular email is written in and how to format the message for transport across the Internet. In Infor Email Marketing, a language definition consists of a locale (geographic region) and an associated character set. The message transport format is referred to as transfer encoding.

Language locales are represented using a pair of two-letter abbreviations with an underscore character in the middle. The first two-letter pair is the language while the second two-letter pair is the locale. For example, in the language locale en_US , en is the language abbreviation for English and**US** is the

locale geographic region for United States. For some locale definitions, the locale portion may be omitted and only the language portion is used. See "Default Settings for Common Tenant Locale Records" on page 361 for additional information.

Character sets represent a language's written alphabet in machine form that can be displayed. Each of the character sets below contains characters for displaying one or more languages. ISO-8859-1 for instance can be used to render English or French messages.

US-ASCII	ISO-8859-8	GB-2312
ISO-8859-1	ISO-8859-9	CP936
ISO-8859-2	ISO-8859-15	CP949
ISO-8859-3	ISO-2022-JP	CP950
ISO-8859-4	Shift_JIS	BIG5
ISO-8859-5	UTF-8	Windows-1250
ISO-8859-6	EUC-JP	Windows-1251
ISO-8859-7	EUC-KR	Windows-1257
TIS-620Windows-874		

Transfer Encoding

The SMTP standard for transferring email data restricts mail messages to the 7-bit US-ASCII characters. However, not all data or character sets that can be used in emails comply with this restriction. Character sets that are naturally represented in eight bits would not reliably pass through all Infor Email Marketing Incoming Services. To ensure transportability of data represented in formats other than 7-bit US-ASCII, they must be re-encoded into a 7-bit format. Infor Email Marketing supports the quoted-printable encoding scheme along with 7-bit and 8-bit data-transfer formats.

The quoted-printable encoding scheme is the recommended data transfer mechanism. It preserves 7-bit data in a human readable form and encodes 8-bit data into a two digit hexadecimal representation of the octet's value.

To make the discussion of locale, character sets, and transfer encoding more concrete, consider this example. If you want to send email within the United States, you can create a Tenant Locale record called US-Mail with a locale of en_US and a character set of US-ASCII . The transfer-encoding scheme can 7-bit or quoted-printable.

For more information on default settings for common tenant locale records for various languages and locales, see "Default Settings for Common Tenant Locale Records" on page 361 .

Note: In multi-byte character sets (GB2312, EUC JP, EUC KR, BIG5, ISO 2022JP, Shift_JIS, UTF-8, CP936, CP949, CP950) the content-transfer encoding should be 7-bit because these character sets are automatically encoded as 7-bit data by the outgoing service.

The common tenant locale information is located in: `<Installation Directory>/config/locale.conf`. You can modify the file, but you must restart the Outgoing Service (and Configuration Manager in Windows) after the edits have been made. The file must remain tab delimited. Refer to RFC 2045 for information about encoding email.

Tenant Locale records are used inside Identity and Unsubscribe Message records. Each Tenant Locale record can be incorporated into multiple Identity or Unsubscribe Message records. However, each Identity or Unsubscribe record can only have one Tenant Locale in it.

Unsubscribe Messages

Unsubscribe messages determine the text that typically appears at the bottom of every email that you send. This text typically includes information on how recipients can update their email preferences. Each unsubscribe message set can contain distinct Text, or HTML versions. An Unsubscribe Message includes a Locale that specifies the language in which the unsubscribe text is written.

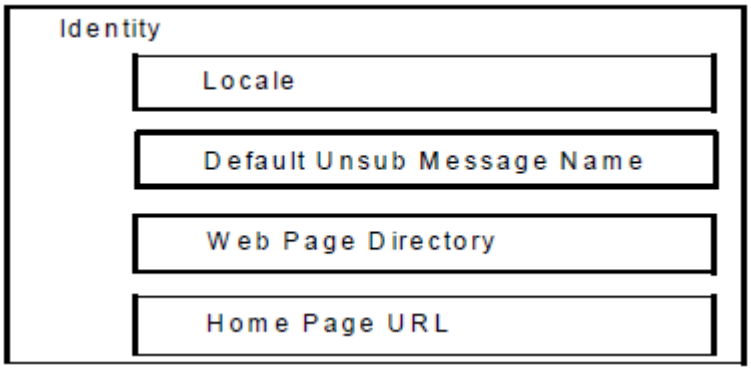
The system comes with a predefined default message set that is automatically used if your template file does not specify another message set. You can modify the default set, or create additional sets for special purposes. See "Recipient Types" on page 64 for more information.

Identities

When designing an Email campaign, you need to create Web pages that will be displayed when an Email recipient wants to unsubscribe, resubscribe, change their Email address, or change the format (text or HTML) of the Email they receive. These Web pages are called survey pages. There is also a Home Page URL where Email recipients are directed after they visit one of the preference pages. The preference pages and home page URL can be customized to match the look for your brand. These customized pages provide a look and feel and are captured as an Identity.

You can set up multiple Identities to be incorporated in your campaigns. Identities are also useful for creating different language profiles. For a particular product, you can have an English, French, or German Identity that is used in conjunction with your English, French, and German FROM Addresses. When you set up your campaign, segment your list by target language, and assign the appropriate From Address for each communication.

Identities contain a Locale, Default Unsubscribe Message Name, and other location-specific items. Refer to the diagram below.



This following sections describe how to create multiple identities using a single tenant. Some of the issues involved include setting up multiple sending addresses, defining unsubscribe message sets, creating customized survey pages, and specifying outbox behaviors for response Email. Each of these issues will be discussed in detail below.

Multiple Sending Addresses

Infor Email Marketing allows you to specify the sending Email address. This appears in the Email From header. When setting up an Email campaign, you can specify a descriptive or friendly name in addition to the actual Email address. See "From Addresses" on page 109 for additional information.

It is possible to change the descriptive name without any additional configuration. If you intend to change the actual Email From address, changes may need to be made to your Infor Campaign Management Server, Infor Email Marketing Outgoing Services, Infor Email Marketing Incoming Services, and, potentially, your DNS Server.

At campaign execution time, Infor Email Marketing runs several tests on the sending address. First, the address must have been previously defined in the Configuration Manager. This ensures that response Emails will be handled correctly. Secondly, Infor Email Marketing validates the DNS configuration of the sending address domain such that response Emails can be routed back to the Infor Email Marketing Incoming Services.

Unsubscribe Language Sets

Using the Configuration Manager you can create multiple named "Unsubscribe Messages" on page 103 sets. Each set includes the same language formatted for TEXT, or HTML. Once the sets have been defined you can use the EML `UnsubscribeLanguage` tag to insert the desired language for your identity.

The following examples show how you might insert the unsubscribe message for a specific unsubscribe message name:

```
`UnsubscribeLanguage("MessageName1")`
```

or

```
`UnsubscribeLanguage("MessageName2")`
```

Note that if you don't explicitly specify an unsubscribe language, the Content Generator automatically inserts the default unsubscribe message for the active identity in the appropriate format.

It is important to specify which unsubscribe message set should be used. If no `UnsubscribeLanguage` tag is found in the message, Infor Email Marketing's Content Generator will automatically insert your default message. If the default unsubscribe language is not defined, message generation errors will occur and the campaign may fail. This prevents you from accidentally delivering Email that does not contain the necessary unsubscribe message.

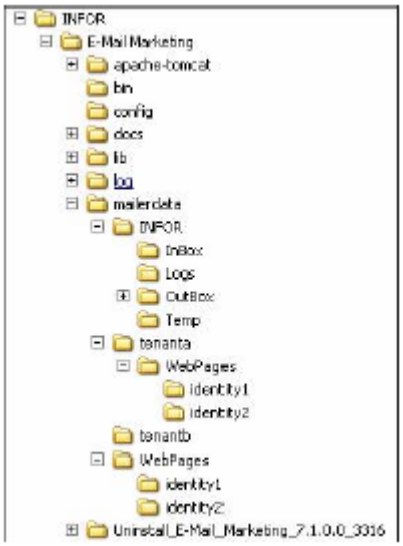
Preference Pages

If you have multiple identities you may want to configure a different set of preference pages for each one ("Preference Pages and Response Handling" on page 219). This is possible by creating a subdirectory

for each identity under the Web pages directory for your tenant. You can then configure your Email unsubscribe message to use a specific set of preference pages for each particular tenant.

Assuming that your data is located in `C:\Program Files\INFOR\Email Marketing\mailerdata`, the Web pages directory will be structured similar to the following:

If you want to customize the WebPages for a particular tenant, then you can make a copy of the WebPages directory below the tenant directory. The incoming service will then use these pages first, if they are available. Otherwise, it will look in the more general WebPages directory. To illustrate the layout, we could have a directory structure that looks like this:



In this example, notice that ‘tenanta’ has custom WebPages but ‘tenantb’ does not. Instead, ‘tenantb’ will use the global WebPages directory.

To summarize, the default preference pages should be located directly in the `<mailerdata>\Web Pages` directory. Preference pages for a specific identity should be located in their respective identity directories (`<mailerdata>\WebPages\<identity>`), where **<identity>** is the tenant name. Each directory should contain, at a minimum, the following pages. Additional pages can be added if necessary:

- ChangeOfAddress.html - Change of Address Confirmation page.
- ChangeOfAddressInvalid.html - Invalid Change of Address page
- ChangeOfFormat.html - Change of format confirmation age.
- Preference.html - Main preference page.
- Unsubscribe.html - Unsubscribe Confirmation page.
- UnsubscribeCancel.html - Unsubscribe Cancel (undo) page.
- logo.gif - Logo used on the preference page.

Your unsubscribe message should link to the directory that contains the appropriate survey pages for your identity. This is done by including the identity name at the beginning of the argument passed to URLGenerate. The identifier passed to URLGenerate is constructed as follows:

```
[Identity/]<FileName>
```

The following is an example show how to generate a link to your default survey page:

```
`URLGenerate("Preference.html")`
```

The following is an example showing how to generate a link to the survey page of another identity:

```
`URLGenerate("<Identity>/Preference.html")``
```

The argument passed to URLGenerate is not a URL. It is an identifier that tells the system to generate a URL that is recipient specific. For example, the last example results in a URL of:

```
http://<EMServer>/<Identity>/Preference.html/Key=<KeyID>
```

All links contained in the preference page and subsequent pages must be structured in the same way in order to maintain the original identity. Note that the structure of the argument passed to `URLGenerate` does not match the actual structure of the files on disk.

To test your preference pages changes, send yourself a simple campaign using the new preference page identity to a small handful of users. Have each user perform one of the following events:

- HTML detection
- Unsubscribe
- Change of address
- Change of format

Allow some time for this new data to be flushed from the Infor Email Marketing Incoming Services to disk (about 5 minutes). Allow time for Log Processing and JobUpdate to run (about 30 minutes), then wait for the Outbox to send your message (up to an hour, should be less). At the end of that time

(defaults for the timing are assumed), you should receive your confirmation message. You should also be able to see these events in your feedback. If these are not present, check that you properly edited your survey pages.

Inbox / Outbox Emails

The system allows the system administrator to customize the behavior of Inbox and Outbox Email processing. Infor Email Marketing automatically processes all undeliverable and reply Emails. For the remaining (5%) of incoming messages the system administrator can create somewhat customized (but not personalized) responses or specify that these Emails should be forwarded to another Email address. See "Manual Processing Forward Addresses" on page 116 for additional information.

For a typical configuration, Infor Email Marketing will generate reply messages for unsubscribe reply, resubscribe reply, changes of address, and change of format messages. Messages which cannot be automatically processed are generally forwarded to another Email address and a notification or receipt is sent back to the sender.

Reply Messages

The Tenant Info, Reply Messages pages allow you to configure reply messages for recipient actions. The reply messages include:

- Unsubscribe
- Resubscribe
- Change-of-Address
- Change-of-Format

Each reply message contains a From Email address. See “Updating Infor Email Marketing Configuration Settings” section of *Infor Email Marketing Installation Guide* for information. In addition, the domain name for these From address should be named by an MX record in Infor Email Marketing’s DNS server. See “Dedicated Subdomain Name Requirement” section of the *Infor Email Marketing Installation Guide* for more information.

Infor Email Marketing allows you to send Emails in several different languages within a single campaign. This is accomplished by segmenting a campaign into communications that each targets a particular language. For each communication, you must provide Email content that is written in the target language plus a From Address Email address that matches the language used in the communication. You may need to customize and localize your preference pages in certain cases. This can be performed in two ways:

- Use Infor Email Marketing Incoming Services which allows for variant selection of preference pages based on the recipient's browser language settings.
- If you are not sure that your recipients have selected a different language for their browser beyond the traditional “English” default, you may enforce viewing in their native language by customizing your preference pages.

The domain of these Email addresses must be a name of the machine that has both DNS A and MX records defined.

The Unsubscribe Reply Messages include a resubscribe link as a part of the message. The way that a resubscribe confirmation URL may be specified to use a specific Identity page default is to enter:

```
<Identity>/UnsubscribeCancel.html
```

in the resubscribe opt-out path on the Unsubscribe Reply Messages page. The default for this field is:

```
/UnsubscribeCancel.html
```

Forward Messages

The Manual Processing Forward Addresses screen has a pull-down selection list entitled "Forwarding Method" that allows the user to select one of three options: ‘Forward as is, ‘Forward with control headers’, and ‘Forward as attachment:

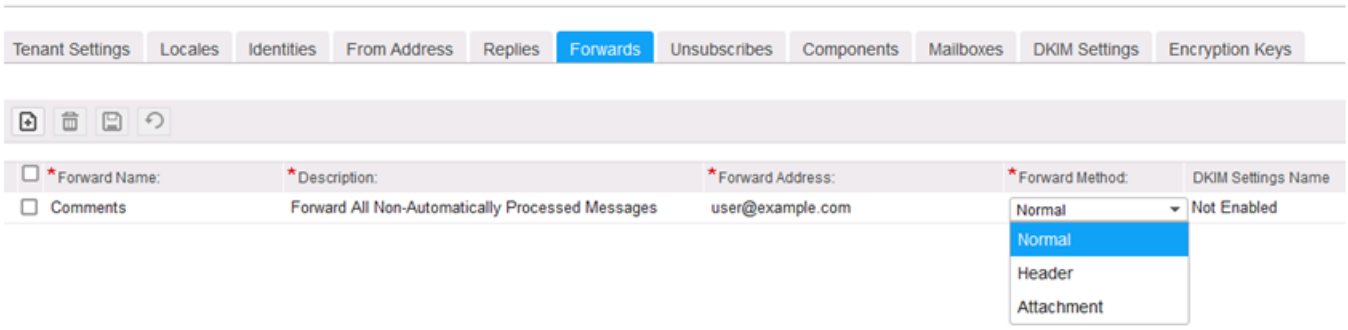


Figure 16: Forwarding Method (1)

- Normal (forward message as is)

Message is simply copied to the Outbox and then forwarded to each of the Forwarding Addresses. The message will appear to have come directly from the recipient. When the message is received by the customer and they can simply reply to it from their email client.

- Header (forward message with control headers)

This option works the same as ‘Normal’ except that a handful of MIME headers are added to the message that provide additional information. An example of these headers follows:

```
X-Request-Source: Action=Forward; ReceivedAt=MAY 18 14:08:55 2006

X-Request-Locator:
2006_05_18__00_00_00_aoconnell02_firehose_manual-28354
```

```
X-Original-Message-Id: <20060518140519.98F6.3-3@jsmith02.cme.infor.com>

X-Survey-Link: http://jsmith02.cme.epiphany.com/Preference.html/Key=3.
F..K.FKrHM6
```

To view these headers in Microsoft Outlook Express, open the message and then open its properties via the **File\Properties** menu option.

- Attachment (forward message as attachment)

This option works similarly to the ‘Header’ option except that the original message is sent as an attachment named "message.eml" and some text is added to the body of the main message (not the attachment). This text looks like the following:

```


Received: MAY 18 14:08:55 2006

Received From: jsmith@cme.infor.com

Sent To: iso_8859_1@jsmith.cme.infor.com

Request Locator:
2006_05_18__00_00_00_jsmith02_firehose_manual-28354

Original Message Id: <20060518140519.98F6.3-3@jsmith02.cme.infor.com>

Preferences Link: http://jsmith02.cme.infor.com/Preference.html/Key=3.
F..K.FKrHM6
```

In addition, the same control headers listed above are also added to the email.

From Addresses

A From Address in this context is a description of how an Email campaign is to be conducted from the perspective of the sender. From Address records contain the following information:

- From Email address

  Sending address placed in the From: portion of an Email.

- From Address Name

  This is the 'friendly name' alias of the Email address. For example, the Email address info.infor.com can have an alias of Infor News. A customer receiving Email from info@infor.com may see the mail as:

  From: “Infor News” <info@infor.com>.

- Identity

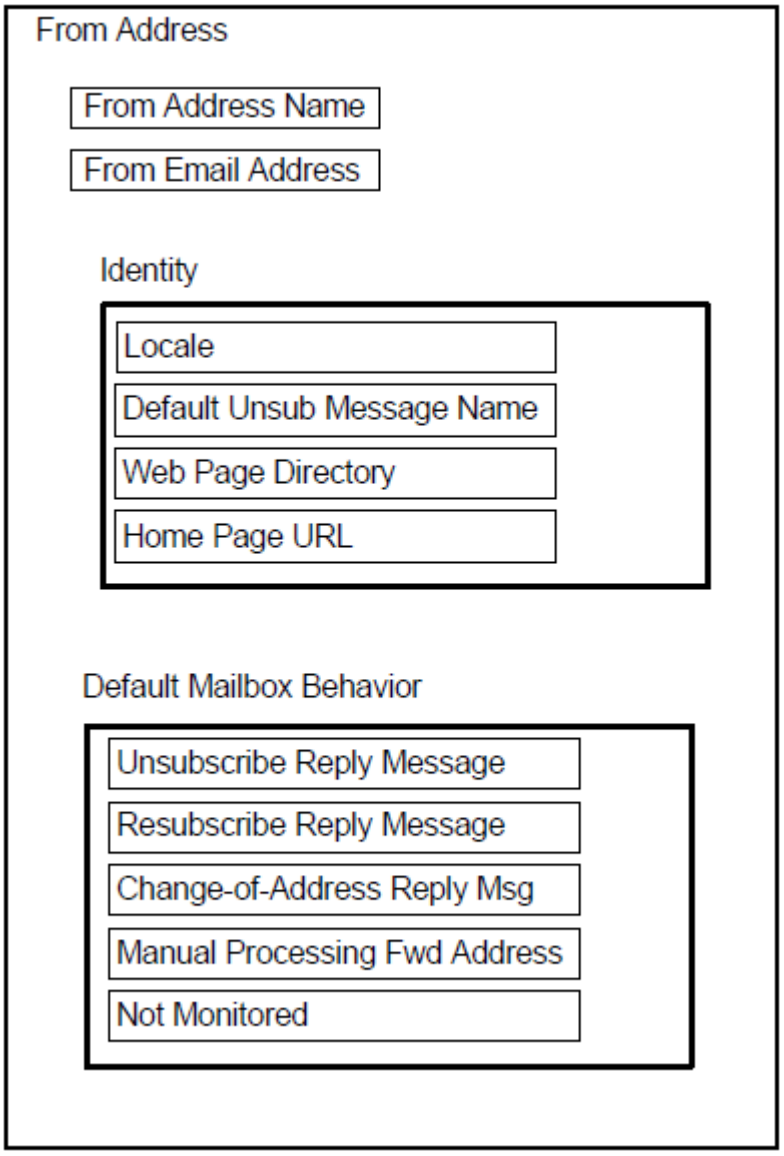
  An Identity defines a look and feel for the Web pages and message text that an Email recipient interacts with. It's comprised of a set of Web pages for managing recipient Email account options

(unsubscribe, re-subscribe, text or HTML format preference, change-of-address), a home-page URL to which customers are directed after a change in account options, and a locale (language) setting.

- Default Mailbox Behavior

  This is information on the Forward To Email address and text for replying to unsubscribe, re-subscribe, and change-of-address requests.

From Address records contain an Identity and Mailbox Behavior. The Identity and Behavior, in turn, contain more information about how the Email is to be created and sent. It also contains information about how the Infor Email Marketing system should respond to recipient actions. The dependency relationships are represented in this diagram:



The Identity describes the tenant (language, Web pages, and so forth). The Mailbox Behavior describes the messages and to be sent and actions to be taken in response to various actions by the recipients

of the Email campaign. The From Address description you create here is accessed from the Infor Email Marketing topic, Communication section to be part of a campaign description.

To create From Address records, you must first define an Identity and its inner components.

Setting Up FROM Address Email Addresses

1. Create Tenant Locales.
2. Set up Unsubscribe Message names.
3. Combine a Tenant Locale record with an Unsubscribe Message name to form an Identity.
4. Create Change-of-address, Resubscribe, and Unsubscribe Reply Messages.
5. Create a Manual Processing Forward Address.
6. Create a Mailbox Behavior connecting the reply messages and forwarding address.
7. Create a From Address and assign an Identity and Mailbox Behavior to it.

   Note: When setting up From addresses on a configuration with one or more Remote Incoming Servers, the From Addresses must be linked to the appropriate incoming server.

   Identities, Tenant Locales, and Unsubscribe Message Names are discussed in the next sections.

Configuring Tenant Parameters

The following table describes the parameters. Unless otherwise noted in the description, changes to these parameters will take effect when the next job is run.

Table 1: Tenant Parameters

Parameter Name	Description	Default
Tenant Info		
Tenant Name	Organization name to display on internal monitoring tools. This name is entered in the installer when you are installing your system.	None
Display Name	Organization name to display to the outside world This name appears on the default survey pages. Changes to this configuration parameter take effect the next time Incoming Services is restarted.	None
Description	A free-form text description of the tenant.	None

Parameter Name	Description	Default
Postmaster Forward Addresses	Email address(es) to which messages sent to PostMaster@< FromAddressDomainName > are forwarded. See the note on forwarding Email at the beginning of this table.	None Example: CustomerSupport@info.cru.com
Test Recipient Messages	Email addresses for testing purposes.	user@example.com
Tenant Specific IP Address Binding	Each tenant can have a dedicated IP Address or multiple tenants can share the same IP Address. This allows you to isolate a tenant or group of tenants to specific IP Addresses. If one of your IP Addresses gets blacklisted then there will be less of a chance that it will affect tenants that are configured to use other IP addresses.	If tenant specific IP address binding is not enabled then the system will bind to the IP address mapped to by the Outgoing Service Host Name.
Abuse Forward Addresses	The Email address to which messages sent to abuse@< FromAddressDomainName > are forwarded. See the note on forwarding Email at the beginning of this table.	None Examples: abuse@info.cru.com
Include Message ID in Text Content	Some customers are bothered by the Message-ID field placed at the end of their content. This message ID is necessary in order to properly categorize return Emails. In some cases customers may not care about the closed-loop capabilities for Infor Email Marketing Email, and want to disable the insertion of the Message-ID field into their content. Setting this parameter to FALSE disables the insertion of the MessageID into the Text content.	Enabled
Include Message ID in HTML Content	Some customers are bothered by the Message-ID field placed at the end of their content. This message ID is necessary in order to properly categorize return Emails. In some cases customers	Enabled

Parameter Name	Description	Default
	may not care about the closed-loop capabilities for Infor Email Marketing Email, and want to disable the insertion of the Message-ID field into their content. Setting this parameter to FALSE disables the insertion of the MessageID into the HTML content.	

Unknown Values	If the source data contains a generic string as a placeholder for data, Infor Email Marketing may insert this invalid data into a substitution field. A list of these “unknown” values can be specified, so that Infor Email Marketing recognizes that it should use the default text (if available) instead of the “unknown” value when generating Email content. See "CasualName" on page 296 and "DefaultIfEmpty" on page 303 for additional information.	`UNKNOWN`
		`UNKNWON`
		`UNKWON`
		`UNKNWN`
		`UNBEKANNT`
		`1900-01-01 00:00:00`

Make Unknown Values Case Sensitive	This setting controls the case sensitivity of the entire list of the above values	`Disabled`
Just In Time Suppression	The Email delivery engine makes a check for suppression just before delivering an Email. The setting has 3 possible values: Disabled, Enabled, Scheduled. If enabled, it applies to all newly created campaigns for the tenant. The Scheduled value means that campaigns that are scheduled for more than 1 day in the future will have JIT Suppression enabled.	Disabled
Custom Mime Headers	Allows administrators to include additional headers that are required by their implementation. Generally these are related to anti-spam measures but can include any information.	

Parameter Name	Description	Default
Complaints Forward Address	The email address that complaint messages should be forwarded to if the complaint behavior is set to "Forward".	
Complaint Behavior	Indicates how the system should handle complaint messages from feedback loops. Possible values include "Ignore", "Forward", "Unsubscribe", and "Unsubscribe/Reply",	Forward
Tenant Info Active	Indicates if the tenant is active or not.	Active
Enable ReCaptcha™	Indicates if ReCaptcha™ should be enabled on the Forward to Friend landing page	Enabled
ReCaptcha™ Public Key	The Public Key assigned by the Google ReCaptcha™ system.	
ReCaptcha™ Private Key	The Private Key assigned by the Google ReCaptcha™ system.	
Locales Choose the tenant locale you want to edit from the displayed list then click **Edit** or click **New** to create a new locale. Click **Delete** to delete the selected locale. Click **Tenant Info** to return to the Tenant Info home page.		
Locale Name	The name you use to access this locale	`English`
Language Locale ID	See “"Locales" on page 101 for information.	`en_US`
Character Set	See “Display Character Sets,” on page 76.	`US-ASCII`
Unsubscribe Messages Choose the unsubscribe message you want to edit from the displayed list then click **Edit** or click **New** to create a new message. Click **Delete** to delete the selected message. Click **Tenant Info** to return to the Tenant Info home page.		
Name	The name you use to access this unsubscribe message. Only A-Z, a-z, and 0-9 are valid characters in the message name.	`Default Message`

Parameter Name	Description	Default
Locale Name	The locale used for this unsubscribe message	English (US)
TEXT Message	The text message presented to the user	
TEXT Default: “If you choose not to receive these messages from `TenantName`, or if you would like to change your email address on our database, or if you would like to specify your message format preference, simply click here: `URLGenerate("Preference.html")` or email us with a subject of "unsubscribe" and we'll take you off the list as quickly as possible. Please include this entire message in your reply.”		
HTML Message	The HTML message presented to the user	
HTML Default: “If you choose not to receive these messages from `TenantName`, or if you would like to change your email address on our database, or if you would like to specify a text message format preference, simply click here: `URLGenerate("Preference.html")` or email us with a subject of "unsubscribe" and we'll take you off the list as quickly as possible. Please include this entire message in your reply. ”		
Identities Choose the identity you want to edit from the displayed list then click **Edit** or click **New** to create an identity. Click **Delete** to delete the selected identity. Click **Tenant Info** to return to the Tenant Info home page.		
Identity Name	The name you use to access this identity	Default Identity
Locale Name	The locale used for this identity	English (US)
Unsubscribe Message Name	The Unsubscribe Message Name for this identity.	Default Language
Web Pages Directory	The directory containing the survey pages for this identity. The < Tenant >_pages part is entered automatically. You can enter any further subdirectories you are using.	
Home Page URL	The home web page to be used with this identity. This is the URL that is use when the HomeURL EML tag is specified.	www.infor.com

Parameter Name	Description	Default
Replies Choose the message you want to edit from the displayed list then click **Edit** or click **New** to create a new message. Click **Delete** to delete the selected message. Click **Tenant Info** to return to the Tenant Info home page.		
Reply Message Name	The name of this reply object.	
Description	A description of this reply object.	
From Address	The FROM address to be used when generating responses using this reply object.	
Subject	The subject header to be used when generated response Emails using this reply object.	
Message	The message body to be used when generating response Emails using this reply object.	
Locale Name	The ID of the locale that should be associated with this reply object.	
Reply Type	The reply type possibilities include: Change of Address (COA), Change of Format (COF), UNSUBSCRIBE, RESUBSCRIBE and NOTMONITORED.	
Manual Processing Forward Addresses Choose the forwarding address you want to edit from the displayed list then click **Edit** or click **New** to create a new message. Click **Delete** to delete the selected message. Click **Tenant Info** to return to the Tenant Info home page.		
Forward Name	The name by which you reference these addresses.	`None`
Description	A free-form text description of the forwarding addresses.	`None`

Forwarding Address	The Email address(es) to which all non-automatically handled incoming messages are forwarded. See the note on forwarding Email at the beginning of this table.
	This address must not have the same domain as From Address.
		`None`
		`Example:`
		`CustomerSupport@info.cru.com`

Parameter Name	Description	Default
Forwarding Method	The forwarding method. Possible values include ASIS, With additional control headers, and as attachment.	`Normal`
Mailbox Behaviors Choose the behaviors you want to edit from the displayed list then click **Edit** or click **New** to create a new message. Click **Delete** to delete the selected message. Click **Tenant Info** to return to the Tenant Info home page.		
Name	The name by which you reference this behavior.	`DEFAULT`
Change of Address	The change-of-address reply message to be used with this mailbox behavior.	`Change of Address Confirmation`
Change-Of-Format	The change of format reply message associated with this mailbox behavior.	`cof`
Unsubscribe	The unsubscribe reply message to be used with this behavior.	`Unsubscribe Confirmation`
Resubscribe	The resubscribe reply message to be used with this behavior.	`Resubscribe Confirmation`
Not Monitored Reply Messages	The NotMonitored reply message to be used with this behavior.	`Not Monitored`
Manual Process Forward Addresses	The manual processing forward addresses to be used with this behavior.	
Complaint Reply Messages	The complaint reply message to be used with this behavior.	
From Addresses Choose the From Adress you want to edit from the displayed list then click **Edit** or click **New** to create a new message. Click **Delete** to delete the selected message. Click **Tenant Info** to return to the Tenant Info home page.		
From Address Name	The “friendly” name by which you reference this From address.	`ASCII`
From Email Address:	The email address that your email message will be addressed FROM.	
Type	Normal, Forward, Blackhole, and Not Monitored.	`Normal`

Parameter Name	Description	Default
Identity Name	The identity used with this From address.	`Default Identity`
Default Mailbox Behavior	The mailbox behavior used with this From address.	`DEFAULT`
Components		
Name	The name of the custom component. When used within an email content this is the EML tag name..	
Description	An internal description for the component.	
Parameters	One or more parameters listed in the order that they should be specified when used in EML.	
Content	The content of the custom EML tag.	

Note: When you delete any object upon which another object depends, you must reassign the dependency before the deletion can be completed successfully. An example is deleting an identity that is already in use in a mailbox behavior. You must assign a new identity to the mailbox behavior before you delete the old identity.

The system warns you if you attempt to make an illegal deletion.

Setting Message ID Visibility

You can use the Configuration Manager to control the visibility of the message ID in the body of your Email messages.

Note: These settings control only the message ID that appears in the body of the Email. Infor Email Marketing also inserts a message ID in the MIME header.

Caution: Because some servers, when they send the return Email, do not include the original MIME header, removing the message ID from the body of your Email campaigns can greatly reduce the reliability of campaign feedback. Without a message ID, Infor Email Marketing cannot reassociate a reply message with the campaign and recipient originating the message.

Security Settings

Username and Passwords

All passwords stored the EM configuration files are encrypted. These are configurable through the configuration manager as outlined below:

- "Proxy Username and Password - Network Settings page. This is used by the outgoing service to log into an http proxy (if proxy support is enabled).
- "Incoming Service Admin Username and Password - Incoming Service Settings page. This is used by the outgoing service to log into the incoming service admin interface.
- "Incoming Service Certificate Password - Incoming Service Settings page. This is used by the incoming service if SSL support is enabled.
- "Outgoing Service Certificate Password - Outgoing Mailing Settings page. This is used by the outgoing service if SSL support is enabled.

SMTP Authentication

Overview

SMTP authentication provided methods in which an end user or intermediate mail server such as Infor Email Marketing can provide credentials to a remote SMTP server. Generally, if a user logs into the server they will be granted more privileged access than would otherwise be available. Most servers don't require authentication if you are delivering an email to a local user. However if the user is not local to the SMTP server then authentication may be required to relay a message. An SMTP server may also require a login before enabling whitelist features.

In an email client, the user can generally specify that a remote SMTP server requires authentication and can also provide the username and password that should be used for this authentication. In the case of a mail server such as Infor Email Marketing, this information is provided in a configuration file (`DomainInfo.xml` for Infor Email Marketing) on a domain basis. The configuration allows you to specify which domains should have authentication enabled. It also allows for the specification of the username and password. This information is stored in an encrypted form.

Configuration for SMTP Authentication

Currently the configuration for SMTP Authentication is provided in DomainInfo.xml. It is not currently available in the configuration manager but this may be added in a future version. An XML tool such as XMLSpy should be used when editing this file. Editing in other types of text editors is discouraged. For each domain or IP Address you can optionally specify 4 different parameters as follows:

use.smtp.authentication	Specifies if smtp authentication should be enabled for the domain. The value can be "true" or "false".

encrypted.username	Specifies the username.
encrypted.password	Specifies the password.
encrypted.realm	Specifies the authentication realm that is used in some SASL mechanism such as Digest-Md5.

The encrypted files should be encrypted by using a cipher tool provided with Infor Email Marketing. To encrypt a value run the following command:

```
<EM_HOME>\bin\runcmd com.infor.util.EncryptDecrypt <value to encrypt
or decrypt> <…>
```

This will output a value that looks like "{3DES}xey+Ms4=". Copy this entire value and place it into the correct XML attribute.

Once you have the encrypted value, you can place it into the XML file. The resulting entry should look something like this:

```
<domain max.messages.per.session="0" max.connections.per.destination=
"0" name="cme.epiphany.com" text.only="false" max.messages.per.hour=
"0" html.preference="false" use.smtp.authentication="true" encrypted.
username="{3DES}xey+Ms4=" encrypted.password="{3DES}xey+Ms4=" encrypted.
realm="{3DES}zuS3cMSOZS6g1iLqjUUtBg==" />
```

The value used for "realm" is generally the same as the domain name. However this is configurable on the remote SMTP server.

Usage of SMTP Authentication

There are three conditions that must be true in order for SMTP authentication to be used. First, it must be enabled in `DomainInfo.xml` for the destination SMTP server. Second, SMTP Authentication must be enabled on the remote SMTP server. Third, Infor Email Marketing and the remote server must be able to negotiate an authentication protocol. If the remote SMTP server doesn't support one of the mechanisms listed above, then authentication will most likely fail.

Preference Web Page Chart

The table below lists the tags inserted into the EML URLGenerate() command (see "URLGenerate" on page 329 for additional information) in order to serve the specified survey page or an image associated with such a Web page. Refer to this table if you wish to modify your survey Web pages. For additional information on Email Markup Language (EML), see "Email Markup Language" on page 293

Note: The Infor Email Marketing Incoming Services is hard-coded for some files with a file extension of '.html'. Infor Email Marketing Incoming Services also supports HTTP, gif, png and jpg files.

The text preference is determined by EMAIL_FORMAT_PREFERENCE column on the Infor Campaign Management Server. This column is expected to be one of three things: T, H, or U (text, HTML, or unknown). EMAIL_HTML_CAPABILITY determines the recipient's capability and is expected to be H or U (HTML-capable or unknown).

The values listed above (T, H, U) are hard coded, and if these are not the values sent across to the Infor Email Marketing Outgoing Services, your campaign will malfunction in that the preference and capabilities columns will not match what is expected, and the wrong content will be generated. See "Email Format Selection" on page 36 for an illustration describing content generation.

Tags Used in URLGenerate() EML Command

Tag Used in URLGenerate() EML Command	Web Page Invoked / Image Served	Notes	Links To:
Preference Home Page(s)			
Preference.html	Preference.html	The home page for unsubscribe management for all recipients. This page allows users to unsubscribe, change of address, or specify a preferred Email format.	For unsubscribe: Unsubscribe.html For address change (with valid Email address): ChangeOfAddress.html For address change (with invalid Email address): ChangeOfAddressInvalid.html For format change: ChangeOfFormat.html
Required GIFs			
logo.gif	logo.gif	Anchor image for the preference home page. This image is located in the WebPages root directory.	Not applicable
Supporting Web Pages			
return_home.html	Your organization's home page	URL taken from Infor Email Marketing configuration data.	`return_home.html`
Unsubscribe.html	Unsubscribe.html	Unsubscribe confirmation.	`return_home.html`
UnsubscribeCancel.html	UnsubscribeCancel.html	Cancel Unsubscribe confirmation.	`return_home.html`

Tag Used in URLGenerate() EML Command	Web Page Invoked / Image Served	Notes	Links To:
ChangeOfAddress.html	ChangeOfAddress.html	Change of Address confirmation.	`return_home.html`
ChangeOfFormat.html	ChangeOfFormat.html	Message format preference (HTML or Text) confirmation.	`return_home.html`
ChangeOfAddressInvalid.html	ChangeOfAddressInvalid.html	Change of Address form displayed in response to entry of an address with invalid syntax.	`return_home.html`

Infor Email Marketing Incoming Services Default Pages

The Infor Email Marketing Incoming Services Default Pages allow you to configure the error-message Web pages that are returned when a requested link is out of date or cannot be found. Standard Infor Email Marketing installations generally have no need to alter these Web pages.

All Infor Email Marketing Incoming Services error pages are located in the `< MailerData >\Web Pages` directory. Customized versions of these files can be stored any one of the following directories:

- `<mailerdata>\<tenant>\<job>\WebPages`
- `<mailerdata>\<tenant>\WebPages\<identity>`
- `<mailerdata>\<tenant>\WebPages`
- `<mailerdata>\WebPages`

These error pages are used in cases where the URL is properly encoded, but files are missing or other error conditions exist.

- Support is added for all ‘HTTP’ files (which can include HTTP headers along with text or HTML).

  Most of the error pages do not return a successful HTTP status code and some of them use headers that are not used in other simple Web pages. Because of this, we have added support for .http files. These files contain all HTTP headers (except Content-Length which is automatically appended at the end of the headers) followed by an empty line (CRLF) and the body of the HTML page. For example, the following page:

```
01 `ServerVersion` 302 Object Moved

02 Expires: Mon, 01 Jan 1996 00:00:01 GMT

03 Date: `CurrentDate`
```

```
04 Location: `TargetURL`
05 Cache-Control: private
06 Content-type: text/html
07
08 <html>
09 <head><title>Object moved</title></head>
10 <body><h1>This object may be found
11 <a HREF="`TargetURL`">here</a></body>
12 </html>
```

- Lines 01-06 are the HTTP Headers
- All header lines must be terminated with a CRLF (RFC 2616).
- The headers are separated from the main body with a blank line (Line 07)

- Additional EML tags are added to support error pages (and are only valid in them).

  In addition to the EML tags supported by the previous version, the following EML tags are added to facilitate custom error pages:

  `ServerVersion` —The version of the HTTP request (usually 1.0 or 1.1)

  `RequestedURL` —The originally requested URL

  `TargetURL` —The destination or target URL used by redirections

  `CurrentDate` —The date and time of the HTTP request formatted for HTTP headers

  `FileDate` - The modification date and time of the file being requested formatted for HTTP headers

- All pages can be localized.

  All Preference pages, error pages, and images can be localized. Clickback has been modified to do variant selection based on the Accept-Language header that most Web browsers send with the HTTP request. This is similar to the method used by popular Web servers such as Apache. To use the localization feature, create a localized version of the page and save it into the same directory as the original page. Add an additional file extension for the language-locale. For example:

  Preference.html —fallback page in case a localized version can not be found

  Preference.html.en —generic English version of the page

  Preference.html.en-us —United States English version of the page

  Preference.html.ja —Japanese version of the page

  See the following section for more information about localization.

Variant Selection

HTTP allows Web-site authors to put multiple versions of the same information under a single URL. Clickback implements a simple selection mechanism that transparently selects the version that has the highest quality value based on information that is provided by the Web browser. This mechanism is called variant selection.

The variant selection is based on two factors:

- Which version or variants of the file are available
- Which versions are acceptable to the user agent (as indicated by the Accept-Language HTTP header)

Given this information, clickback scores each possibility and returns the one with the highest score or quality factor.

For example, if a request came in for Preference.html, we first get a list of the versions that are available. Suppose that we have the following 4 versions: Preference.html, Preference.html.en, Preference.html.es, Preference.html.ja. The next thing that we look at is the Accept-Language header which tells us which version are acceptable to the user-agent and indicates a quality value for each one. For example:

Accept-Language: fr; q=1.0, en; q=0.9, es; q=0.5

Given this information we can score our four versions as follows:

```
Preference.html     0.0
Preference.html.en     0.9
Preference.html.es     0.5
Preference.html.ja     0.0
```

The English version has the highest quality value so it is the one that is returned.

Controlling the Accept-Language Header in IE

The Accept-Language header can be controlled in IE by editing the languages listed in the Language Preference dialog. TheLanguage Preference dialog can be found by clicking Languages in the general tab of the **Tools > Internet Options** dialog.

Controlling the Accept-Language Header in Netscape

The Accept-Language header can be controlled in Netscape by editing the languages listed in the Language for Web Pages section of the Preferences dialog. The Preferences dialog can be found by selecting **Edit > Preferences** from the menu.

Encryption Support

Marketing emails are generally sent out in clear text. However, in some cases, the content of the email may contain sensitive information (i.e. customer numbers, account numbers, etc.). Infor Email Marketing supports the ability to encrypt this sensitive data. Encryption may be especially important if the data is being sent over the Internet to another server. For example, it allows for encryption of sensitive data that is included in URLs. However the application does not limit the usage to URLs only. The marketer may encrypt any data that they choose within the email and it will be up to them to decide what data does or does not require encryption.

The system uses standard methods and algorithms to perform the encryption. It is assumed that the application performing the decryption will have access to the necessary shared secret keys and will have knowledge of the required algorithms.

Several EML tags are available to support data encryption. These EML tags are documented in "Email Markup Language" on page 293 . These tags are "Encrypt", "JoinWithRandomOrder", and "RandomAlphaNumeric".

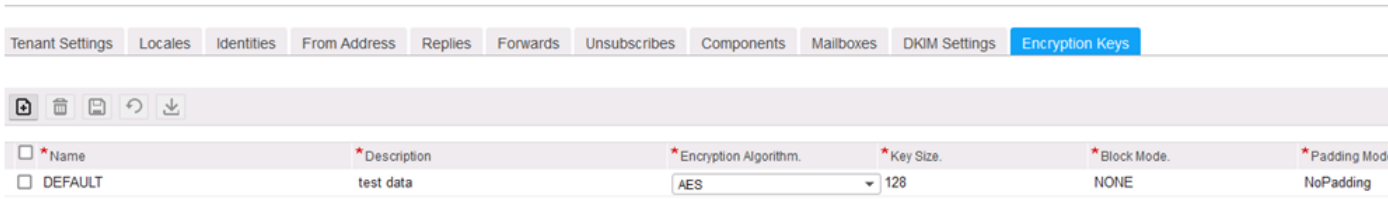
Configuration Manager Key Generation

Infor Email Marketing provides the ability to encrypt text within an email or on URLs. This can be useful if sensitive information needs to be sent to an external system such as Infor Email Advisor . To enable encryption, you must first create a secret key that is shared between Infor Email Marketing and the system that will decrypting the data.

To configure encryption keys, within the Configuration Manager, navigate to the Tenant Options:

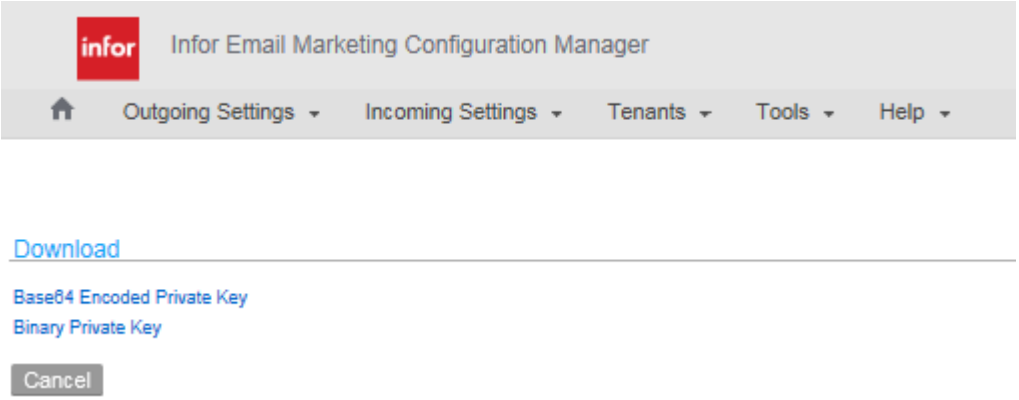
1. Navigate to Tenants.
2. Select **Encryption Keys** from the pull down menu.

   This displays a list of Encryption Keys:



   The first key is provided by default and is generated uniquely for each installation. The column Name and Description allow the key to be easily identified.

1. The "Delete" link deletes the specified encryption key.
2. The "Download" link opens a new page that provides several download choices.

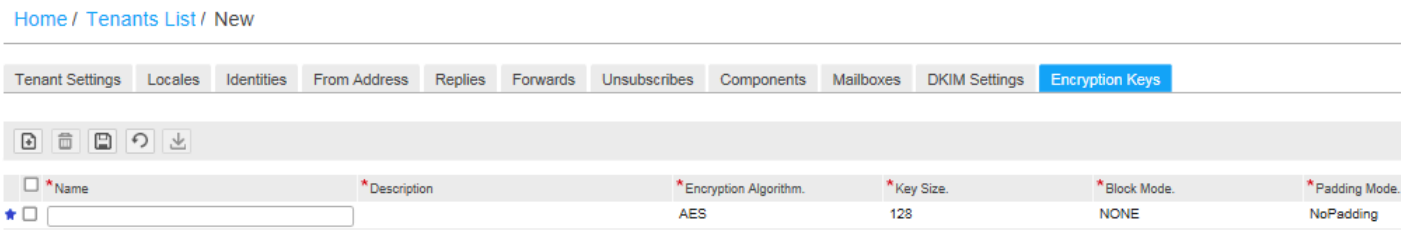


The Encryption Settings Download page is used to provide access to the keys in raw and base64-encoded form.

Hitting either "Base64 Encoded Private Key" or "Binary Private Key" links will download the encryption key in the requested format. These keys are intended to be transferred (securely) to the system that will be decrypting the data. The format of the key to be used will depend on the requirements of the remote system.

To add a new encryption key press the "**New**" button:

This will open a new page that allows specification of the parameters for the encryption key.



Enter the name, and description then choose your encryption options and click the "**Save**" button. Note the Key Size greater than 128 may require the "Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files" to be installed. If required this can be downloaded from http://java.oracle.com as an additional download for the JRE.

Configuration

Currently the encryption algorithm, block mode, padding mode, and key size are fixed at (AES/ECB/ISO10126Padding/128). The actual key used by Infor Email Marketing will be stored in the `<Installation Directory>\config\EM.properties` file. The property for the encryption key setting is called 'DefaultEncryptionKey' and the value will come from the `<outputname>.em` file that

was generated by the key generation tool. The admin will need to manually edit this property file and add the new entry for the encryption key. For example:

```
DefaultEncryptionKey=dStSeg1z8CM2vGmijbw5U==
```

Management and Control

4

This chapter provides an overview of Infor Email Marketing management and control topics, including:

- Console Manager
- Third-party server monitoring software
- DNS server activity monitoring
- Error reporting through logs and Email alerts
- Storage management

Administration Console

Infor Email Marketing supports a Web-based Administration Console Manager that enables you to monitor and control the Infor Email Marketing Outgoing Service. System administrators can use the Administration Console Manager to check the status of Infor Email Marketing in response to an error message or alarm generated by Email services.

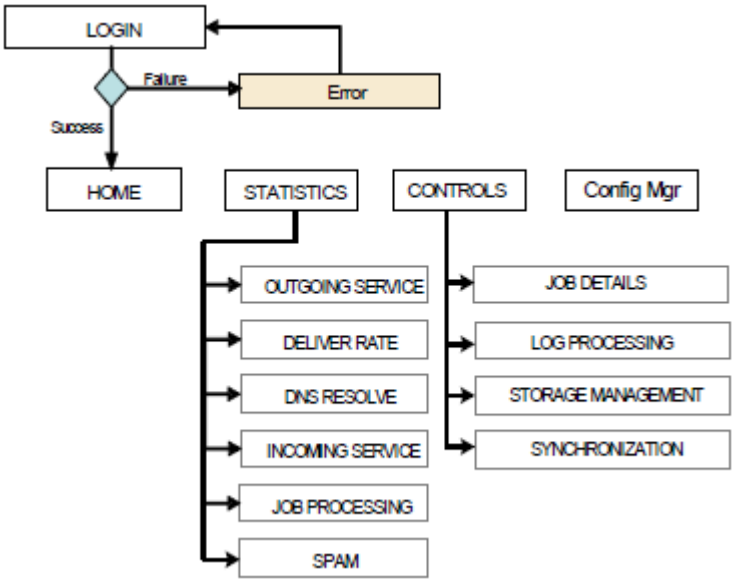


Figure 17: Administration Console Interface Structure

The initial Console Manager screen displays a summary status report with current statistics since the Infor Email Marketing Outgoing Service was last started. Links beneath this report allow you to drill—down on specific statistics, view current jobs, and pause a specific job.

Opening the Administration Console Manager

To open the Administration Console Manager, direct your browser to the Infor Email Marketing Outgoing Service domain, default port 8080 (or the port number you chose during the installation):

`http://<OutgoingMachineHostName>:8080/adminmgr/faces/pages/index.xhtml`

A dialog screen appears, prompting for a username and password. The list of users is controlled through the tomcat-users.xml file. You can also control access by IP address and Hostname using the settings on the security settings page. See "Security Settings" on page 119 for more information.

Figure 18: Admin Console Login Page

Upon a successful login, you should see this screen:

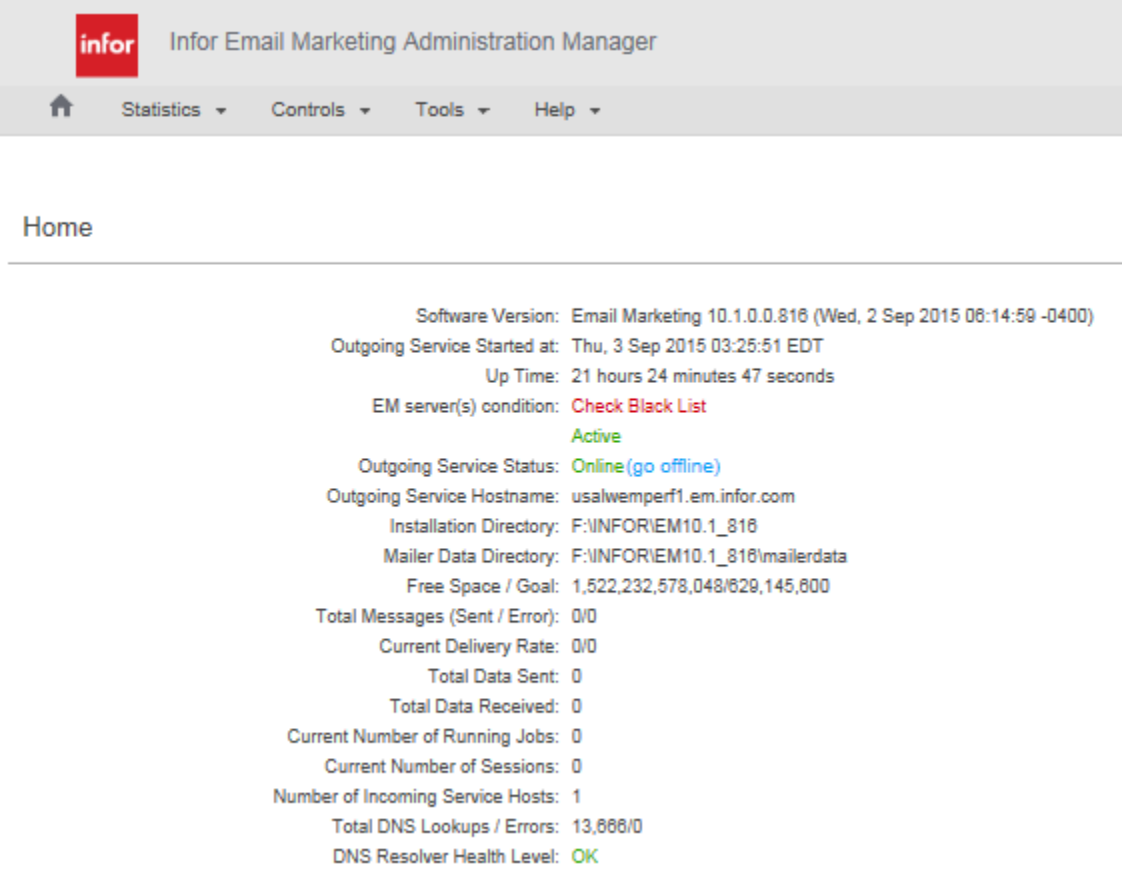


Figure 19: Admin Console Home Page

Data Fields	
Outgoing Service Status	The status of the application is indicated as "Online" (in green color) and "Offline" (in red color). The application status can be controlled using the "go offline" or "go online" link.
Software Version:	The software version, build number and build time.
Outgoing Service Started At:	The full time and date of when the outgoing service was started.
Up Time:	The days, hours, minutes, and seconds that the server has been running
Outgoing Service Condition:	The overall status of the outgoing service (i.e. GOOD, DISK FULL, RESOLVER ISSUES, STOPPING, etc.).
Outgoing Service Hostname:	The fully qualified DNS name of the outgoing service. This is also used ad the default source host name for outbound campaigns unless overridden by a campaign specific value.
Installation Directory:	The full path of the location where Infor Email Marketing is installed.
Mailer Data Directory:	The full path of the campaign data directory for this installation.
Free Space / Goal:	The free disk space on the disk volume where the mailer data is stored. Also the free space goal which is the amount of disk space needed to continue normal operation.
Total Messages (Sent / Error):	The total number of successful and failed delivery attempts since startup.
Current Delivery Rate:	The current number of messages being sent per second.
Total Data Sent:	The total number of bytes sent since startup.
Total Data Received:	The total number of bytes received since startup.
Current Number of Running Jobs:	The current number of actively running jobs.
Current Number of Sessions:	The current number of SMTP sessions (connections) for all active jobs.
Number of Incoming Service Hosts:	The number of incoming servers configured.
Total DNS Lookups / Errors:	The total number of DNS Lookups and Errors since startup.
DNS Resolver Health Level:	The current DNS Resolver Health.
Links:	

Data Fields	
Outgoing Service:	Links to the Outgoing Service Statistics page.
Delivery Rates:	Links to the Delivery Rate Statistics page (see section 6 for details).
DNS Resolver:	Links to the DNS Resolver Statistics page.
Incoming Service:	Links to the Incoming Server Statistics page.
Job Processing:	Links to the Job Processing Statistics page.
IDENT Protocol:	Links to the IDENT statistics page.
Spam:	Links to the spam statistics page.
Job Details:	Links to the Job Control and Details page.
Log Processing:	Links to the Log Processing Control and Details page.
Storage Management:	Links to the Storage Management Control and Details page.
Synchronization:	Links to the synchronization Control and Details page.

Outgoing Service Statistics Page

The outgoing service statistics page shows more details about the operation of the outgoing service. This includes details about connection pools, content generation details, and information about log files.

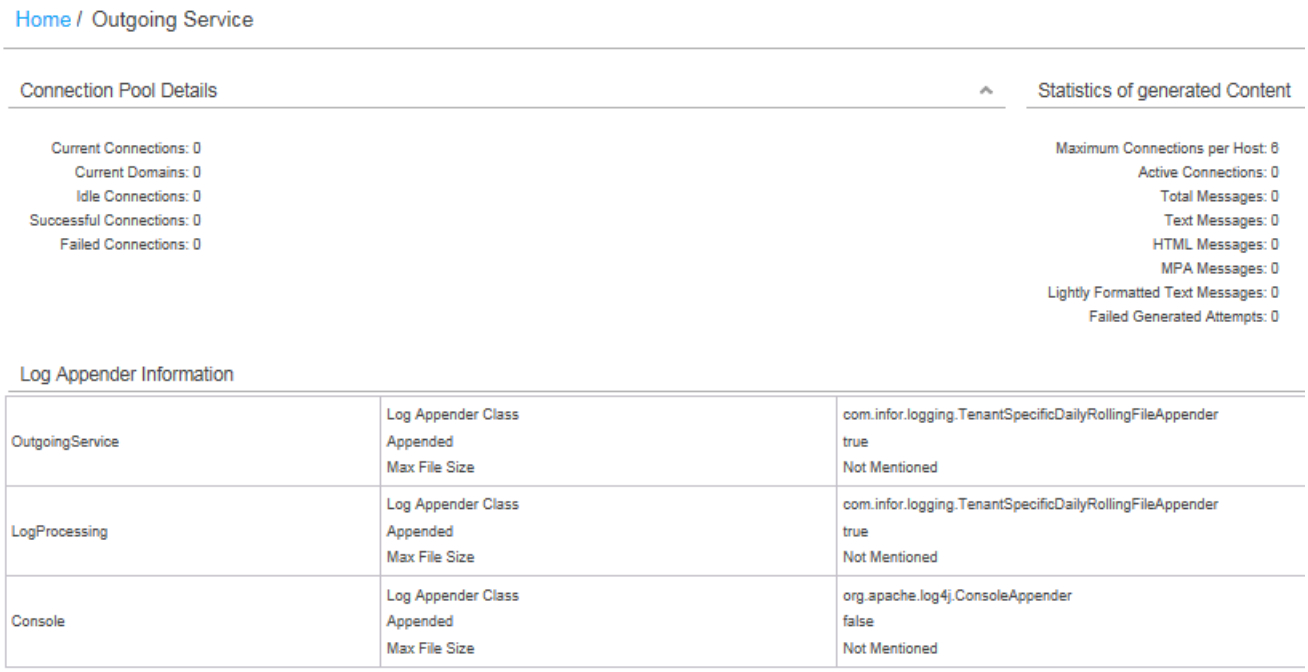


Figure 20: Server Statistics

Data Fields	
Connection Pool Details:	Shows details about the currently allocated connections to remote SMTP servers.
Current Connections:	The current number of established connections to remote SMTP servers.
Current Domains:	The current number of unique domains that we have active connections with.
Maximum Connections Per Host:	The maximum number of SMTP connections that can be established to a single remote SMTP server. **Note:** A domain may have many servers that will accept email for them and so we can establish this maximum number of connections per server.
Active Connections:	The current number of connections that are being used for email delivery.
Idle Connections:	The current number of connections that are established but idle or not currently being used for email delivery.
Successful Connections:	The number of connections that have been successfully established.

Data Fields	
Failed Connections:	The number of failed connection attempts.
Statistics of Generated Content:	Shows details about content generation activities.
Total Messages:	The total number of messages that have been successfully generated.
Text Messages:	The total number of TEXT messages that have been successfully generated.
HTML Messages:	The total number of HTML messages that have been successfully generated.
MPA Messages:	The total number of Multi Part Alternative messages that have been successfully generated.
Lightly Formatted Text Messages:	The total number of lightly formatted text message that have been successfully generated.
Failed Generation Attempts:	The total number of message generation attempts that have failed for any reason (server log will show details)
Log Appending Information:	Shows details about the active log files.
File Name:	The log file name.
Appended:	True if the log file is appended to, false if a new file is created each time the outgoing service is started.
Max File Size:	The maximum size of the log file in bytes before it is rolled or truncated.
Links:	
Connection Pool Details	
More Details	

Connection Details Page (All Connections)

The connection details page shows detailed information about a set of connections (active or idle).

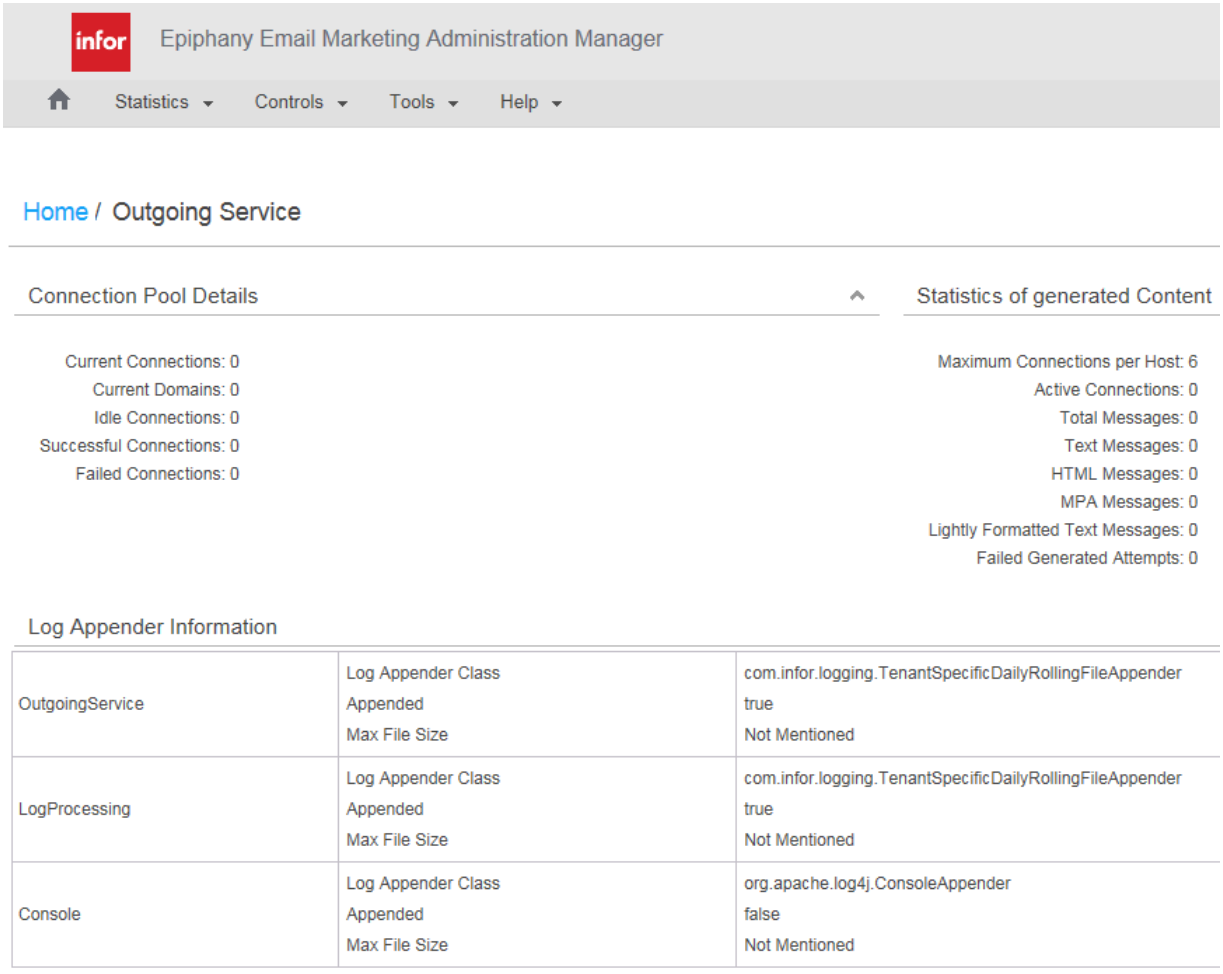


Figure 21: Connection Details (All Connections)

Data Fields	
Attempts:	The number of delivery attempts to this connection.
Success:	The number of successful delivery attempts to this connection.
Failed:	The number of failed delivery attempts to this connection.
Connection:	The name of the connection which includes source and destination ip addresses.
Domain:	The domain for the connection.
Links:	
None	

Note: This page is useful for debugging deliverability problems. For example, you will be able to see domains that may be slow because they are taking up all the connections. You can also see domains that have high failure counts.

Connection Pool Details (By Domain)

The connection details page shows detailed information about connections to domains (active or idle).

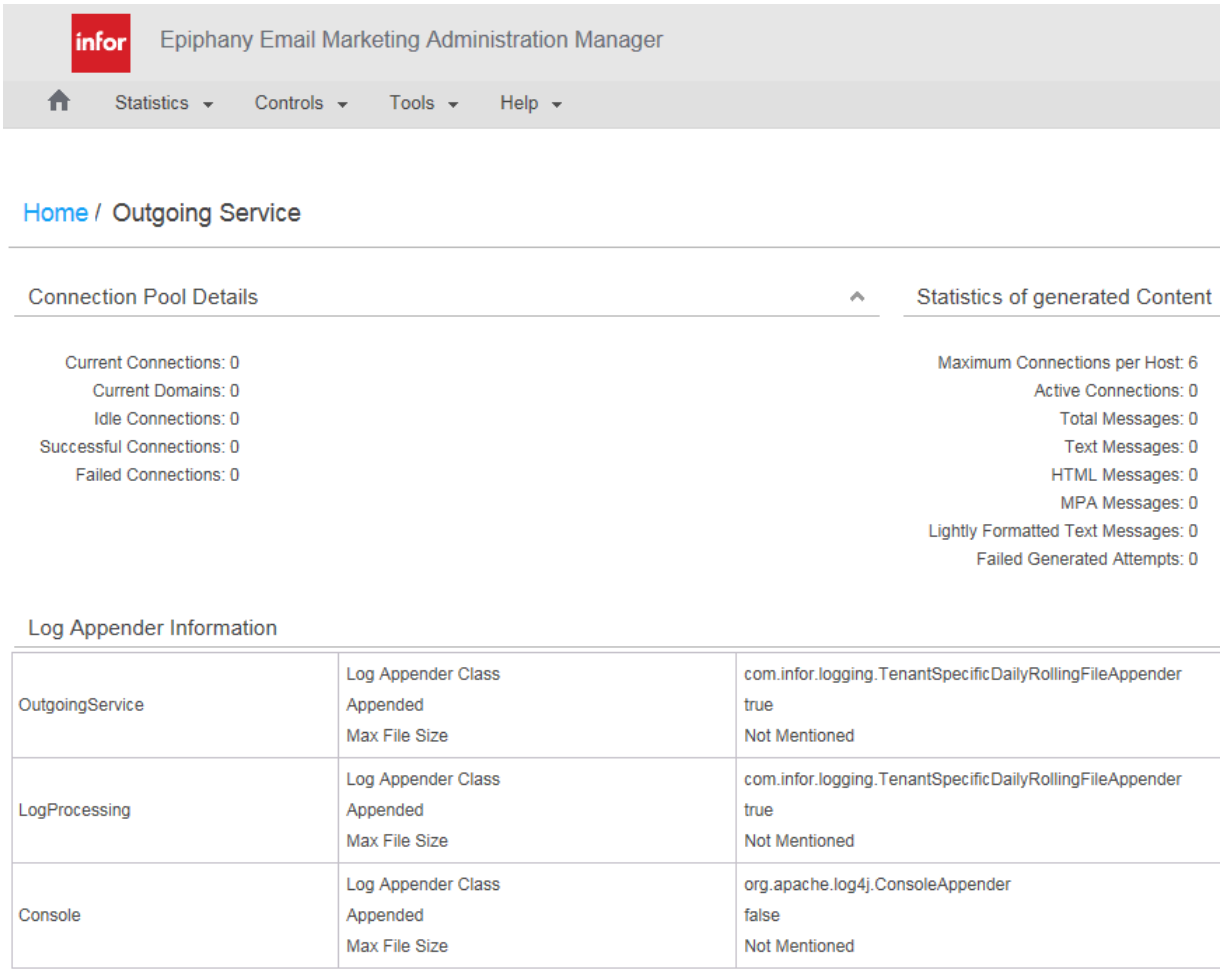


Figure 22: Connection Pool Details by Domain

Data Fields	
Attempts:	The number of delivery attempts for this domain.
Success:	The number of successful delivery attempts for this domain.
Failed:	The number of failed delivery attempts for this domain.

Data Fields	
Connection	The number of active connections to this domain.
Domain:	The domain name.
Links:	
Details	A link to the Connection Details screen.
Domain Details Drill down	

Note: This page is useful when debugging deliverability problems. For example, you will be able to see domains that may be slow because they are taking up all the connections. You can also see domains that have high failure counts.

Domain Details Drill Down

The connection details page shows detailed information about connections for the selected domain:

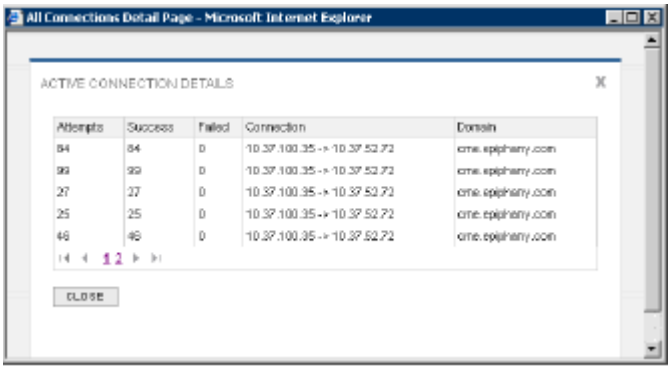


Figure 23: Active Connection Details Drill Down

Data Fields	
Attempts:	The number of delivery attempts for this domain.
Success:	The number of successful delivery attempts for this domain.
Failed:	The number of failed delivery attempts for this domain.
Connection	The active connections to this domain.
Domain:	The domain name.
Links:	
Details	A link to the Connection Details screen.
Domain Details Drill down	

Delivery Rate Statistics Page

The delivery rate statistics page provides information about the delivery rates displayed for various time frames.

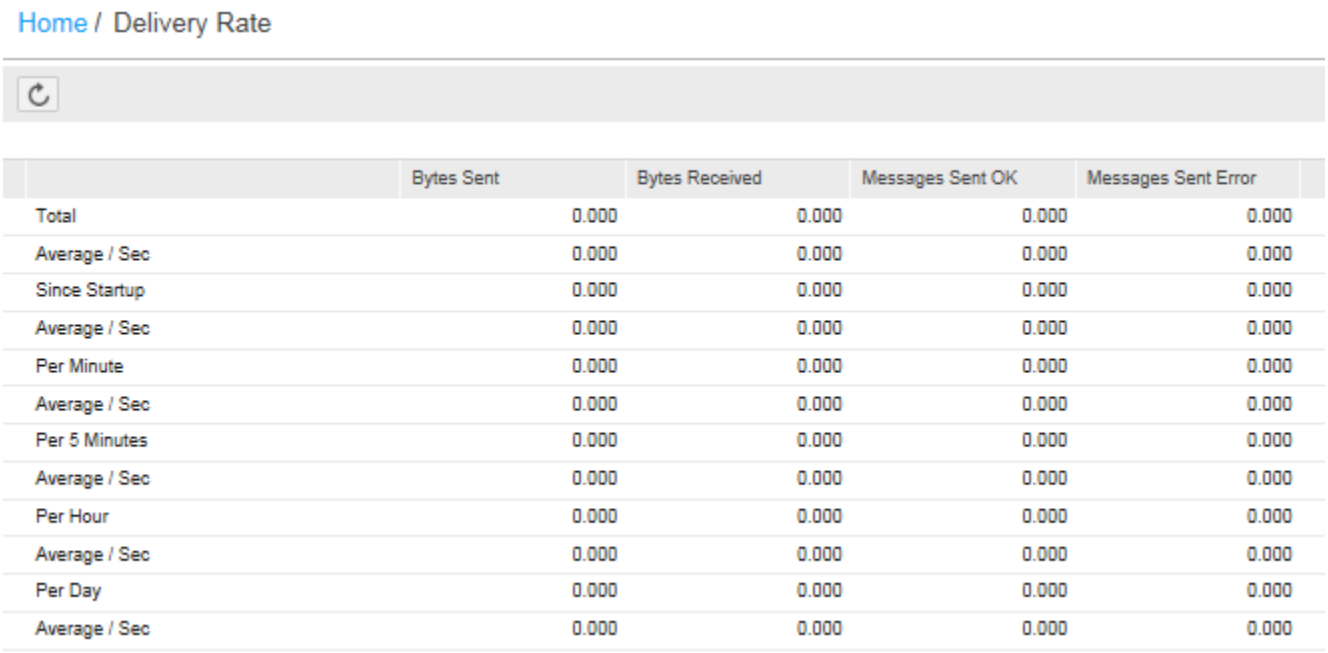


Figure 24: Delivery Rate Statistics Page

Data Fields	
Total:	The total rate since installation.
Average / Sec:	The average delivery rate per second since installation.
Since Startup:	The total rate since the outgoing service was started.
Average / Sec:	The average delivery rate per second since the outgoing service was started.
Per Minute:	A per minute moving average of the delivery rate.
Average / Sec:	The average delivery rate per second for the time range covered by the per minute moving average.
Per 5 Minutes:	A per 5 minute moving average of the delivery rate.
Average / Sec:	The average delivery rate per second for the time range covered by the per 5 minute moving average.
Per Hour:	A per hour moving average of the delivery rate.

Data Fields	
Average / Sec:	The average delivery rate per second for the time range covered by the per hour moving average.
Per Day	A per day moving average of the delivery rate.
Average / Sec:	The average delivery rate per second for the time range covered by the per day moving average.
Links:	
None	

For each of the above time periods the following statistics are kept:

- Bytes Sent: The number of bytes sent.
- Bytes Received: The number of bytes received.
- Messages Sent OK: The number of email message sent successfully.
- Messages Sent Error: The number of failed delivery attempts.

Note: This page helps the admin determine delivery rates and assists in determining bandwidth requirements. It will also be useful to help verify that email delivery throttling setting are working correctly.

DNS Resolver Statistics Page

The DNS Resolver statistics page provides information about each of the configured DNS servers. This includes counts of various types of queries as well as different types of errors.

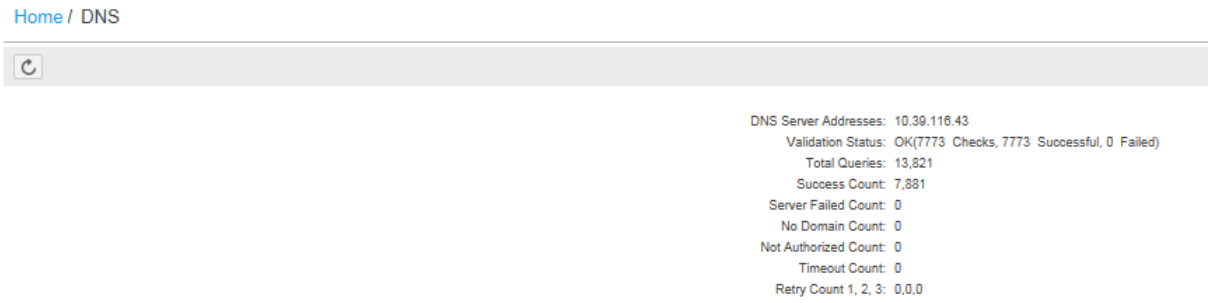


Figure 25: DNS Resolver Statistics Page

Data Fields	
DNS Server Address:	The IP Address of the DNS Server.
Validation Status:	The current validation status. Also shows the total number of checks performed, the number that were successful, and the number that failed.
Total Queries:	The total number of queries.

Data Fields	
Success Count:	The total number of queries that were successful (regardless of type).
Server Failed Count:	The total number of queries that failed due to error on remote server.
No Domain Count:	The total number of queries that failed because the domain does not exist.
Not Authorized Count:	The total number of queries that failed due to an authorization error. These errors are likely to be a result of a misconfiguration.
Timeout Count:	The total number of queries that have timed out.
Retry Count 1,2,3:	The number of retries for 1st retry, 2nd retry, 3rd retry etc.
Links:	
None	

Note: This page is helpful for debugging DNS Resolver issues. For example it will show DNS servers that have high error counts. If the DNS server is overwhelmed then it will also show high timeout and retry counts. Can be useful to help verify that the DNS is sized properly.

Troubleshooting DNS Problems

If you encounter DNS problems while your Infor Email Marketing Outgoing Service is operating you might have a DNS server failure. Typical symptoms of DNS server failure are:

- The server fails to respond, triggering an alarm.
- Emailing proceeds slowly but with a high rate (essentially 100%) of non-deliverables due to DNS lookup errors. These lookup errors can all be retried and normally succeed on subsequent attempts after the DNS issues have been resolved.

If you encounter these symptoms, your DNS server cache is possibly corrupt. Corrupt DNS caches are often the result of an over-worked and/or memory-starved DNS server or deliberate efforts of outsiders to create a denial of service condition on the server. Other possible explanations for these symptoms, in order of highest probability, are:

- Your DNS server is overwhelmed by Infor Email Marketing Outgoing Service demands.
- Your DNS server needs more memory (256MB+).
- You have a ‘denial of service’ attack. (That is, an unscrupulous sender attacks by flooding the DNS server or deliberately attempting to plant erroneous resource records.)
- You experience a server hardware and/or operating system failure.

While you can get some information from the DNS server logs, note that even in normal operation the DNS server log is potentially very large.

Retrieving Infor Email Marketing Incoming Services Information and Status

Infor Email Marketing Services information and status can be accessed directly from the Admin Manager, but will only show up if one or more Incoming services are running. For more information, see the following sections below.

Incoming Service Status Page

The Incoming Service Status page shows the status of each of the configured incoming servers. A link for each incoming server will provide more details for that server.

Figure 26: Incoming Service Status Page

Data Fields	
Name	The configured name of the incoming server.
Start Time	The time that the server was started.
Up Time	Up time since server start.
Host Name	The host name of the incoming server.
Links:	
<Incoming Service Name>	Takes you to the Incoming Service Details pages which show information about each of the configured protocols on the selected incoming service.

Incoming Service Details Page

Clicking on the **Incoming Service Details** link from the **Incoming Service Status Page** launches this screen:

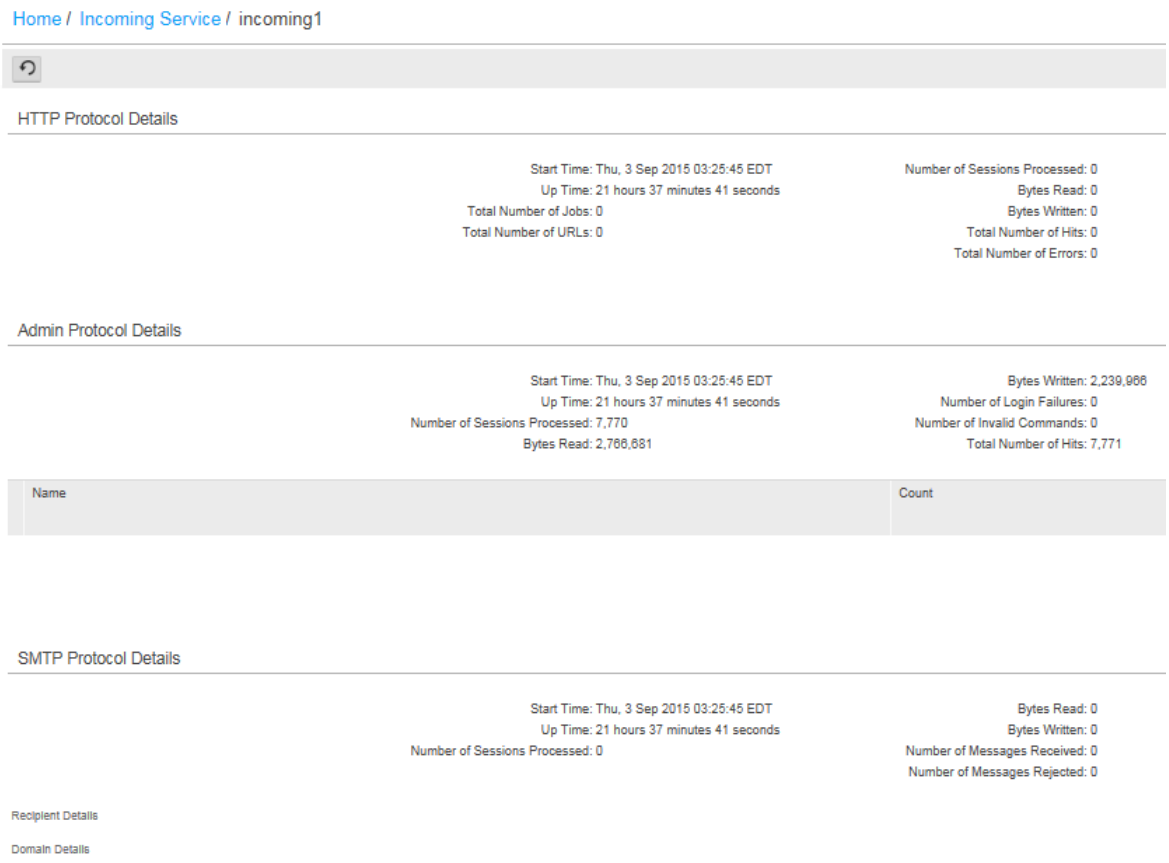


Figure 27: Incoming Service Details Page

Data Fields	
Protocol Name:	The name of the configured protocol. (HTTP, HTTPS, HTTP ADMIN, HTTPS ADMIN, IDENT or SMTP).
Start Time:	The time that the protocol was started.
Up Time:	The number of days, hours, minutes, and seconds that the protocol has been running.
Status:	The current status of the protocol (Either RUNNING or NOT RUNNING).
Port:	The configured TCP/IP port used by the protocol.
Links:	
HTTP	Links to the protocol details for the HTTP protocol handler.
HTTPS	Links to the protocol details for the HTTPS protocol handler.
HTTP ADMIN	Links to the protocol details for the HTTP ADMIN protocol handler

Data Fields	
HTTPS ADMIN	Links to the protocol details for the HTTPS ADMIN protocol handler.
SMTP	Links to the protocol details for the SMTP protocol handler.

Note: The HTTPS protocols may be disabled based on the settings in the configuration manager. This page is useful as an overall status for the incoming service. It tells us which protocols are running and which ports they are using.

Incoming Service HTTP Protocol Details Page

The incoming service HTTP Protocol Details page provides information about the number of HTTP request received by the incoming service and also gives a breakdown of the type of connections per job.

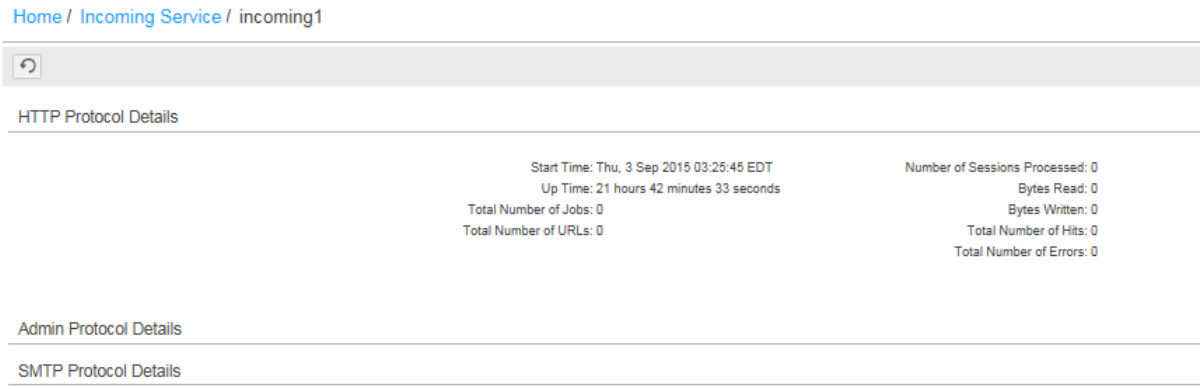


Figure 28: Incoming Service HTTP Protocol Details Page

Data Fields	
Start Time:	The time that the protocol was started.
Up Time:	The number of days, hours, minutes, and seconds that the protocol has been running.
Total Number of Jobs:	The total number of jobs known to the incoming service.
Total Number of URLs:	The total number of URLs known to the incoming service.
Number of Sessions Processed:	The total number of HTTP connections handled.
Bytes Read:	The total number of bytes read since startup.
Bytes Written:	The total number of bytes written since startup.

Data Fields	
Total Number of Hits:	The total number of individual HTTP requests processed. **Note:** The difference between sessions and hits is that multiple hits (requests) may be sent on the same session.
Job Number:	The campaign job number.
Job IDs:	The campaign job id (also directory name).
Exists:	'Yes' if the job file exists, 'No' if not. Note that if the Job File exists, then response information will be recorded for it; otherwise links will still be active but will not be recorded.
Unsubscribe:	The number of Unsubscribe requests processed.
COA:	The number of change of address requests processed.
COF:	The number of change of format requests processed.
URL Details:	
Number	The index number or internal ID for this URL.
URL	The actual target URL, as specified in the URL-Track EML tag.
Description	The description of the URL as specified in the URLTrack EML tag.
Hit Count	The number of hits for this unique URL instance.
Links	
Incoming Service List	Takes you back to the incoming service list.

Note: Shows the number of HTTP responses by type for each job. Also shows the number of hits for each tracked URL.

Note: The following keys make a URL unique: Job#, Target URL, and Description. So, based on this, a URL will be tracked separately if it appears in another job, or if the description is different. This allows the marketer to place the URL in multiple places in the EML and then track which one gets clicked on. For example, you could put the URL as the target behind an image and also as a normal text link somewhere else in the email. If you use a different description, then these URLs would be tracked separately. This allows you to determine which instance is more effective.

Incoming Service Admin Protocol Details Page

The Incoming Service Admin Protocol Details Page gives information about the number of admin requests to the incoming service and a breakdown of the types of connections made.

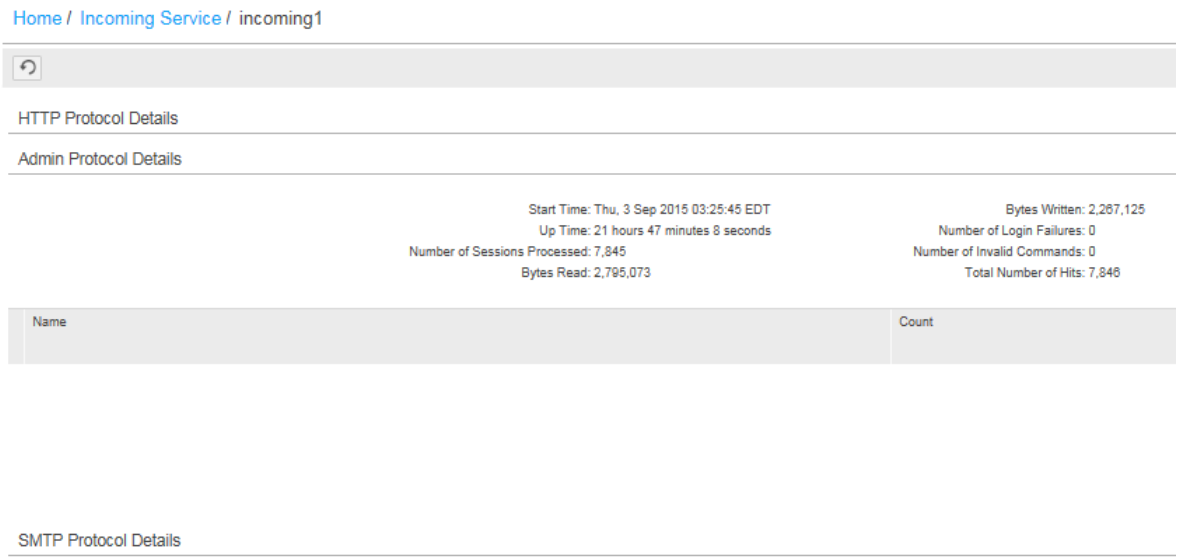


Figure 29: Incoming Service Admin Protocol Details Page

Data Fields	
Start Time:	The time that the protocol was started.
Up Time:	The number of days, hours, minutes, and seconds that the protocol has been running.
Number of Sessions Processed:	The total number of HTTP connections handled.
Bytes Read:	The total number of bytes read since startup.
Bytes Written:	The total number of bytes written since startup.
Number of Login Failures:	The number of failed login attempts since startup. This should normally be zero and, if you see a non-zero value, then it means that either your password is/was incorrect or an unauthorized system is attempting to access the incoming admin statistics.
Number of Invalid Commands:	The number of invalid commands since startup. This could be a result of using incompatible versions of Infor Email Marketing or manual erroneous Admin requests.
Total Number of Hits:	The total number of individual HTTP requests processed. NOTE: The difference between sessions and hits is that multiple hits (requests) may be sent on the same session.

Data Fields	
Name	The name of the admin command.
Count	The number of requests received for the given command.
Links	
Incoming Service List	Takes you back to the Incoming service list.

Note: This page is useful when debugging certain types of synchronization issues between the incoming server and the outgoing server.

Incoming Service IDENT Protocol Details

The Incoming Service IDENT protocol Details pages gives counts for the number of IDENT request received by the incoming service.

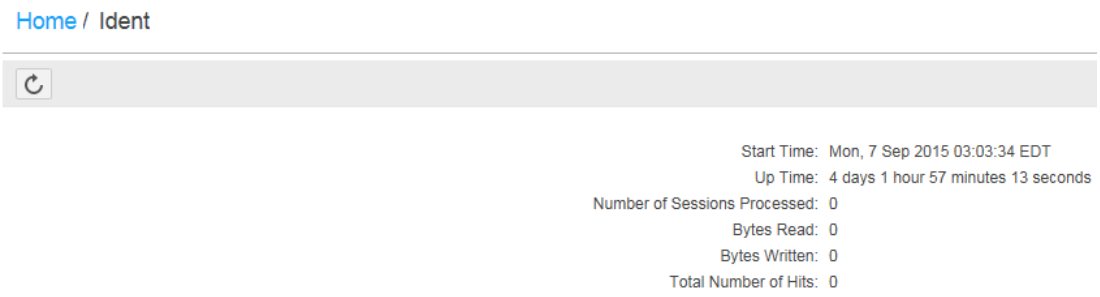


Figure 30: Incoming Service IDENT Protocol Details

Data Fields	
Start Time:	The time that the protocol was started.
Up Time:	The number of days, hours, minutes, and seconds that the protocol has been running.
Number of Sessions Processed:	The total number of IDENT connections handled.
Bytes Read:	The total number of bytes read since startup.
Bytes Written:	The total number of bytes written since startup.
Total Number of Hits:	The total number of individual IDENT requests processed. NOTE: The difference between sessions and hits is that multiple hits (requests) may be sent on the same session.
Links	
Incoming Service List	Takes you back to the Incoming service list.

Note: This page shows if there is any IDENT activity. Our internal studies have shown that, if IDENT is enabled, then we get higher deliverability numbers. Some SMTP servers will refuse to accept email unless they get a valid IDENT response. This page will help you understand how the IDENT server is interacting with your server.

Incoming Service SMTP Protocol Details

The Incoming Service SMTP Protocols Detail page gives counts for the number of email received by the incoming service. It also gives a breakdown of the number of Emails received per from address.

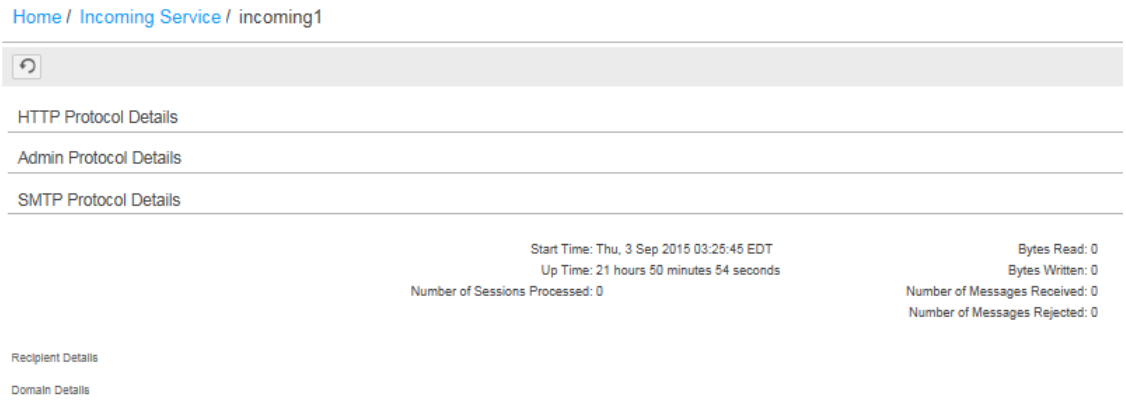


Figure 31: Incoming Service SMTP Protocol Details Page

Data Fields	
Start Time:	The time that the protocol was started.
Up Time:	The number of days, hours, minutes, and seconds that the protocol has been running.
Number of Sessions Processed:	The total number of SMTP connections handled.
Bytes Read:	The total number of bytes read since startup.
Bytes Written:	The total number of bytes written since startup.
Number of Messages Received:	The total number of email messages received since startup.
Number of Messages Rejected:	The total number of email messages rejected since startup.
Recipient Details:	
Address	The email address.
Count	The number of email messages received for this email address.
Domain Details:	

Data Fields	
Domain	The domain.
Count	The number of email messages received for this domain.
Links	
Incoming Service List	Takes you back to the Incoming service list.

Note: This page is useful for showing incoming email activity and more specifically can show which incoming email addresses are more active. In some cases, you could use this page to determine which email addresses are not being used and which therefore would be safe to delete from the configuration.

Job Processing Statistics Page

The Job Processing statistics page gives details about the job processing (i.e. campaign submission) application. It provides statistics related to campaign submission, feedback, etc.

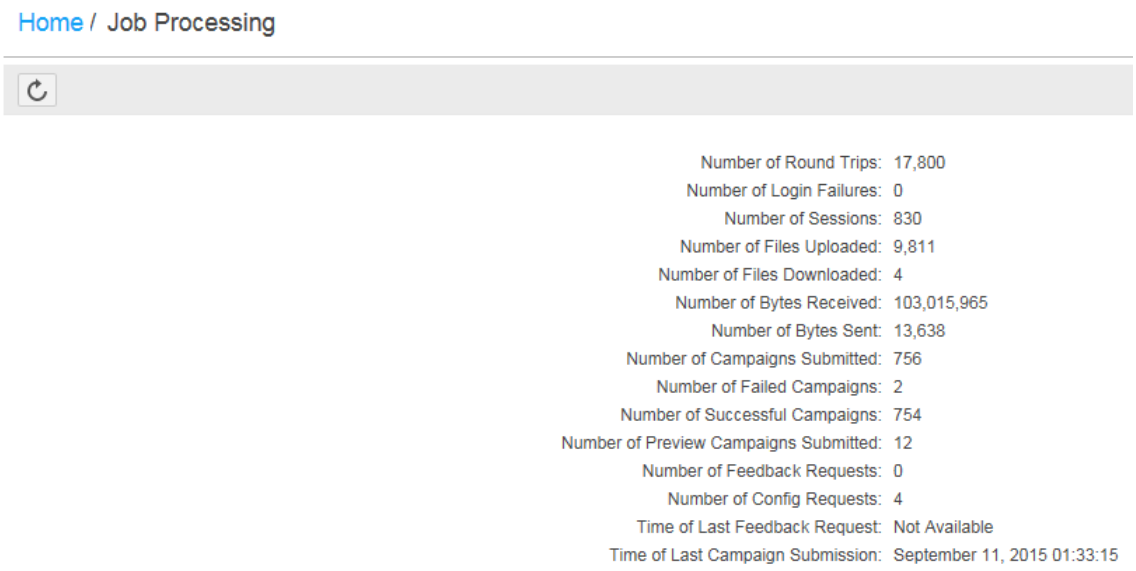


Figure 32: Job Processing Statistics Page

Data Fields	
Number of Round Trips:	The number of round trips or individual HTTP requests handled since startup. A single campaign submission or feedback request may include hundreds of round trips.
Number of Login Failures:	The number of login failures since startup.

Data Fields	
Number of Sessions:	The number of sessions established since startup. A session is created for each campaign submission or feedback request etc.
Number of Files Uploaded:	The number of files uploaded to the Outgoing Service from the client machine (Marketing).
Number of Files Downloaded:	The number of files downloaded from the Outgoing Service from the client machine (Marketing).
Bytes Received:	The total number of bytes received since startup.
Bytes Sent:	The total number of bytes sent since startup.
Number of Campaigns Submitted:	The number of campaigns submitted (real campaigns or preview campaigns)
Number of Failed Campaigns:	The number of campaigns that failed for whatever reason.
Number of Successful Campaigns:	The number of successfully submitted campaigns.
Number of Preview Campaigns:	The number of preview campaigns submitted.
Number of Feedback Requests:	The number of feedback requests made to the outgoing service.
Number of Config Requests:	The number of requests made to synchronize the configuration between the outgoing service and outbound marketing.
Time of Last Feedback Request:	The time and date of the last feedback request.
Time of Last Campaign Submission:	The time and date of the last campaign submission.
Links	
None	

Note: Useful for debugging issues with campaign submission and feedback.

Ident Protocol

Data Fields		Default
Start Time	IDENT Server start time.	None
Up Time	Length of time that the IDENT Server running.	None
Number of Sessions Processed	Sessions processed by the IDENT server.	None
Bytes Read	Number of bytes read by the IDENT server.	None
Bytes Written	Number of bytes written by the IDENT server.	None
Total Number of Hits	Identity challenges found.	None
Links		
None		

Spam Statistics Page

The Spam Statistics page provides details about spam keywords and domains that may be blocking email due to spam policies. It shows a count of the number of rejected Emails that match the configured keywords. It will also show a list of domains, with associated counts, that have rejected email due to their spam policies.

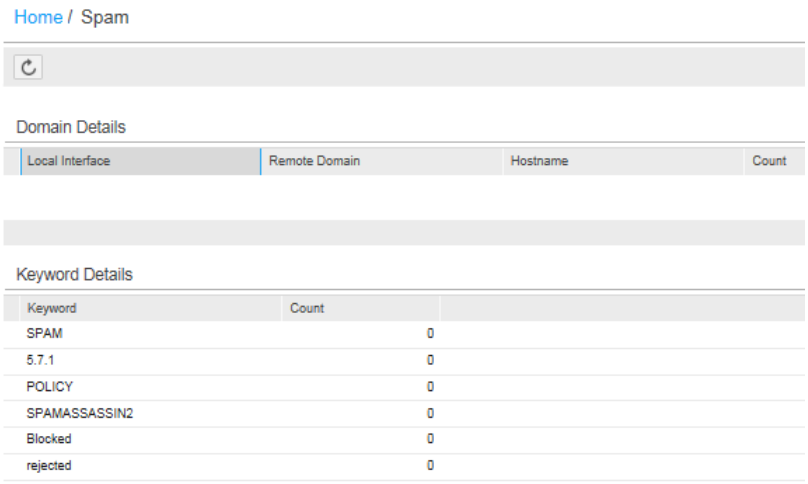


Figure 33: Spam Statistics Page

Data Fields	
Keyword:	The keyword used to categorize spam responses.
Count	The count of the number of Emails rejected where the smtp response matched the associated spam keyword.
Domain Details:	
Local Interface	The local network interface to which the connection is bound.
Remote Interface	The remote IP address of the connection.
Remote Interface	The domain name of the SMTP server.
Count	The number of email messages rejected by this domain.
Links	
None	

Note: Can show which SMTP servers or domains may be blocking you because they think you are a spammer. Also shows a breakdown of the matches by keyword.

Note: A domain is considered unique based on local IP address, remote IP address, and host name. Infor Email Marketing supports binding to a specific network interface and it's possible that one network interface may get black listed where others won't. In this case the remote server may think that multiple servers are sending Email because the Emails are coming from multiple IP addresses.

External Monitoring of the Incoming Service

The Incoming Server now supports direct monitoring via a configurable TCP/IP (HTTP) port number. This works the same way as the monitoring port for the Outgoing Service. You can access the status using any HTTP client including a regular web browser and it is supported by most external monitoring tools (i.e. WhatsUp Gold, Nagios, etc). The status is returned as a simple number followed by a short status message (i.e. "0 GOOD").

Possible status messages include the following:

- GOOD
- STARTING
- STOPPING
- MAILER DISK FULL
- HOME DISK FULL
- CHECK DNS
- CHECK INCOMING DATABASE
- UNKNOWN_STATUS

A "GOOD" status means that the Incoming Service is running and available to receive incoming HTTP and SMTP based responses.

Configuration

The setup is controlled by the EM.properties file in the config directory.

Data Fields

InboundStatusProbePort=5789

This is the port that the incoming service will use to report the current status. The status is returned as simple text (i.e. text/plain). There is no default for the Probe Port. If it is not specified then the incoming server will not start the monitoring service.

NgemHomeFileSpaceLimit=1048576

The Status Probe checks the available space in the NGEM Home directory. If it falls below this limit the service will return "HOME DISK FULL" as the status.

MailerDataFileSpaceLimit=1048576

The Status Probe checks the available space in the mailer data directory. If it falls below this limit the service will return "MAILER DISK FULL" as the status.

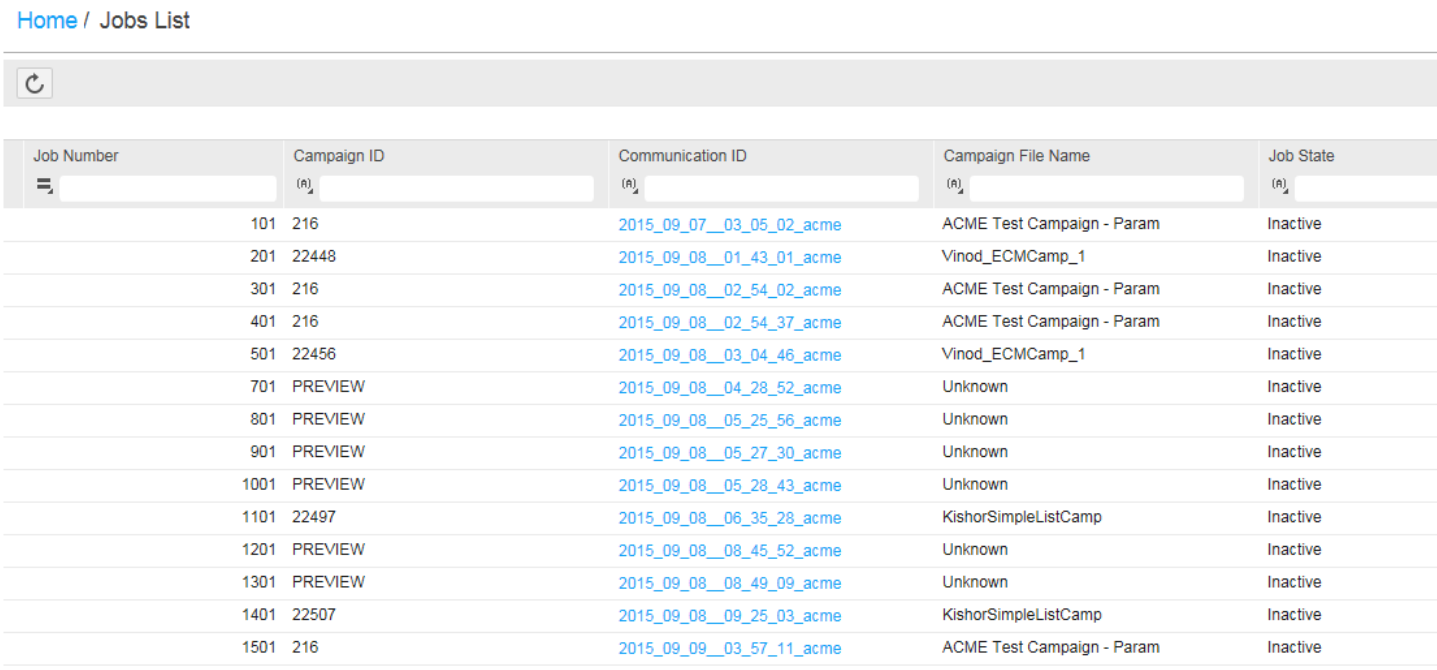
Usage

With the above configuration you could access the incoming server status at http://<incoming server host name>:5789. Any status message other than "0 GOOD" can be considered an alertable condition.

Job Control and Details Page

The job control and details pages show a list of jobs known to the outgoing service. The initial page gives some high level details for each job and then allows you to drill down for more details.

Job Control



Job Number	Campaign ID	Communication ID	Campaign File Name	Job State
101	216	2015_09_07__03_05_02_acme	ACME Test Campaign - Param	Inactive
201	22448	2015_09_08__01_43_01_acme	Vinod_ECMCamp_1	Inactive
301	216	2015_09_08__02_54_02_acme	ACME Test Campaign - Param	Inactive
401	216	2015_09_08__02_54_37_acme	ACME Test Campaign - Param	Inactive
501	22456	2015_09_08__03_04_46_acme	Vinod_ECMCamp_1	Inactive
701	PREVIEW	2015_09_08__04_28_52_acme	Unknown	Inactive
801	PREVIEW	2015_09_08__05_25_56_acme	Unknown	Inactive
901	PREVIEW	2015_09_08__05_27_30_acme	Unknown	Inactive
1001	PREVIEW	2015_09_08__05_28_43_acme	Unknown	Inactive
1101	22497	2015_09_08__06_35_28_acme	KishorSimpleListCamp	Inactive
1201	PREVIEW	2015_09_08__08_45_52_acme	Unknown	Inactive
1301	PREVIEW	2015_09_08__08_49_09_acme	Unknown	Inactive
1401	22507	2015_09_08__09_25_03_acme	KishorSimpleListCamp	Inactive
1501	216	2015_09_09__03_57_11_acme	ACME Test Campaign - Param	Inactive

Figure 34: Job Control and Details Page

Data Fields	
Job Number:	The job number.
Job ID:	The job ID (or directory)
Job State:	The current state for the given job.
Total Records:	The total number of records in the given job.
Completed Records:	The total number of records that have completed delivery.
Links	
Job details	Links to the job details page (shown below).

Note: A pulldown list allows you to select which group of jobs to view, filtered by their state: ACTIVE, RUNNING, INACTIVE, PAUSED, WAITING, and ALL.

Job Details

The Job Control and Details drill down page shows detailed information about a job such as the number of records, number of Emails sent, etc. It also shows the current status and then allows you to start execution or to pause the job.

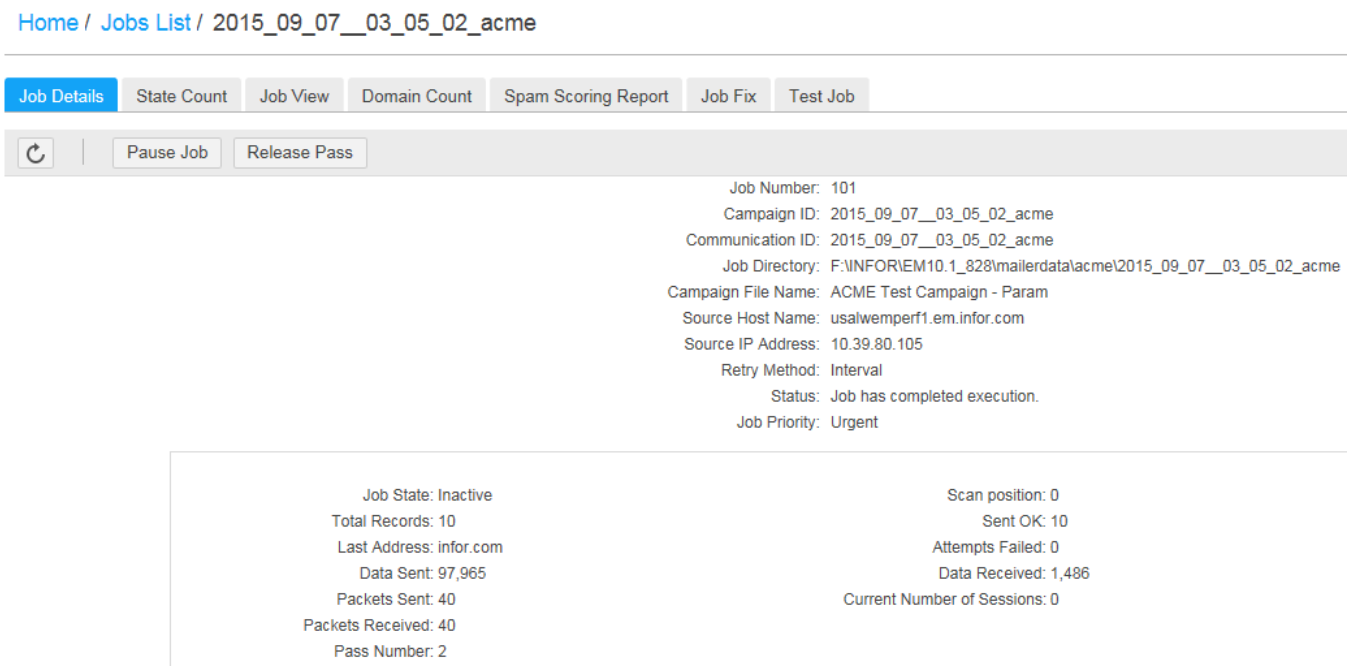


Figure 35: Job Details Page

Data Fields	
Job Number:	The job number.
Job ID:	The job ID (or directory)
Job Directory:	The full path of the job directory.
Campaign File Name	The campaign name as created in the ‘campaign.hdr’ file.
Source Host Name:	The source host name that any connections are bound to when delivering email for this job.
Source IP Address:	The source IP Address to which any connections are bound when delivering email for this job.
Retry Method:	The retry method (either INTERVAL or REGRESSIVE).
Status:	The last status message for the job, if available. Will show any errors or a reason why the campaign cannot be scheduled. If all is running correctly, then the status may be empty.
Job State:	The current status of the job (RUNNING, WAITING, PAUSED, and INACTIVE, etc.).

Data Fields	
Total Records:	The total number of records in the job file.
Last Address:	The email address of the last message that was delivered for this job.
Sent OK	The total number of messages that have been sent OK for this job.
Data Sent:	The total number of bytes sent for this job.
Data Received:	The total number of bytes read for this job.
Current Number of Sessions:	The current number of active connections.
Scan Position:	The current scan position (byte offset). This is the position of the most recent record being processed.
Attempts Failed:	The number of failed delivery attempts for this job. Note that if a record fails the first time, it may be tried again so you can't really match this number against the number of records in a job.
Packets Sent:	The total number of packets (i.e. similar to TCP/IP packets) sent for this job. The ratio of packets to bytes can be an indicator of network efficiency. (For example, this can be used to show the efficiency of SMTP pipelining).
Packets Received:	The total number of packets received (i.e. similar to TCP/IP packets) received for this job.
Pass Number:	The current pass number (or retry count) for the job.
Links	
Pause Job	Pauses an active job, even if it is not currently running
Release Pass	Causes the next pass to start executing immediately. If the job is already running, or paused, then this link will not appear.
State Count	Runs a state count report.
Job View	Runs a job view report.
Domain Count	Runs the domain count report.
Job Fix	Executes Job Fix and reports the results.
Test Job	Executes Test Job and reports the results.

Note: This is probably the most commonly used page. As a campaign is submitted, these pages are used to monitor its progress. The statistics can be refreshed to see how many messages have been sent. You can also use this page to force a job to execute outside of its regular schedule.

The Job Fix and Test Job links are utilities that can be run from links on this page, and are not considered to be the same as report generators (i.e. they are executed and will report the results of that execution attempt, but their primary purpose is to execute the function).

Clicking on any of the these links takes to you one of the following pages which are detailed reports:

- State Count Report
- Job View Report
- Domain Count Report

For more information on each of these reports, see "Reports" on page 169

Job Fix Tool:

Jobfix is an advanced tool that should be used only if you know what you are doing. It will be run automatically under certain conditions such as after a server failure. It can also be used to change some of the internal control parameters of a job file.

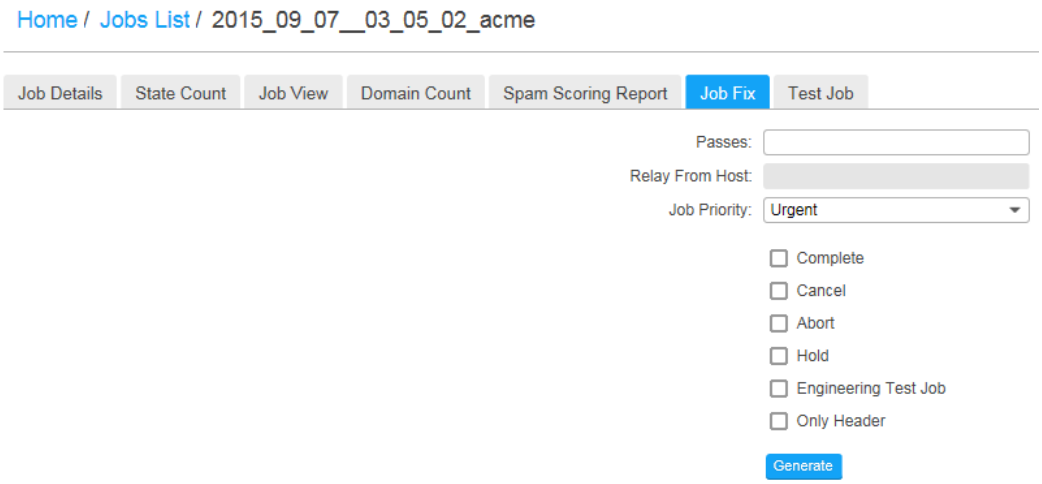


Figure 36: Job Fix Tool Page

Data Fields	
Input Fields:	
Complete	Causes the job to be marked as "Complete".
Cancel	Causes the job to be marked as "Canceled".
Abort	Causes the job to be marked as "Aborted".
Hold	Causes the job to be put on "Hold".
Data File Count	Modifies the data file count of the job file.
Engineering Test Count	Marks the job as an "Engineering Test Job".
Release From Hold	Releases the job from "Hold".
Passes	Sets the maximum number of passes for the job.

Data Fields	
Only Header	Only examines the job header for errors. By default job fix will examine the header and all records.
Relay From Host	Sets the hostname that the outgoing server will bind to when delivering outbound email.
Maximum Message per Minute	The maximum messages received per minute for this campaign.
Job Priority	Sets the job priority.
More Details	A pulldown list that allows for the selection of an input list file number.
Source Code Offset	Adjusts the source code offset for records with the given list file number. **Note:** This is an advanced setting.
Source Code Size	Adjusts the source code size for records with the given list file number. **Note:** This is an advanced setting.
UserKey Code Offset	Adjust the user key offset for records with the given list file number. **Note:** This is an advanced setting.
UserKey Size	Adjust the user key size for records with the given list file number. **Note:** This is an advanced setting.
CTG Parameters	An optional comma-separated list of name=value pairs that will be passed to the content generator, while generating new messages.
CTG ClassSpecification	The Java class specification for the campaign.
HTML Mode	Sets the HTML mode for the job.
JobFix File Number	A filter that allows you to specify which records should be fixed. It applies to the settings that come before it. For example, if you wanted to change ‘Source Code Offset’ or ‘Source Code Size’, then you would also need to specify a ‘Job Fix File Number’. Note that these are advanced settings and would generally only be used at the direction of Infor support.
Links	
Generate	Click this link to run jobfix.

Pausing a Job

To pause a job:

1. In the Admin Manager home page, click **Controls\Job** Details.
2. Locate the job that you want to pause, click the link to get the job details, and click **Pause Job** . This action forces the job to immediately suspend all mailing.
3. To continue with the job, click **Resume** .

   Note: If the Infor Email Marketing Outgoing Service is restarted, all paused jobs become active again.

Releasing a Job

To release a job that is waiting for its next automatic restart time:

In the Admin Manager home page, click **Controls\Job Details** .

Locate the job that you want to start and click **Release Pass** . This action immediately starts the next iteration of the job.

Holding a Mailing

You may use jobfix with the '**hold**' option to put a mailing on hold. This hold will remain after the Infor Email Marketing Outgoing Service is stopped and restarted.

You may later resume the held job by running the jobfix tool with the '**release**' option:

Stopping a Mailing Permanently

You may use the jobfix tool with the '**abort**' option to abort a running job. This is done from the Job Details page in the Admin Manager.

Log Processing Control Page

The Log Processing Control Page gives details about the processing of incoming responses (Email and HTTP-based). It allows the admin to force log processing to run on demand. Several drill down pages give more details on the number of hits for each processing rule and details about the incoming log files.

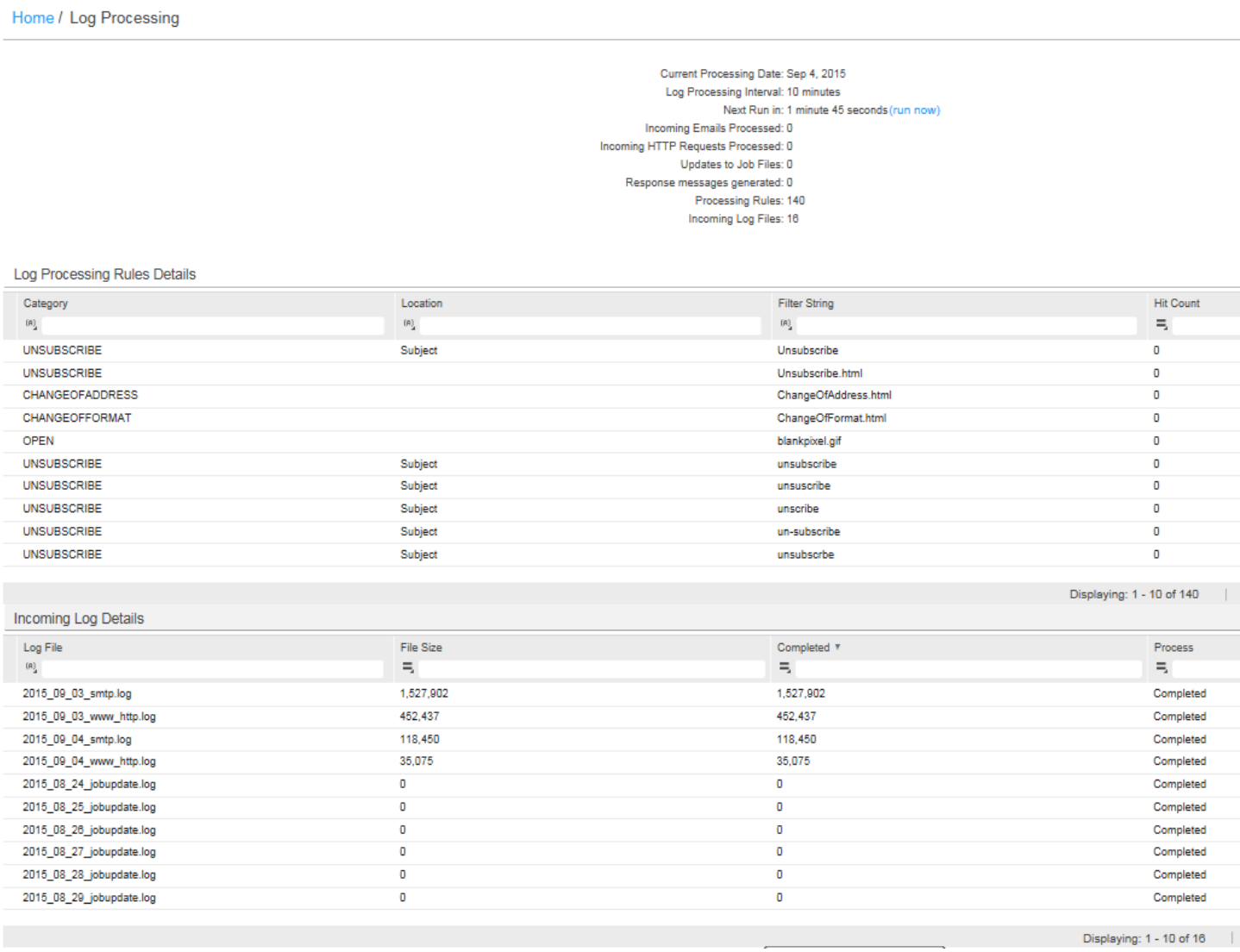


Figure 37: Log Processing Control Page

Data Fields	
Current Processing Date:	The date of the current file being processed.
Log Processing Interval:	The frequency in minutes of log processing runs.
Next Run in:	The number of hours, minutes, and seconds until the next log processing run.
Incoming Emails Processed:	The number of incoming Emails processed.
Incoming HTTP Requests Processed:	The number of incoming HTTP requests processed.
Updates to Job Files:	The number of updates made to job files since startup.

Data Fields	
Response messages generated:	The number of reply messages generated, based on incoming requests (i.e. unsubscribe reply, coa reply, etc.).
Processing Rules:	The number of configured processing rules.
Incoming Log Files:	The number of incoming log files known to log processing.
Links	
Run now	Cause log processing to execute immediately.
Processing Rule Details	Links to the Processing Rule Details page shown below.
Incoming Log File Details	Links to the 'Incoming Log File Details' page show below.

Note: This page is used to verify that Log Processing is executing and processing incoming log files. It also allows the admin to force log processing to execute immediately.

Log Processing Rules Detail

The Log Processing Rules detail shows the hit count for each of the configured processing rules.

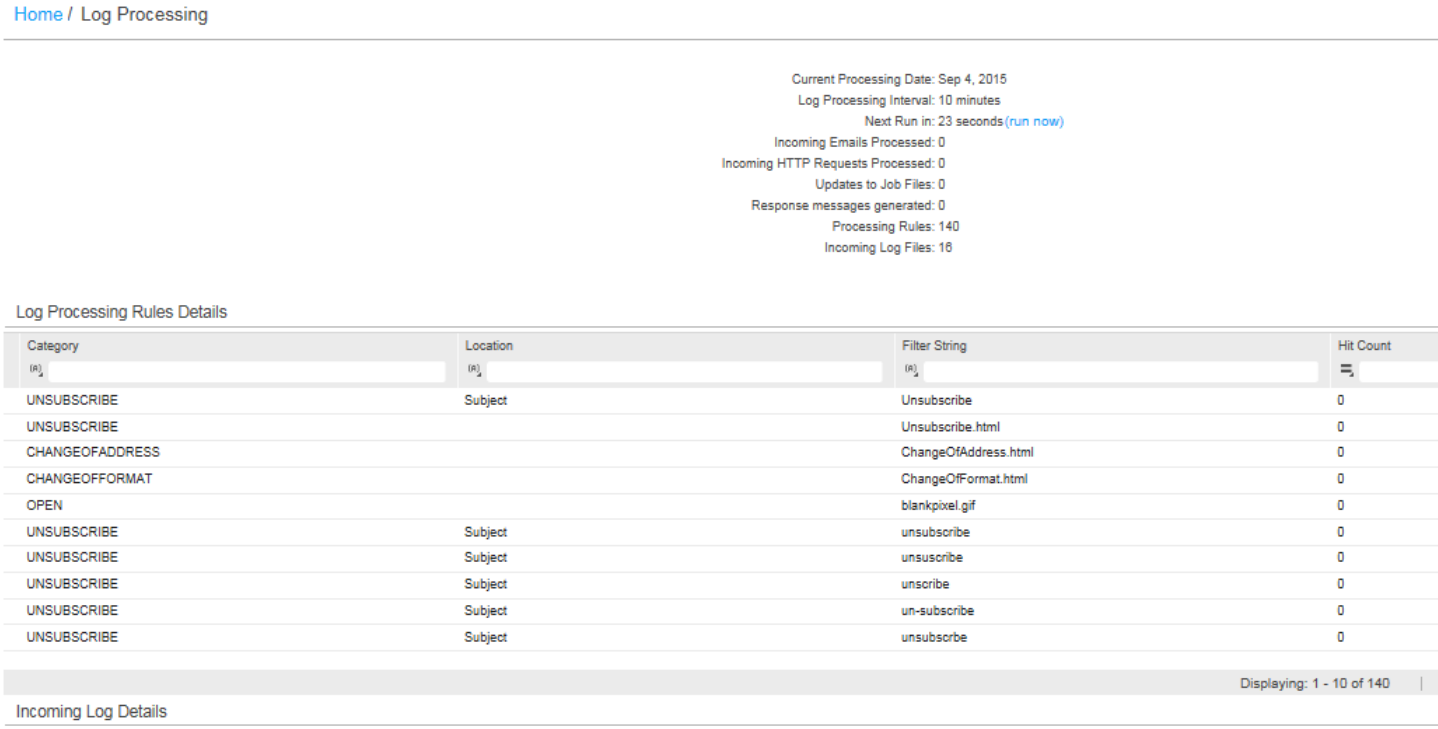


Figure 38: Log Processing Rules Detail Page

Data Fields	
Category	The category of a processing rule.
Location	The search location used for the processing rule (i.e headers, subject, body, etc.).
Filter String	The string to search for.
Hit Count	The number of hits for the given processing rule.
Links	
List Navigation Links	Allows the admin to navigate the list of processing rules.

Note: This page shows details about how the incoming messages have been categorized. It is useful when debugging log processing and especially if the admin has changed the processing rules (perhaps to add localized keywords) and wants to verify their operation.

Incoming Log Details

The Incoming Log Details page gives details on each of the incoming log files on the system. It shows if the log file has been completely processed and if not allows the admin to force execution for that log file.

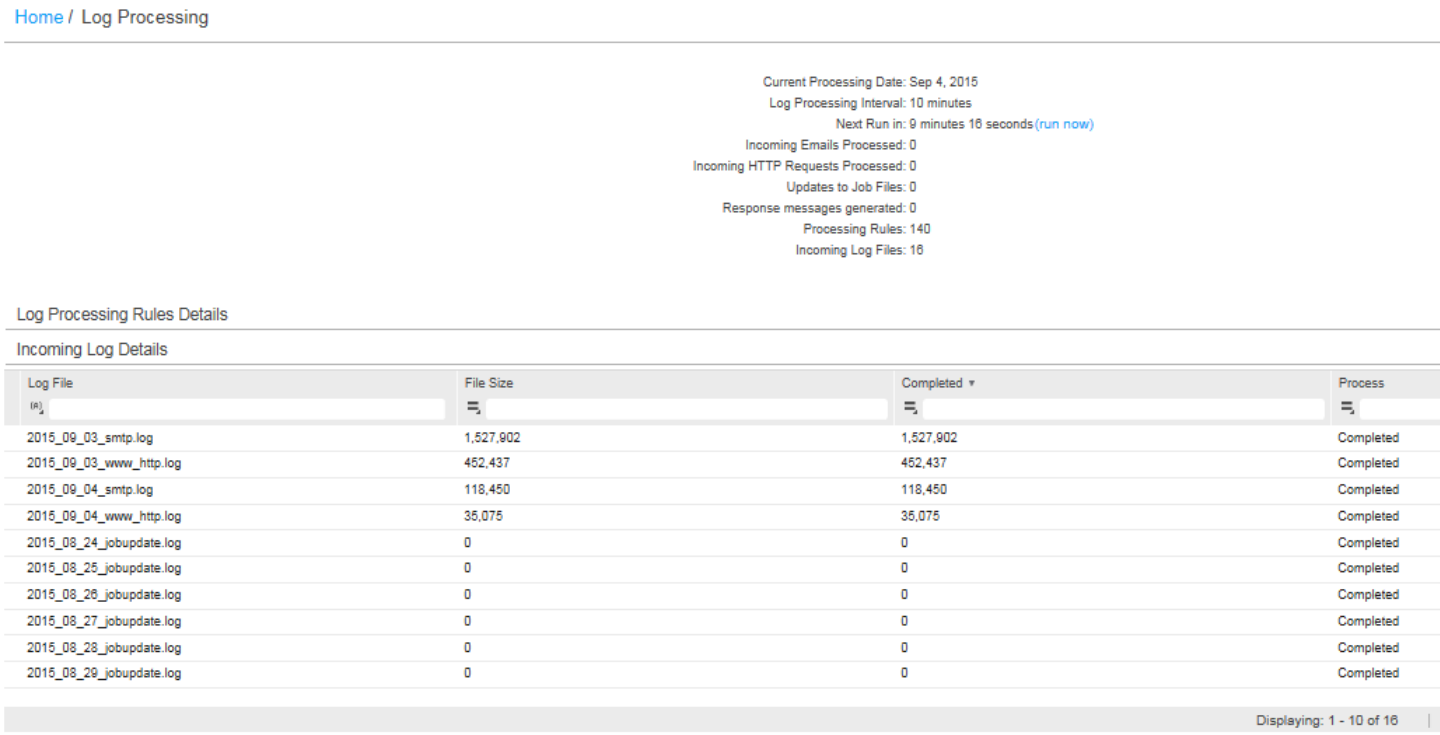


Figure 39: Incoming Log Details

Data Fields	
Log File	The name of the incoming log file.
File Size	The size of the incoming log file.
Bytes Processed	The number of bytes processed in this log file.
Process	Will either say "Completed" or will contain a link "run now" to force execution.
Links	
run now	Clicking on this link forces the selected log file to be processed.

Note: This page shows which files have been processed and which log files still need some work. Generally log files are processed automatically but in some cases (if the server was taken down for example), they may not be completely processed. For these files, you can either wait for the system to process them (this may take up to a day) or you can force them to be processed on demand.

Storage Management

Campaigns require a large amount of storage on the Infor Email Marketing Outgoing Service since every Email campaign can generate a large number of bounces, Email replies, and click-throughs, all of which must be captured for logging and proper handling. Since disk storage space is finite, Infor Email Marketing has an intelligent, built-in garbage collection process called Storage Management that automatically handles disk storage management.

Storage Management Control Page

The Storage Management Control page gives details on storage management and allows the admin for force execution on demand.

Figure 40: Storage Management Control Page

Data Fields	
Scheduled Run Time:	The time of day that storage management will execute.

Data Fields	
Next Run:	The number of hours, minutes, and seconds until the next storage management run.
Files Deleted:	The number of files deleted since startup.
Files Archived:	The number of files archived since startup.
Links	
run now	Clicking on this link forces storage management to execute on demand.

Note: Storage Management is the Infor Email Marketing garbage collector. It deletes job files and other log files that are no longer needed. This page allows you the view its status and to force execution on demand.

Garbage Collection

Data for each campaign is saved to its own job directory on the Infor Email Marketing large capacity storage unit. The Infor Email Marketing storage management process deletes campaign data from the large capacity storage unit when that data is no longer needed.

Campaign data is sent to the Infor Email Marketing Outgoing Service as soon as the campaign is released by Marketing's scheduler. Upon receipt, a job directory is created on the Infor Email Marketing data storage unit, and the content files and export list are placed there. Once Infor Email Marketing validates that the files are consistent and correct, it builds a job file that is also placed in this directory. This job file keeps track of the Email campaign detail to the level of individual recipient click-throughs and unsubscribe requests. In addition, the table that tells the Infor Email Marketing Incoming Services where to send click-throughs for this campaign is stored in this directory.

During the course of a campaign, the job file is frequently updated and the redirect URL table is constantly read. The job file continues to be updated until it is removed, some 90 days later by default.

On the other hand, the redirect URL table is still essential for allowing recipients to click-through their old Emails, and is kept for an extended period (perhaps 6 to 12 months or longer). Accordingly, there are two primary parameters that control the retention periods for job files:

- External Tracked URL (Days)
- Job Archive Delay (Days)

Storage Management uses two job-specific parameters: job.longevity and clickthru.longevity. If present (in the `<job_id>.JobInfo.xml` file), then these values should override those specified by Job Archive Delay and External Tracked URL Period, respectively. (They are passed to Infor Email Marketing from Marketing).

Synchronization Control Page

The Synchronization Control page gives details on synchronization between each of the incoming servers and allows the admin to force execution on demand.

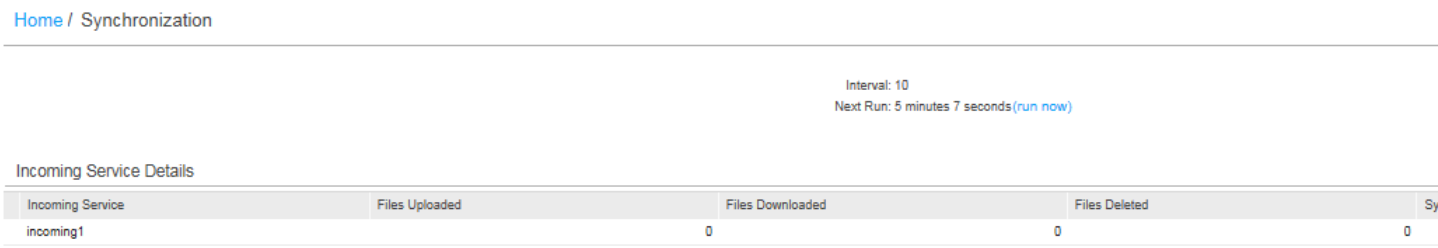


Figure 41: Synchronization Control Page

Data Fields	
Interval	The frequency in minutes of synchronization runs.
Next Run	The number of hours, minutes, and seconds until the next synchronization run.
Incoming Service	The name of the incoming service.
Files Uploaded	The number of files uploaded to the given incoming service.
Files Downloaded	The number of files downloaded from the given incoming service.
Files Deleted	The number of files deleted from the incoming service.
Links	
run now	Clicking on this link causes full synchronization to be executed on demand.
clear	Clicking on this link clears the error indicator for the given incoming server.

Note: This page shows the number of files being synchronized between the outgoing server and each incoming server. Files are automatically synchronized at startup, on a regular schedule, and when new campaigns are submitted. This page also allows the admin for run full synchronization on demand.

Controlling the Infor Email Marketing Outgoing Service

You can perform the following Infor Email Marketing Outgoing Service tasks:

- Stopping and Restarting the Infor Email Marketing Outgoing Service

The Infor Email Marketing Outgoing Service should be stopped and restarted to enable some configuration changes, such as changes to IP addresses, port numbers, usernames and passwords. However, the system will reload most changes automatically without the need to restart.

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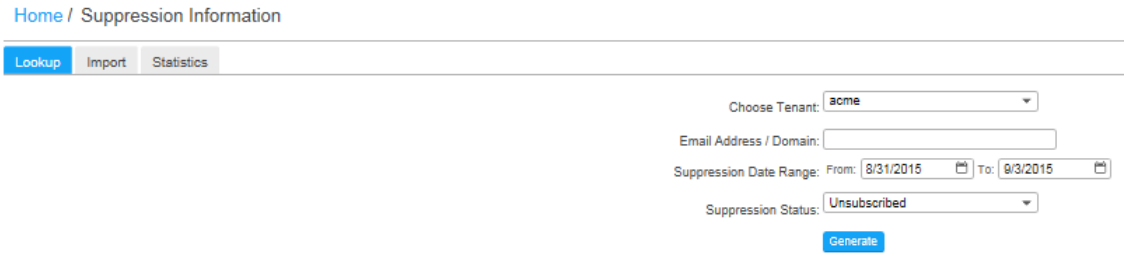
Suppression Database Control

The suppression database contains information about email addresses or domains that have been suppressed from future campaigns. Usually, a suppression is added automatically when an email recipient unsubscribes from a campaign, but it can also be done by the administrator using the control interface described below. The software also tracks if a previously suppressed user is re-subscribed.

SuppressInfo

The SuppressInfo control provides three different tabs. The SuppressInfo tab allows the administrator to query the database for email addresses or domains that have been suppressed. You may optionally filter the query email address, domain, date range and suppression status using these criteria:

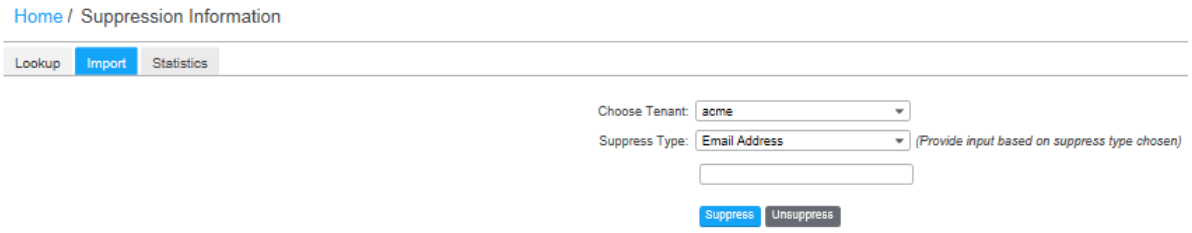
- **Choose Tenant**: Select the tenant to which the suppression should apply.
- **Email Address / Domain**: Enter the specific email address or domain that you are searching for. NOTE: if you enter a domain it will only search for a matching domain suppression (i.e. entire domain has been suppressed), and it will not list any suppressed email addresses at that domain.
- **Suppression Date**: Enter the starting date (Date From) and / or ending date (Date To). This will select only suppression records in the given date range.
- **Suppression Status**: Select either “**All**”, “**Active**”, or “**Inactive**”. “Active” means the address or domain is actively suppressed, whereas “Inactive” means that the address or domain was suppressed at one time but has been re-subscribed.
- **Generate**: Click the “Generate” button to create the report. The report can be viewed as HTML in the browser or as CSV.



SuppressImport

The SuppressImport tab lets the administrator add entries to the suppression database. You can add a single email address or domain or you can do a bulk import from a text file.

- **Choose Tenant**: Choose the tenant to which the suppressions apply.
- **Suppress Type**: Chose “Email Address”, “Domain”, or “File”. Based on the selected type enter the data in the text field below. When importing from a file enter the name of the file. The file should contain a list of email addresses or domains, one per line.
- **Suppress**: All imported email addresses will be added as “Active” suppressions. If an entry for the given email address or domain already exists then its status will be updated to “Active”.
- **Unsuppress**: All imported email addresses will be added as “Inactive” suppressions. If an entry for the given email address or domain already exists then its status will be updated to “Inactive”



SuppressStats

The SuppressStats tab gives summary statistics about the number of records in the suppression database.

- **Choose Tenant**: Select the tenant for which you need statistics.
- **Generate**: Queries the database and generates summary statistics.

Statistics are broken down by Email address and Domain. Counts will show the number of records that are unsubscribed (active suppression) as well as Resubscribed (inactive suppression).

Alerts for System Error Conditions

The Infor Email Marketing Outgoing Service will notify the administrator whenever the system status changes. Alerts are sent as emails and can also be triggered by external monitoring tools by probing the EM status port. The current system status can also be viewed on the home page of the Admin Manager.

Alert emails are sent to the list of email addresses defined by the “**Error Alert Address List**” field on the **Outgoing Settings > Email**screen in the configuration manager. The status probe port is defined on the **Outgoing Settings > Outgoing Mailing > General Tab** in the configuration manager.

Any change in system status will cause an alert to be triggered. Alert conditions include: “DNS RESOLVER ISSUES”, “DNS INITIALIZATION ISSUES”, “BLACKLISTED”, and “SYNCHRONIZATION ERRORS”.

Reports

5

Overview

The Administration Manager's 'Job Control and Details' drill down page shows detailed information about a job, such as the number of records, number of Emails sent, etc. and is probably the most commonly used page. As a campaign is submitted, these pages are used to monitor its progress. The statistics can be refreshed to see how many messages have been sent and various reports can be generated.

Note: The 'Job View' and 'Test Job' links are not report generators.

Clicking on any of the report links takes to you one of the following pages.

Domain Count Report

The Domain Count report shows summary statistics by domain. It allows you to see to top domains by count or by speed (fastest or slowest). It also shows counts by top level domain or country code.

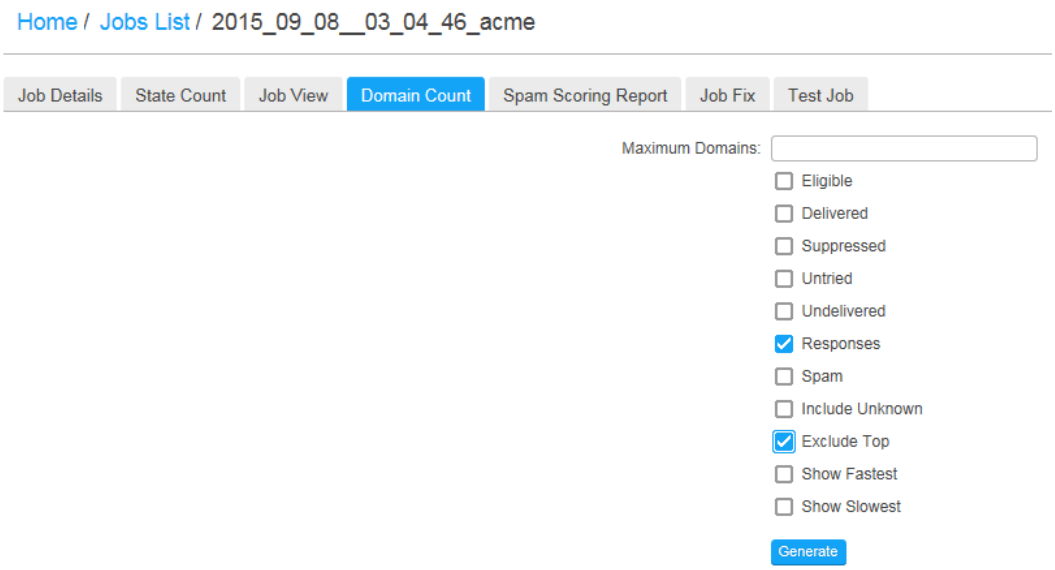


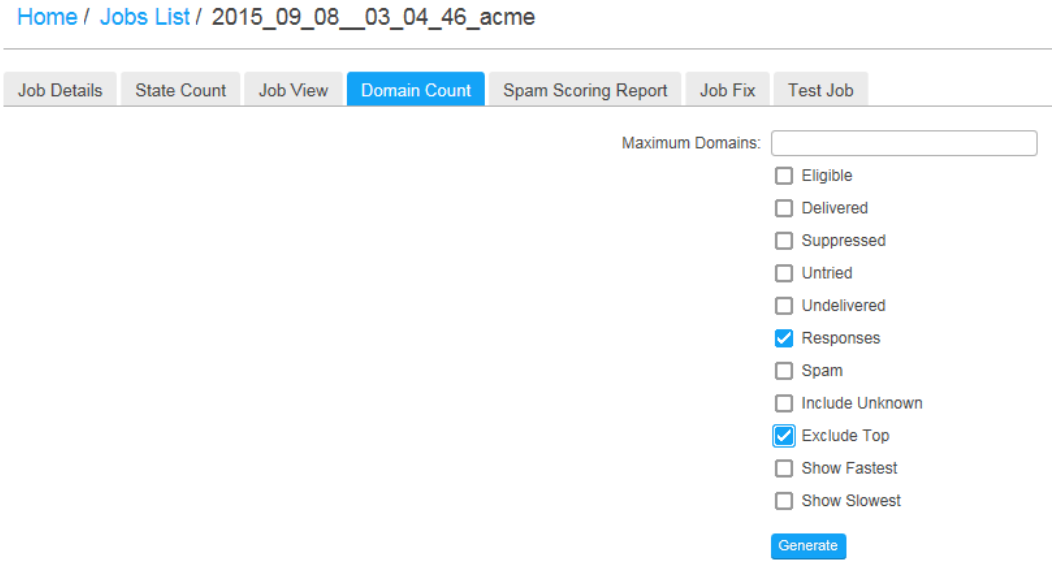
Figure 42: Domain Count Report Page

Data Fields	
Input Fields;	
Eligible	Count only records that are/were eligible for delivery.
Delivered	Count only records that have been delivered.
Suppressed	Count only records that were suppressed.
Untried	Count only records that are untried.
Undelivered	Count only records that are undelivered (i.e. undeliverable or bounced).
Responses	Count only records that have received responses.
Spam	Count only records that were flagged as spam.
Maximum Domains	Allows for a maximum number of domains to be specified in the report.
Include Unknown	Include unknown top level domains in the report.
Exclude Top	Indicates that top level domains should be excluded from the report.
Show Fastest	Show the fastest domains, along with the normal domain counts.
Show Slowest	Show the slowest domains, along with the normal domain counts.
Links	

Data Fields	
Generate	Click this link to generate the report.

Generating the Domain Count Report

Clicking on the ‘Generate’ button creates a corresponding Domain Count report link to a text file that contains the report results (see lower left portion of the screen below):



Domain Count Report Example

The Domain Count report should look similar to the following representative example:

```
Domain Details

                  Snapshot Time:Fri, 7 Mar 2008 13:02:40 PST

                  Total Records:4827045

                       Selected:4827045

             Selection Criteria:All

                  Total Domains:67

        Total Top Level Domains:32

               Selected Domains:67

               Reported Domains:67

Domain Count Details

Name             Selected Count   Total Count  Total Delivery Time(ms)
 Average Delivery Time(ms)

EXAMPLE.COM     3054631    3054631    4080481       1
```

```
INFOR.COM     1767667    1767667              156911

EXAMPLE.CO.UK     1104    1104      2489      2

TEST.COM     1078    1078     1987       2

EXAMPLE.FR     613    613     1120       2

INFOR.NET     495    495      754       2

EXAMPLE.DE     344    344      632       2

EXAMPLE.COM.BR     201    201      621      3

EXAMPLE.CO.JP     195    195         2987           15

EXAMPLE.IT     180    180      652      4

EXAMPLE.COM.PE     91    91        3872           43
```

```
     68    68         0       0

EXAMPLE.INFOR     55    55          0       0

EXAMPLE.COM.MX     50     50       653           13

INFOR.COM.BR     37    37       187       5

EXAMPLE.COM.INFOR     28    28         0       0

EX     14    14         0        0

EXAMPLE     13    13         0       0

EXAMPLE.C     13    13         0       0

E     10    10         0        0

EXAMPLE.ES      9     9      121           13
```

```
EX       8      8         0       0

HOTMA       8      8         0       0

EXAMPLE.CA       8      8       345           43

EXAMPLE.COM.TR       8      8        461           58

EXAMPLE.RU       8      8        766           96

EXAMP        7      7          0        0

EXAMPL       7      7          0       0

EXAMPLE.CO       7      7         3823          546

INFOR.COM.COM       7      7         0       0

INFOR.COM.MX       6      6           982          164
```

```
EXAMPLE.COM.TW       5     5          788         158

EXAMPLE.OM           5     5          457          91

INFOR.CO.KR          5     5          982         196

EXAMPLE.CL           4     4          257          64

INFOR.IT             4     4          233          58

EXAMPLE.COM.AR       3     3          897         299

EXAMPLE.COM.AU       3     3          764         255

EXAMPLE.COM.FR       3     3          788         263

EXAMPLE.COM.UK       3     3            0           0

EXAMPLE.             2     2          897         449
```

```
EXAMPLE.CN      2     2       566         283

EXAMPLE.CO.KR       2     2       976         488

EXAMPLE.COM.CN      2     2       564         282

EXAMPLE.COM.CO      2      2       987          494

EXAMPLE.EE       2      2       332         166

EXAMPLE.NL       2     2       827          414

EXAMPLE.TK      2     2       987         494

EXAMPLE.UK      2      2       453         227

INFOR.CA      2      2       120          60

INFOR.CO      2     2       978          489
```

```
INFOR.CO.IL        2      2        136          68

INFOR.COM.TR       2       2        198           99

EXAMPLE.CH        1       1         56           56

EXAMPLE.CO.TH        1      1          0            0

EXAMPLE.COM.HK       1      1         53          53

EXAMPLE.COM.JP       1       1        124         124

EXAMPLE.COM.SG       1      1         77          77

EXAMPLE.SK        1       1        43          43

EXAMPLE.TR        1       1        562         562

I       1       1          0            0
```

```
INFOR.CN        1      1        100         100

INFOR.COM.AU        1      1        344         344

INFOR.EE       1      1          0           0

INFOR.NL       1      1          0           0

Top Level Domain Details

Name       Selected Count       Description

.COM        4823383       US Commercial

.UK        1109      United Kingdom

.FR        616       France

.NET        495      Network

.DE        344      Germany
```

```
.BR       238     Brazil
```

```
.JP       196     Japan
```

```
.IT       184     Italy
```

```
.PE       91     Peru
```

```
.MX       56      Mexico
```

```
.CO       11     Colombia
```

```
.TR       11     Turkey
```

```
.CA        10     Canada
```

```
.ES       10     Spain
```

```
.RU       8     Russian Federation
```

```
.KR       7     Korea, Republic of

.CN       5      China

.OM       5     Oman

.TW       5     Taiwan

.AU       4     Australia

.CL       4     Chile

.AR       3     Argentina

.EE       3     Estonia

.NL       3     Netherlands

.IL       2     Israel
```

```
.TK        2      Tokelau
```

```
.CH        1      Switzerland
```

```
.HK        1       Hong Kong
```

```
.SE        1      Sweden
```

```
.SG        1      Singapore
```

```
.SK         1      Slovak Republic
```

```
.TH        1      Thailand
```

Domain Count Report Definitions

The Domain Count report creates its data based upon the input criteria you have selected prior to running the report.

Average Delivery Time (ms)

The average time spent, in milliseconds, delivering email for this domain.

Description

A description of the domain.

Domain Count Details

A section for the report that shows counts for domains.

Name

The domain or top level domain name.

Reported Domains

The total number of domains reported. The number of reported domains is limited by the ‘Maximum Domains’ input value.

Selected

The total number of records in the job file that match the selection criteria.

Selected Count

The total number of records for the given domain that match the selection criteria.

Selection Criteria

A textual description of the selection criteria.

Selected Domains

The total number of domains that match the selection criteria.

Snapshot Time

The time that the report was generated.

Top Level Domain Details

A section of the report that shows counts for top level domains (country codes or commercial designation).

Total Count

The total number of records for the given domain.

Total Delivery Time (ms)

The total time spent, in milliseconds, delivering email for this domain.

Total Domains

The total number of domains found in the job file.

Total Records

The total number of records in the job file.

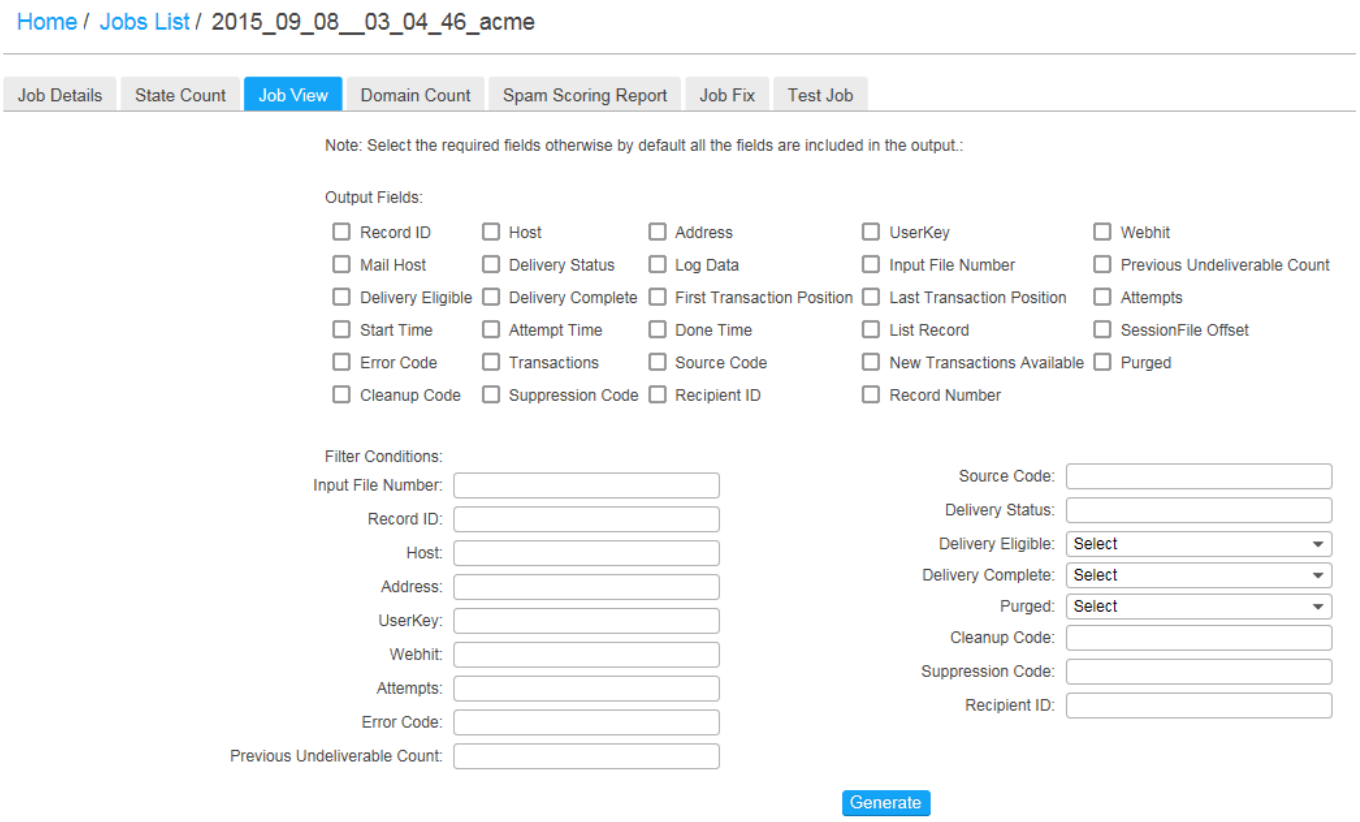
Total Top Level Domains

The total number of top level domains found in the job file.

Job View Report

The jobview report displays information about records in an Infor Email Marketing job file. A record in a job file equates to one line in a list file plus extra Infor Email Marketing-specific information. It contains all the data relevant for sending Email and storing responses for a single recipient.

Jobview can display information about all records, or a select group of records. The record selection criteria is specified by which check boxes you select. Note that, by default, all fields will be included in the output if you do not make a selection.



Data Fields	
Field Selection:	The following fields (checkboxes) allow you to specify which fields should be included in the output file.
Record ID	An ID assigned to each record. This may or may not be the same as the record number depending on the job sorting method used.

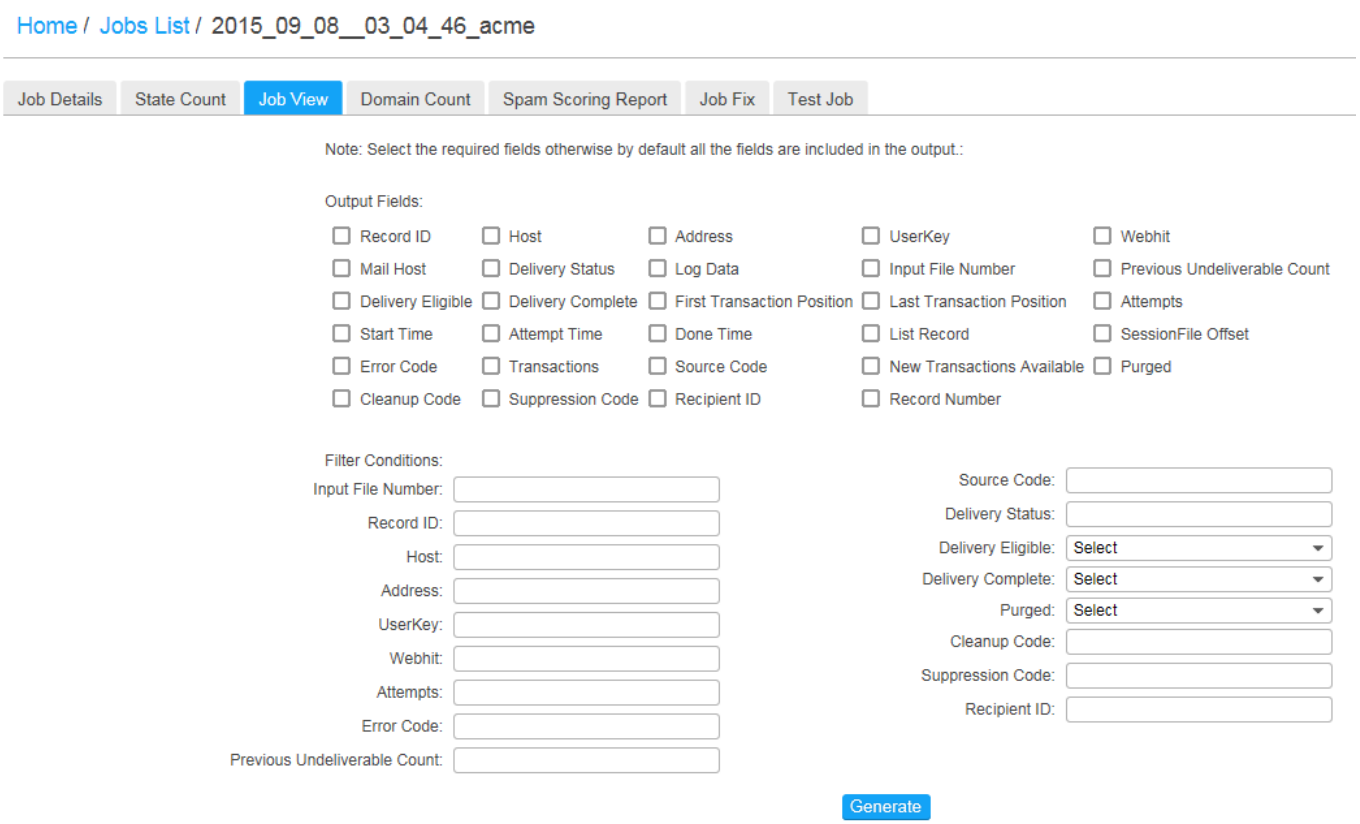
Data Fields	
Host	The domain part of the email address.
Address	The email address.
UserKey	The unique user key.
Webhit	A list of URLs that were clicked on.
Mailhost	The IP Address of the remote SMTP server where the message was delivered.
Delivery Status	The delivery status for the record.
Log Data	The SMTP log data associated with the selected record.
Input File Number	The list input file number.
Delivery Eligible	A boolean value that indicates if the record is eligible for delivery.
Delivery Complete	A boolean value that indicates if delivery has been completed (successful or not) for the given record.
First Transaction Position	The file position of the first transaction associated with this record.
Last Transaction Position	The file position of the last transaction associated with this record.
Attempts	The number of delivery attempts.
Start Time	The time that delivery started for the given record.
Attempt Time	The time of the last delivery attempt.
Done Time	The time that delivery completed for the given record.
List Record	A record that comes from the campaign export file. This record contains information used for substitution fields (such as demographic or transactional information).
Error Code	The error code (if any) for the last delivery attempt. The error code must be understood in the context of the delivery status (i.e. different delivery status values are associated with different error codes).
Transactions	A list of the transactions associated with this record.
Source Code	The source code (i.e. communication code) for this record.

Data Fields	
New Transactions Available	A boolean value that indicates if new transactions are available since the last feedback pull.
Purged	A boolean value that indicates if the record was purged or not. Purged records are a result of duplicate email addresses.
Cleanup Code	A value that indicates what type of email address cleanup was performed, if any.
Suppression Code	If the record is suppressed, this value will indicate the reason.
Recipient Id	The recipient id in the job file, sometimes called the record id.
Record Number	This is a number that identifies the actual order that a record is stored in a job file.
Filter Conditions:	The following values allow the administrator to filter the report to a specific set of records based on the values chosen.
Input File Number	Allows records to be selected by input file (list) number.
Record ID	An ID assigned to each record. This may or may not be the same as the record number depending on the job sorting method used.
Host	Allows records to be selected by the domain part of the email address.
Address	Allows records to be selected by the email address.
UserKey	Allows records to be selected by the unique user key.
Webhit	Allows records to be selected by a specific web hit (i.e. clicked on a specific URL).
Attempts	Allows records to be selected by the number of attempts.
Error Code	Allows records to be selected by the error code.
Previous Undeliverable Count	Allows records to be selected by the value of the previous undeliverable count.
Source Code	Allows records to be selected by source code (i.e. communication code).
Delivery Status	Allows records to be selected by source code (i.e. communication code).

Data Fields	
Delivery Eligible	Allows records to be selected by their eligibility for delivery.
Delivery Complete	Allows records to be selected if they have completed.
Purged	Allows records to be selected if they have been purged.
Cleanup Code	Allows records to be selected based on the value of their cleanup code.
Suppression Code	Allows records to be selected based on the value of their suppression code.
Recipient Id	Allows a specific record to be selected based on the recipient ID.
Links	
Generate	Click this link to generate the report.

Generating the Job View Report

Clicking on the '**Generate**' button creates a corresponding Job View report link to a text file that contains the report results (see lower left portion of the screen below):



Job View Report Example

The Job View report should look similar to the following representative example:

```
Job ID:2008_03_05__13_06_29_demo

Time:Thu, 6 Mar 2008 12:08:15 PST

Webhit Mapping Details

Index:1           URL:http://www.yahoo.com

Record Details

RecordID:1

File Number:0

Previous Undeliverable Count:-1

Host:cme.epiphany.com

Address:aoconnell@cme.epiphany.com
```

```
UserKey:000000000a
Mail Host:10.37.52.72
Attempts:1
Start Time:Wed, 5 Mar 2008 13:06:31 PST
Done Time:Wed, 5 Mar 2008 13:06:57 PST
Attempt Time:Wed, 5 Mar 2008 13:06:57 PST
SessionFile Offset:0
Error Code:0(No Error)
Source Code:treatment
Delivery Status:1
Delivery Eligible:true
Delivery Complete:true
New Transaction Available:true
Purged:false
Cleanup Code:0(Email Address is OK)
Suppression Code:0(None)
Recipient Id:0
First Transaction Position:56
Last Transaction Position:311
Transaction Details
Transaction Type:AttemptSuccessful
IP Address:0.0.0.0
Time:Wed, 5 Mar 2008 13:06:57 PST
HTML Detection Sent:false
HTML Sent:false
Codepage Conversion Error:false
```

```
Content Type:1

Attempt Number:1

Transaction Type:WebClick

IP Address:0.0.0.0

Time:Wed, 5 Mar 2008 13:09:35 PST

URL Index:1

BatchFile Number:3

BatchFile Offset:86

Transaction Type:HttpChangeOfAddress

IP Address:0.0.0.0

Time:Wed, 5 Mar 2008 13:09:37 PST

BatchFile Number:3

BatchFile Offset:86

Old Address:aoconnel@cme.epiphany.com

New Address:bogo3@epiphany.com

Transaction Type:ChangeOfFormat

IP Address:0.0.0.0

Time:Wed, 5 Mar 2008 13:09:38 PST

New Format Code:1

BatchFile Number:3

BatchFile Offset:86

Webhit Details

No Data Found

Blob Data Details

Blob Data:
dHJlYXRtZW50ICBuaWRjaWQgIDAwMDAwMDAwMGFUVGFvZHJpc2NvbGxAY21lLmVwaXBo
YW55LmNvbSAgICAgICAgICAgICAgICAgLTEgICAgICAgICAgQmlnNUNhbXAgICAgICAgb
W4g44CA77yM44CB44CC77yO77yb77ya77yf77yB77iw4oCm4oCl77mQ77mSwrfvuZTvu
ZXvuZbvuZfvvZzigJMgICBhYWENCg==
```

```
Log Details

OffSet:0

Size:1139

Log Data

Content-ID: 1/000000000a

MailHost: cme.epiphany.com(10.37.52.72)

Addressee: aoconnell@cme.epiphany.com

Status-Attempt-Session-Error: 1:1:3f:0

Date: Wed Mar 05 13:06:57 PST 2008

At 2008-03-05 13:06:57.005: 220 zebby.cme.epiphany.com ESMTP Sendmail
 8.12.8/8.12.8; Wed, 5 Mar 2008 13:39:07 -0800

At 2008-03-05 13:06:57.005: Sent: EHLO demo.infor.com

At 2008-03-05 13:06:57.005: 250-zebby.cme.epiphany.com Hello demo.infor.
com [10.37.100.35], pleased to meet you

250-ENHANCEDSTATUSCODES

250-PIPELINING

250-8BITMIME

250-SIZE 10000000

250-DSN

250-ETRN

250-AUTH LOGIN PLAIN

250-DELIVERBY

250 HELP

At 2008-03-05 13:06:57.036: Sent: MAIL FROM:<test@demo.infor.com>

RCPT TO:<aoconnell@cme.epiphany.com>

DATA

At 2008-03-05 13:06:57.052: 250 2.1.0 <test@demo.infor.com>... Sender
 ok
```

```
At 2008-03-05 13:06:57.052: 250 2.1.5 <aoconnell@cme.epiphany.com>...
 Recipient ok

At 2008-03-05 13:06:57.052: 354 Enter mail, end with "." on a line by
 itself

At 2008-03-05 13:06:57.052: Sent 1141 bytes of data.

At 2008-03-05 13:06:57.068: 250 2.0.0 m25Ld7jc026238 Message accepted
 for delivery
```

Job View Report Definitions

The job report creates its data based upon the input criteria you have selected prior to running the report. In many cases, there will be a close correspondence between these input field names/definitions, and the generated report field names/definitions.

Address

Corresponds to '**Address**' input field.

Attempts

Corresponds to '**Attempts**' input field.

Attempt Time

Corresponds to '**Attempt Time**' input field.

Cleanup Code

Corresponds to '**Cleanup Code**' input field.

Delivery Complete

Corresponds to '**Delivery Complete**' input field.

Delivery Eligible

Corresponds to '**Delivery Eligible**' input field.

Delivery Status

Corresponds to '**Delivery Status**' input field.

Done Time

Corresponds to '**Done Time**' input field.

Error Code

The most recent delivery error code, if any.

File Number

Corresponds to the 'I**nput File Number**'.

First Transaction Position

Corresponds to '**First Transaction Position**' input field.

Host

Corresponds to '**Host**' input field.

Last Transaction Position

Corresponds to '**Last Transaction Position**' input field.

Mail Host

Corresponds to '**MailHost**' input field.

New Transaction Available

Corresponds to '**New Transaction Available**' input field.

Purged

Corresponds to '**Purged**' input field.

Recipient Id

Corresponds to '**Recipient Id**' input field.

RecordID

Same as 'Record ID'.

SessionFile Offset

The file position where the log data for the given record begins.

Source Code

Corresponds to '**Source Code**' input field.

Start Time

Corresponds to '**Start Time**' input field.

Suppression Code

Corresponds to '**Suppression Code**' input field.

Transaction Details

The details will vary depended upon the transaction type.

Transaction Type

- AddressCleanup: The email address was found to be malformed and a best effort was made to repair the address.
- AttemptSuccessful: Successful delivery attempt. This only means that athough the email was delivered to the destination SMTP server, it does not indicate that the recipient actually received the email.
- AttemptUnsuccessful: Unsuccessful delivery attempt. This usually means that the email was rejected by the destination SMTP server.
- ChangeOfFormat: The email recipient requested a change of email format preference.
- CompleteChangeOfAddress: The email address was malformed and repaired and then successfully delivered. This is an automatic change of email address request to fix the bad address on the source system.
- CompleteUndeliverable: After all campaign passes are complete and after one or more delivery attempts, the email was still undeliverable.
- CompleteUntried: After all campaign passes are completed, the email remains untried. Usually a record is untried because a connection could not be made to the destination email server.
- HttpChangeOfAddress: The email recipient requested an email address change via the HTTP-based preference system.
- HttpOpen: The system detected that the email was opened usually because the embedded HTML detection image was downloaded.
- HttpResubscribe: The email recipient canceled an unsubscribe request via the HTTP-based preference system.
- HttpUnsubscribe: The email recipient made an unsubscribe request via the HTTP-based preference system.
- Purged: A duplicate email address was found in the input list file and this record was marked as a duplicate.
- SmtpReply: An SMTP reply was received.
- SmtpUndeliverable: The email deliver attempt bounced.
- SmtpUnsubscribe: The email recipient made an unsubscribe request via email.
- Suppressed: The email address was suppressed due to a previous unsubscribe request.
- WebClick: The email recipient clicked on a tracked URL.

UserKey

Corresponds to '**UserKey**' input field.

Possible Transaction Fields

Depending upon which transactions have occurred, a subset of transaction data will be output to the report. The transaction data types are defined below.

Attempt Number

The email delivery retry number.

Bad Address

The original malformed email address.

BatchFile Number

An internal ID used to identify an incoming HTTP or SMTP batch file.

BatchFile Offset

The position within the batch file where the event is located.

Blob

The record data from the input list file.

Blob Data Details

Redundant heading.

Cleanup Code

A value that identifies the type of email address cleanup that was performed.

Codepage Conversion Error

True if a codepage (or character set) conversion error occurred while generating the message.

Content Type

A value which indicates the type of content that was sent to the recipient.

Fixed Address

The repaired email address.

HTML Detection Sent

True if HTML detection was enabled for this message.

HTML Sent

True if an HTML message was sent.

IP Address

The IP Address of the email recipient email client or browser.

Log Details

One or more log entries associated with this record. The fields present in this part of the report are an excerptof the log text.

New Address

The new email address.

New Format Code

A value which indicates the new format preference.

No Data Found

In this case there were not webclicks so it didn’t have anything to display.

Old Address

The original email address.

Reply Type

A value that identifies the type of a reply. Possible values would include Auto-Reply or Forwarded.

Resubscribe Category

A value that identifies which category a resubscribe request applies to.

Suppression Code

A value that identifies the reason for a suppression (Possible values include: User or Domain Suppression).

Time

The time of this event.

Unsubscribe Category

A value that identifies which category a unsubscribe request applies to.

URL Index

An internal index used to identify a tracked URL.

Webhit Details

Details for each webhit (click of a tracked URL) associated with this record. These details include the URL, timestamp and index number.

Statecount Report

The statecount report shows summary statistics about the state of a job file. Job records are counted and summarized in several different ways.

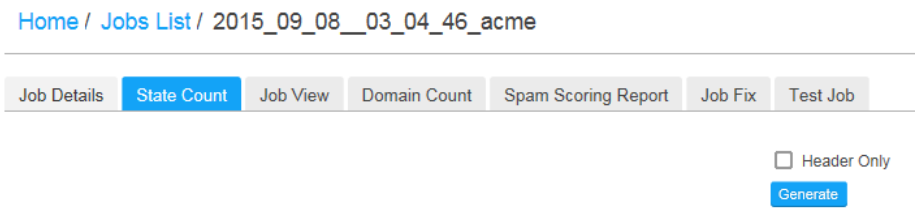


Figure 43: State Count Report

Data Fields	
Input Fields	
Header Only:	Indicates that only the job header information should be summarized. The report will not include detailed information about the job records.
Links	
Generate	Click this link to generate the statecount report

Generating the Statecount Report

Clicking on the '**Generate**' button creates a Statecount Report that should look similar to the following representative example:

```
State Count Details
Job File Name:C:\INFOR\mailerdata\demo\2008_03_05__13_06_29_demo\2008_
03_05__13_06_29_demo.job
Identification:1234
Job Number:1234
Record Count :4827045
Corrupted Record Count:0
Header Size:2142
Max Record Size:416
File Submitted At:Mon, 3 Mar 2008 16:16:31 PST
File Sorted At:Mon, 3 Mar 2008 16:16:31 PST
Test Mailing Approved At:Mon, 3 Mar 2008 16:18:21 PST
Delivery Started At:Mon, 3 Mar 2008 16:18:25 PDT
Delivery Completed At:Wed, 5 Mar 2008 17:21:11 PST
Delivery Start Time:Mon, 13 Aug 2007 08:48:00 PDT
Delivery Cutoff Time:Wed, 1 Jan 2020 00:00:00 PST
Total Data Sent:37532963175
Total Packets Sent:29104205
Messages Sent OK:4823183
Messages Sent Error:160271
DNS Lookups:961978
DNS Lookup Error:8256
Data File count:1
Suppression File Count:2
Job Priority:100
Max Retry Count:60
Retries Completed:60
Retry Interval:30
Webhit Mapping Details
Index:1
URL:http://email.example.com/m/emd/m45.phps
Index:2
URL:http://info.example.com/trans/?Id=730
Index:3
URL:http://info.example.com/trans/?Id=741
Index:4
URL:http://clk.example.com/A12/ardkks332/01/
State Details
Count:4806892           File Number:0
Source Code:1           Eligible:true
Complete:true           Success:true
Html Content Sent:false           DNS Lookup Error:0

Html Mail Read:false           Message Forwarded:false
Inprogress:false           Html Detection Sent:false
Untried:false           Unsuccess:false
```

```
Content Generation Error :0           Network Error:0
                   Protocol Error:0           Illegal Address:false
                    Address Userpart Fixed :false            Address
Hostpart Fixed:false                              Suppressed User:false
          Suppressed Domain:false
Purged:false           Dropped:false
 Unsubscribe:false           Change Of Address:false
Auto Reply:false           Change Of Format:false
Text Preference:false           Html Preference:false
Web Unsubscribe:false           Webhits:false
Webhit Details
Index:4           Count:637
Index:2           Count:221
Index:1           Count:964
Count:14782           File Number:0
Source Code:           Eligible:true
Complete:true           Success:true
Html Content Sent:false           DNS Lookup Error:0

Html Mail Read:false           Message Forwarded:false
Inprogress:false           Html Detection Sent:false
Untried:false           Unsuccess:false
Content Generation Error :0           Network Error:0
Protocol Error:0           Illegal Address:false
Address Userpart Fixed :false           Address Hostpart Fixed:false

Suppressed User:false           Suppressed Domain:false
Purged:false           Dropped:false
Unsubscribe:false           Change Of Address:false
Auto Reply:false           Change Of Format:false
Text Preference:false           Html Preference:false
Web Unsubscribe:false           Webhits:true
Webhit Details
Index:4           Count:2
Index:2           Count:4
Index:1           Count:8
Count:5352           File Number:0
Source Code:           Eligible:false
Complete:false           Success:false
Html Content Sent:false           DNS Lookup Error:0

Html Mail Read:false           Message Forwarded:false
Inprogress:false           Html Detection Sent:false
Untried:true           Unsuccess:falseContent Generation Error :0
       Network Error:0
Protocol Error:0           Illegal Address:false
Address Userpart Fixed :false           Address Hostpart Fixed:false

Suppressed User:true           Suppressed Domain:false
Purged:false           Dropped:false
Unsubscribe:false           Change Of Address:false
Auto Reply:false           Change Of Format:false
Text Preference:false           Html Preference:false
```

```
Web Unsubscribe:false           Webhits:false
Webhit Details
Index:2            Count:1
Source Code Details
Code            File Number:0
Total Records:4827045            Eligible:4824006
Complete:4823785            Delivered:4823183
Responses Forwarded:0            Total Html Mail Clients:0
Total Html Messages Sent:0            Total Web Responses:16271
Gross Names:4827045            Corrected:37
Dropped:0            Duplicates:23
Suppressions:2593            Gross Mailed:4824006
Undeliverable:1049            Not Mailed:0
Net Mailed:4822957            Unsubscribes:0
Change Of Address:0            Replied:0
Forwarded:0
Webhit Details
Index:4            Count:14284
Index:2            Count:466
Index:1            Count:1702
Index:3            Count:63
Rollup Details
Total Records:4827045           Eligible:4824006
Complete:4823785           Total Successfully Delivered:4823183
Total Responses Forwarded:0           Total Html Mail Clients:0
Total Html Messages Sent:0           Total Web Responses:16271
Gross Names:4827045           Corrected:37
Dropped:0           Duplicates:23
Suppressions:2593           Gross Mailed:4824006
Undeliverable:1049           Not Mailed:0
Net Mailed:4822957           Unsubscribes:0
Change Of Address:0           Replied:0
Forwarded:0
Input File Details
File Number:0          File Name:2008_03_05__13_06_29_demo.lst
Size:487531545          Record Size:101
Record Count:0          Address Offset:22
Address Size:76          Key Offset:4
Key Size:18          List Record Offset:0
List Record Size:99          Jobfile Html Mode:2
Source Key Offset:0          Source Key Size:7
Content Generation Class Specification:com.infor.job.ctg.admin.Content
Generator
Content Generation Parameters:2008_03_05__13_06_29_demo
Undeliverable Count Offset:0            Undeliverable Count Size:0

Html Detection Enabled:true            Html Capability Offset:0

Html Capability Size:0
Suppression File Details
File Name:demo
File Size:5233992            File Record Count:140593
Suppression Count:2593            Domain Suppression Count:0
```

```
File Name:global
File Size:4             File Record Count:0
Suppression Count:0            Domain Suppression Count:0
```

Statecount Report Definitions

Each of the data fields in the Statecount report is defined below. In some cases, if the field has a zero or null value, it will not be printed. The definitions are presented in alphabetical order.

Address Offset

The offset within the record at which the Email address can be found.

Address Size

The size of the Email address field within the record.

Auto Reply

The number of records for the given source code for which the recipient has sent back an auto-reply message.

Bad Address Count

The count of records from the specified list file that were found to be illegal or malformed and could not be corrected.

Cleaned Address Count

A count of all records in the given list file for which the Email address was found to be malformed or invalid and a repair attempt was made. This does not necessarily mean that the Email will be delivered successfully. This count comes from the job header information. It is the total as of the time when the job file was built.

Content Generator Class Specification

The path and file name of the dynamic link library that is used to generate message content for recipients listed in this data file.

Content Generation Parameters

A list of extra parameters that should be passed to the content generator when it is initialized. The parameters here only apply to recipients from this list file.

Corrected

A count of all records for the given source code for which the Email address was found to be malformed or invalid and a repair attempt was made and the delivery attempt was successful.

Corrupted Record Count

The total number of recipient records that were found to be corrupted while scanning the job file.

Delivery Completed At

The time that either the last pass completed or the campaign expired.

Delivery Cutoff Time

The time when the job will stop execution even if it has not completed all of the requested passes.

Delivery Held At

The most recent time that the job file was put on hold (pausing the Email delivery in a persistent way).

Delivery Released At

The most recent time that the job file was released from a previous hold (un-pausing the Email delivery).

Delivery Start Time

The time when the job is scheduled to start. This does not mean that the campaign will start exactly at this time, but the it is the earliest time that the campaign will start.

Delivery Started At

The time when the Infor Email Marketing Outgoing Services started the first pass on the job file.

DNS Lookup Errors

The number of DNS errors that occurred while trying to resolve the mail exchangers for the campaign.

DNS Lookups

The total number of DNS Lookups made while delivering Email for the campaign. Keep in mind that many DNS requests must be made in order to determine the mail exchanger for a given domain, so this count is much higher than the actual number of messages.

Domain Suppression Count

The number of host suppression records contained in the suppression file being described. This field is only be present for suppression files.

Purged

A count of all records for the given source code that were purged due to duplicate Email addresses.

File Name

The path and file name of the suppression file.

Filenumber

An index number of the input list file.

File Number

The filenumber (zero indexed) for which summary information is being provided.

File Record Count

The number of records contained in the suppression file being described.

File Record Size

The size of the records contained in the input file being described.

File Size

The size in bytes of the suppression file being described.

File Submitted At

The time that the campaign was submitted to the Infor Email Marketing Outgoing Services.

File Time

The time stamp of the input file being described at the time it was used to create the job.

Flag

A string representation of the flags value. Flag can be one of the following strings:

- Job Currently Running
- Job Currently Not Running
- Test Mailing Sent, Test Mailing
- Approved, Mailing Complete
- Mailing Canceled
- Mailing Aborted
- Mailing Delivery On Hold
- Duplicates Were Not Purged.

Gross Mailed

The count of recipient records that are a) eligible for transmission, or b) have an illegal address (malformed), but are not suppressed or dropped.

Gross Names

A count of all records for the given source code. This is equal to total.records.

Identification

An internal job identification code. In many cases it is used as an identifying portion of directory or file names.

Input File Details

A set of information about the input data file used to create the job.

Job File HTML Mode

A value that the Content Generator uses to select the type of Emails that should be sent (that is, HTML Detection, Multi-Part Alternative).

Job Filename

The full path and file name of the job file.

Job Number

A unique index number that identifies the job.

Job Priority

The priority that this job has as compared to other jobs that are running. In Infor Email Marketing all jobs have the same priority.

Key Offset

the offset within the record at which the recipient key can be found. This key uniquely identifies the recipient and is used to re-associate it with the record in the source database system.

Key Size

The size of the recipient key field within the record.

List Record Offset

The offset within the record at which the List Record data can be found. List Record data is extra data/fields that are used to generate the Email (that is, the data for field substitutions).

List Record Size

The size of the List Record data within the record.

Max Retry Count

The maximum number of retries that will be executed on the job file. In other words the Infor Email Marketing Outgoing Services will attempt to deliver an Email this many times. Passes are generally scheduled to run every 30 minutes, but, depending on the size of the job, network constraints, and Infor Email Marketing Outgoing Services resources, this time may vary. For Infor Email Marketing this is set to a value of 96.

Messages Sent Error

The total number of Email messages that the Infor Email Marketing Outgoing Services attempted to deliver, but which were not successful. See the list of SMTP error codes below for information on what type of errors cause this error.

Messages Sent OK

The total number of Email messages sent without error. This does not necessarily mean that the message was received by the end recipient, but only that the message was delivered to a remote SMTP server. This determination is made by receiving an SMTP code in the “2yz” range after the DATA segment of the message was transmitted. The message may bounce at a later time.

Name

The filename relative to the job directory.

Net Mailed

The actual number of messages believed to be delivered. This number is calculated by starting with gross.mailed and subtracting the number of records that were undeliverable or not.mailed. (net.mailed = gross.mailed - (undeliverable + not.mailed)).

Not Mailed

The count of records that were untried. This will be zero until the job has completed. This could be the result of DNS or other network errors.

Number

The index of the input file being described.

Purged Record Count

The count of records from the specified list file that were purged due to duplicate Email addresses in this list or other list files.

Record Count

The total number of recipient records contained in the job file.

Relay From Host Name

The outgoing Email host name that the Infor Email Marketing Outgoing Services binds to when delivering Email for this campaign. This is also the name that the Infor Email Marketing Outgoing Services uses to identify itself to remote SMTP servers.

Responses Forwarded

The number of records for the given source code for which the recipient has replied to the Email and the reply message was forwarded on for manual processing.

Retries Completed

The number of passes that have completed.

Retry Interval

The amount of time in minutes between passes.

Source Code

A value that groups records together for reporting purposes. Source code is identical to the communication code as defined in the campaign definition. Statecount generates summary information for each source code, each summary field is defined below. Rollup is similar to Source Code except that it includes summary information for all sourcecodes combined.

Source Code Offset

The offset within the record at which the source code can be found.

Source Code Size

The size of the source code within the record.

State Details

Details about all records which have a particular state file number, source code, and value. State has several attributes defined below and includes a breakdown of the actual state value. Some of these values are boolean (true or false) and some contain additional information like an error code. Possible state values include:

Eligible	Network Error
Complete	Protocol Error
Inprogress	Illegal Address

HTML Detection Sent	Address Userpart Fixed
HTML Content Sent	Address Hostpart Fixed
Untried, Success	Other Address Fixup
Unsuccess	Surpressed User
DNS Lookup Error	Surpressed Domain
Content Generation Error	Dropped

The state also includes the following response codes:

No Response	Change Of Address
Undeliverable	Auto Reply
Message Forwarded	HTML Mail Read
Reply Sent	Text Preference
Unsubscribe	Web Unsubscribe

Suppress File Count

The number of suppression files used to create the job.

Suppressions

A count of all records for the given source code which were suppressed due to a host or user record in the suppression file.

Suppressed Address Count

The number of records from the specified list file that were suppressed due to a host or user record in the suppression file.

Suppression Count

The number of user suppression records contained in the suppression file being described. This field will be present only for suppression files.

Suppression File Details

A set of information about the suppression file used to create the job.

Total as Yet Untried

A count of the number of records for the given source code that the Infor Email Marketing Outgoing Services has not attempted delivery. The Infor Email Marketing Outgoing Services attempts delivery for the first message in the list for each given domain. If there are connectivity problems to the domain, the remaining messages for that domain are reported as untried.

Total Auto Reply

The number of records for the given source code for which an auto-reply message was sent by the recipient.

Total Change of Address

The number of records for the given source code for which the recipient has requested a change of Email address. Feedback of this event is sent back to the application server.

Total Corrected

A count of all records for the given source code that are marked as cleaned up. Infor Email Marketing makes an attempt to fix common errors that occur in Email addresses (such as americaonline.com > aol.com) but this does not mean that in all cases the fixed Email address is correct. If the Email transmission is found to be successful, feedback information is sent to the Outbound Infor Campaign Management Server noting that a correction was made (see below). See the discussion of Address Fixup in this Guide for further information.

Total Cleaned Up Delivered

A count of all records in the given source code that were cleaned up and delivered successfully.

Total Complete

A count of all records in the given source code that are marked as complete. This means that an Email was sent, but does not necessarily mean that it was received by the addressee.

Total Data Received

The total number of bytes received by the Infor Email Marketing Incoming Services for this job. This includes only SMTP protocol messages and does not include DNS requests.

Total Data Sent

The total number of bytes transmitted by the Infor Email Marketing Outgoing Services for this job. This includes only SMTP protocol messages and does not include DNS requests.

Total Eligible

A count of all records in the given source that are marked as eligible for transmission.

Total DNS Lookup Error

A count of all the records in the given source code that had DNS lookup errors for which the domain either did not exist or did not have an associated MX (mail exchanger) resource record. This error could also be caused by general network problems.

Total DNS MX Lookup Error

A count of the number of records in the given source code that had DNS lookup errors for which the MX resource records could not be resolved. This could also be caused by general network problems.

Total Hosts Suppressed

A count of all the records for the given source code that were suppressed due to a host record in a suppression file.

Total HTML Detection Sent

The number of records in the given source code for which an HTML detection message was sent.

Total HTML Format Change

The number of records in the given source code for which the recipient has changed their format preference to HTML. This change of preference does not affect existing campaigns that may be actively mailing. This information is sent back to the application server and applied to new campaigns.

Total HTML Mail Clients

The number of records in the given source code that the Infor Email Marketing Outgoing Services has detected as using an HTML-capable Email client. The Infor Email Marketing Outgoing Services may or may not send these feedback events to the application server depending on whether the system administrator has chosen to maintain this information.

Total HTML Messages Sent

The number of records in the given source code for which the recipient was sent an HTML-formatted message.

Total Illegal Addresses

A count of all records in the given source code that were found to be malformed or illegal and could not be cleaned.

Total In Progress

A count of all records in the given source code that are marked as in progress. This means that the Infor Email Marketing Outgoing Services is currently processing the record.

Total Network Error

A count of all the records in the given source code that produced TCP/IP network errors. If the Infor Email Marketing Outgoing Services is not able to connect to the recipient’s SMTP server, this counter is incremented.

Total Content Generation Error

A count of all the records in the give source code that had content-generation errors due to missing template files or other missing message components.

Total Packets Received

The total number of TCP/IP packets received by the Infor Email Marketing Incoming Services during the course of this job. This only includes SMTP-protocol packets and does not include DNS packets.

Total Packets Sent

The total number of TCP/IP packets transmitted by the Infor Email Marketing Outgoing Services during the course of this job. This only includes SMTP-protocol packets and does not include DNS packets.

Total Protocol Error

A count of all the records in the given source code that had SMTP-Protocol errors that occurred while attempting to deliver the Email message. Some of these errors are temporary and others are permanent. See "SMTP Errors" on page 212 below for more information.

Total Purged

A count of all the records in the given source code that were purged due to duplicate Email addresses.

Total Records

A count of all records in the given source code.

Total Response Forwarded

The number of records in the given source code for which an Email response was received and forwarded on for manual processing. These are generally messages that cannot be automatically categorized.

Total Successfully Delivered

A count of the number of records in the given source code that were successfully delivered to a remote SMTP server. This does not necessarily mean that the message was received by the addressee.

Total TEXT Format Change

The number of records in the given source code for which the recipient has changed their format preference to TEXT. This change of preference does not affect existing campaigns that may be actively mailing. This information is simply sent back to the Application Server and applied to new campaigns.

Total Undeliverable Responses

The number of records in the given source code for which an undeliverable Email response was received.

Total Unsubscribe

The number of records in the given source code for which the recipient has requested to unsubscribe and no longer receive Email from the Infor Email Marketing Outgoing Services. The Infor Email Marketing Outgoing Services automatically maintains a database of these recipients. If the recipient's Email address is included in future campaigns, it will show up as suppressed and the recipient is not sent any Email. These events are sent back to the application server. For more information about this, see the "Setting Up Feedback Acknowledgement" section of the *Infor Email Marketing Installation Guide* .

Total Unsuccessfully Delivered

A count of the number of records in the given source code for which a delivery attempt was made, but there was a permanent error (such as "user does not exist"). See "SMTP Errors" on page 212 for additional information on SMTP errors.

Total Users Suppressed

A count of all the records in the given source code that were suppressed because the user's record appears in a suppression file.

Total Web Response

The number of unique users who clicked at least one tracked URL associated with the current campaign. Multiple clicks on the same or different URLs count as a single count for the purposes of this statistic.

Assume that an Email contains three URLs and the recipient clicks on the first URL twice, the second URL once and doesn't click on the third URL. Total Web URL counts the number of unique recipients who clicked on a specific URL (in this case, total.Web.URL for URL 1 would be incremented by one, and total.Web.URL for URL 2 would also be incremented by one). Since we only track unique clicks, each count would only reflect that the customer had clicked, not how many times they had clicked. Total Web response tracks that the customer clicked on ANY URL (rather than a specific URL), so Total Web response would be incremented by one.

Total Web Unsubscribe

The number of records in the given source code for which the recipient has unsubscribed via the HTML survey page.

Total Web URL

The number of unique users who clicked the specific tracked URL in the current campaign. Multiple clicks on the same URL count as a single count for the purposes of this statistic. See "Total Web Response" on page 211 for related information.

Undeliverable

A sum of the various types of errors that occurred, including:

- Illegal address
- Network error
- Protocol error
- Lookup errors (1 and 2)
- Unsuccessful (permanent protocol errors)
- Undeliverable (messages that bounced)

Unsubscribes

The number or records for the given source code for which the recipient unsubscribed using Email.

SMTP Errors

The undeliverable count (UC) is used to determine whether an Email address can accept an Email sent to it. By default, when the UC reaches 99, the Email address is considered to be unreachable. You can set the UC limit at which you want to consider the address unreachable. The following rules are used to increment the undeliverable count:

- It is immediately set to 99 if the Email address is poorly formed (invalid characters, missing or more than one @, and so forth). UC is not set to 99 if the mailbox does not exist in the mail domain (for example, doesnotexist@mymail.com), or if the mail domain does not exist.
- If the SMTP status code is in the range 200-299, the Email is marked as successfully sent. No further retries are attempted and the UC is set to 0.
- If the SMTP status code is in the range 400-500, the recipient record is marked with a PROTOCOL error and the Infor Email Marketing Outgoing Services will retry it on the next pass. Infor Email Marketing per default runs 96 passes at 30 minute intervals per mail job. So Infor Email Marketing tries to send an Email for up to 96 times until it is delivered, or until a permanent error occurs (SMTP error in the 501-599 range).
- All other SMTP status codes are considered permanent errors (for this job) and lead to the UC being incremented by 1 after the job has completed.

If an Email cannot be delivered within a job, its UC is increased by one, it is not increased by one for each unsuccessful pass. The indiv.log feedback includes an entry for a given Email address only if the job does not retry it in further passes.

An invalid Email address due to an unknown Email domain might be temporary. For example, the authoritative DNS server for an Email domain could be down leading to an invalid domain response. An invalid Email address due to an invalid mailbox name (SMTP error 550, Unknown local part) could be treated as unfixable resulting in an undeliverable count of 99. But in this case Infor Email Marketing also just increases the undeliverable count by 1.

Processing the job.log file for undeliverable codes is one way to determine which addresses are undeliverable. Some ISPs return permanent error codes for transient conditions like mailbox full. This

is one reason why UC is not set to 99 immediately but instead incremented by 1. Error bias is on the safe side.

You can configure a marketing rule set through the Web-based front end of Marketing to allow for multiple mailings to set a trigger that applies either to the undeliverable count or the number of days that have passed while the Email remained undeliverable. At that point the recipient can be deleted or other attention can be paid to the recipient.

The specific SMTP error code for a bounce is not reported to Marketing , only the fact that the bounce occurred.

Some Example Errors:

```
421 <domain> Service not available,

    closing transmission channel

   [This may be a reply to any command if the service knows it must
shut down]

450 Requested mail action not taken: mailbox unavailable

    [E.g., mailbox busy]

451 Requested action aborted: local error in processing

452 Requested action not taken: insufficient system storage

500 Syntax error, command unrecognized

    [This may include errors such as command line too long]

501 Syntax error in parameters or arguments

502 Command not implemented

503 Bad sequence of commands

504 Command parameter not implemented

550 Requested action not taken: mailbox unavailable

    [E.g., mailbox not found, no access]

551 User not local; please try <forward-path>

552 Requested mail action aborted: exceeded storage allocation

553 Requested action not taken: mailbox name not allowed

    [E.g., mailbox syntax incorrect]
```

```
554 Transaction failed
```

The following is from the SMTP spec rfc821.txt.

```
4yz   Transient Negative Completion reply
```

```
The command was not accepted and the requested action did not occur.
However, the error condition is temporary and the action may be
requested again. The sender should return to the beginning of the
command sequence (if any). It is difficult to assign a meaning to
"transient" when two different sites (receiver- and sender- SMTPs) must
 agree on the interpretation.  Each reply in this category might have
 a different time value, but the sender-SMTP is encouraged to try again.
  A rule of thumb to determine if a reply fits into the 4yz or the 5yz
 category (see below) is that replies are 4yz if they can be repeated
 without any change in command form or in properties of the sender or
 receiver.  (E.g., the command is repeated identically and the receiver
 does not put up a new implementation.)
```

```
5yz   Permanent Negative Completion reply
```

```
The command was not accepted and the requested action did not occur.
 The sender-SMTP is discouraged from repeating the exact request (in
the same sequence).  Even some "permanent" error conditions can be
corrected, so the human user may want to direct the sender-SMTP to
reinitiate the command sequence by direct action at some point in the
 future (e.g., after the spelling has been changed, or the user has
altered the account status).
```

System Maintenance

6

Server Monitoring Software

We recommend that you use other industry-standard port monitoring software such as WhatsUp Gold ™ by Ipswitch or WebTrends Enterprise Suite by WebTrends Corporation. Such alarm software can alert you to problems by initiating a page, Email, or telephone alert when the server hardware or operating system is not functioning properly, or when an operational threshold has been reached.

The probe points that merit monitoring are provided here: The port numbers shown below are their default values, but these are all configurable and may differ from these defaults depending on your Infor Email Marketing configuration.

TCP Port Number (default)	Software Unit Monitored
25	Incoming Services - Receiver: Incoming SMTP (primarily bounces and reply Email)
80	Infor Email Marketing Incoming Services: HTTP redirects (click-throughs)
113	Incoming Services - IDENT server (identifies the Infor Email Marketing Outgoing Services as a mailing engine)
443	HTTPS for secure connection between the Infor Campaign Management Server and the Infor Email Marketing Incoming Services. A connection indicates that the transport mechanism between Infor Campaign Management Server and the Infor Email Marketing Incoming Services has not failed completely.
8085	Infor Email Marketing Incoming Services status
8080	Infor Email Marketing Outgoing Services status This port includes all information relayed through the Admin Console. Use this port for generating alarms.

Monitoring Infor Email Marketing Outgoing Services

Infor Email Marketing Outgoing Services constantly monitors the status of its systems. When the Infor Email Marketing Outgoing Services detects a problem, it displays this condition on the Infor Email Marketing Outgoing Services Admin Manager and makes the information available on the status probe point which is a configurable monitor port (configurable in the Configuration Manager).

This status probe port should be watched by port monitoring software. See the section"Server Monitoring Software" on page 215 for additional information. You can examine this port through a Web browser by opening:

```
http://<
InternalConnectionHostName
>:<Monitor Port>
```

Where InternalConnectionHostName is the name or IP address of the machine hosting the Infor Email Marketing Outgoing Services and Monitor Port is the port you have configured as the monitoring port in the Configuration Manager. During normal operation of the system the string “0 GOOD” is displayed. If a problem is detected, a string beginning with 1 and followed by a diagnostic message is displayed.

Note: Your monitoring software should issue an alarm if it detects a message other than “0 GOOD,” or if it cannot connect to the Monitor Port.

The table below provides a summary of diagnostic messages that you might encounter:

Diagnostic Message	Nature of the Problem	Action to Take
DISK FULL	Data drive (mass storage) is full.	Back up and clean up the drive.
RESOLVER ISSUES	A large number of DNS failures has been encountered.	The DNS server may be malfunctioning or overloaded.
DNS INITIALIZATION CHECK ISSUES	Infor Email Marketing Outgoing Services did a DNS self-check (on the Infor Email Marketing Outgoing Services’s own domain name) and the check failed, causing the Infor Email Marketing Outgoing Services to halt. The LAN interface of the local system may have an inconsistent IP address with respect to the DNS information configured and available for this machine.	Check that the DNS server is up and running and that you have properly configured your IP address information.
STOPPING	This message doesn’t truly reflect an error. The normal Infor Email Marketing Outgoing Services shut-down sequence may take several minutes, and this mes-	None. Wait until the Infor Email Marketing Outgoing Services shut-down is complete.

Diagnostic Message	Nature of the Problem	Action to Take
	sage is displayed while it takes place.	

Note: The Infor Email Marketing Outgoing Services reinitializes itself in response to a DNS server failure. No Email is lost or repeated due to this reset.

Backup Strategy

Infor Email Marketing Outgoing Services data should be routinely backed up. The server typically contains at least two distinct data stores:

- The local hard drive on which the Infor Email Marketing application is installed
- The large capacity, high-performance storage unit where campaign-related information is stored

A full backup rather than an incremental backup should be performed on all Infor Email Marketing data storage units at regular intervals. During the course of daily operation, Infor Email Marketing accesses nearly every large file on its large capacity storage unit. This occurs because the Infor Email Marketing Outgoing Services is constantly updating job files with the latest record of Email recipient click-throughs and change requests.

While you can schedule a backup to be performed while the Infor Email Marketing Outgoing Services is not processing a job, it is virtually impossible to find a period during which the Infor Email Marketing Incoming Services is inactive. At any time of day or night, Email recipients can open their Email and perform click-throughs or send reply Email. Consequently the HTTP log file (capturing click-throughs) and the incoming batch file (capturing reply Email) are likely to be updated during the backup. Since fresh data is appended to the end of these logs, any snapshot is still consistent and useful should a later recovery be necessary.

Preference Pages and Response Handling 7

Your Infor Email Marketing application includes a Web page Preference system that automatically responds to Emailed and click-through recipient requests. These requests can include:

- Unsubscription
- Resubscription
- Email address changes
- Message-content format preferences
- Forward to Friend

Infor Email Marketing automatically processes all visits to the Web page Preference system and attempts to provide automated processing for all reply Email. The unsubscribe message tells the recipient how to unsubscribe from your Email campaigns. It is best to solicit Web responses from your recipients as this minimizes the bandwidth used by incoming Email. If you are using a third-party profile management system, you can direct your recipients to use it in this message by modifying the unsubscribe message.

The information that recipients provide is transmitted to your EpiMart for use in future Email campaigns.

Email Preference Pages

The Infor Email Marketing system provides the Email recipient with an easy-to-navigate Web page preference system. Recipients can access the preference system by clicking an embedded link at the bottom of every Email sent from Infor Email Marketing.

Preference pages are built into Infor Email Marketing and are set up automatically when Infor Email Marketing is installed. There is no need to make any changes to your organization's existing Web site. However, you may wish to customize the default web pages included with Infor Email Marketing.

Preference Page Configuration

The Infor Email Marketing preference pages are designed to display a corporate logo in the form of a GIF file. A transparent GIF file of the correct size has been provided in the installation, but you can

replace it with your own GIF. See “Copying the Organization Logo File” in the Infor Email Marketing Installation Guide for details.

You can also customize your organization’s preference Web pages by modifying the preference page templates.

Preference Flow of Control

When a recipient clicks on an preference Web page link, their browser displays a custom Web page, dynamically generated by the Infor Email Marketing Incoming Services. This Web page is based on an encoded string stored in the recipient’s Email. The Infor Email Marketing Incoming Services decodes this string, enabling it to identify the specific campaign and recipient. Even if a recipient forwards their Email to another Email account and responds from that account (a common occurrence), the Infor Email Marketing Incoming Services can identify the originating Email address.

An overview of the preference Web page system for users is shown in "Figure 44: Preference Page Flow" on page 220. As Email recipients navigate through this system, Infor Email Marketing records their choices and updates the job file. This information is later fed back to the Infor Campaign Management Server machine, where the information is extracted into the data mart.

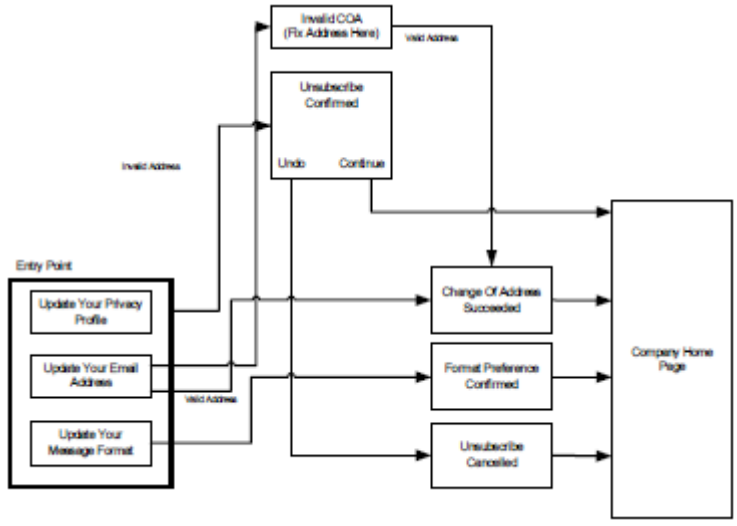


Figure 44: Preference Page Flow

These page flows perform the following ways:

- After a recipient has confirmed an action, they are taken to the company’s home page.
- Recipients have the opportunity to change their message format (between HTML and Text).
- There are two different versions of format change text: a recommended one based on HTML detection, and a less frequently used one for Infor Email Marketing running without HTML detection.

How HTML Detection Impacts Format Choice

HTML Detection allows Infor Email Marketing to determine whether a recipient's Email reader can correctly display HTML-formatted Email. If a recipient's HTML capability is unknown and he has not requested text-only formatting, the Infor Email Marketing Outgoing Services sends a special multi-part alternative (MPA) message. This message is built from the text template with only light HTML formatting by the Infor Email Marketing's Content Generator. The HTML portion of the MPA message contains a reference to a one-pixel invisible GIF image served by the Infor Email Marketing Outgoing Services. If the Email recipient's Email browser can render the HTML, the Infor Email Marketing Outgoing Services logs the request for this image. The recipient is then marked as HTML-capable.

The MPA message is created in one of two ways:

- If the campaign includes both a text and an HTML component, and the campaign creator specifies that MPA can be used, the HTML portion will include the HTML detection image reference.
- If the campaign does not include an HTML component, or if the campaign creator did not specify that MPA can be used, the Infor Email Marketing Outgoing Services creates a specially formatted MPA message for the appropriate recipients. The text portion of this message is the original text content of the message, while the HTML portion includes the text content with minimal HTML tags. This HTML portion also contains the HTML detection image reference.

With HTML detection operating, the preference system can offer to make the best Email format choice for the recipient:

```
Select your preferred format and click the "Update Format" button.
```

```
( ) HTML
```

```
( ) Plain Text
```

By selecting the first check box, the Email recipients indicate that they wish to receive only HTML messages. Selecting the second check box is interpreted as a preference for Plain Text. HTML, however, is only delivered if Infor Email Marketing detects HTML capability.

See "Email Format Selection" on page 36 for more information.

Preference Web Page Chart

The table below lists the tags inserted into the EML URLGenerate() command (see "URLGenerate" on page 329) in order to serve the specified preference page or an image associated with such a Web page. Refer to this table if you wish to modify your preference Web pages. For additional information on Email Markup Language (EML), see "Email Markup Language" on page 293

Note: The Infor Email Marketing Incoming Services is hard-coded for a file extension of .html. Infor Email Marketing Incoming Services also supports .HTTP, .gif, and .jpg files.

The text preference is determined by EMAIL_FORMAT_PREFERENCE column on the Infor Campaign Management Server. This column is expected to be one of three things: T, H, or U (text, HTML, or unknown). EMAIL_HTML_CAPABILITY determines the recipient's capability and is expected to be H or U (HTML-capable or unknown).

The values listed above (T, H, U) are hard coded, and if these are not the values sent across to the Infor Email Marketing Outgoing Services, your campaign will malfunction in that the preference and capabilities columns will not match what is expected, and the wrong content will be generated. See the diagram describing content generation in "Email Format Selection" on page 36.

Tag Used in URLGenerate() EML Command	Web Page Invoked / Image Served	Notes	Links To:
Preference Home Page(s)			
Preference.html	Preference.html	The home page for unsubscribe management for recipients. This page allows users to unsubscribe, change address, or specify a preferred Email format.	For unsubscribe: Unsubscribe.html For address change (with valid Email address): ChangeOfAddress.html For address change (with invalid Email address): ChangeOfAddressInvalid.html For format change: ChangeOfFormat.html
Required GIFs			
logo.gif	logo.gif	Anchor image for the preference home page. This image is located in the tenant root directory.	Not applicable
Supporting Web Pages			
Your organization's home page		URL taken from Infor Email Marketing configuration data	

Tag Used in URLGenerate() EML Command	Web Page Invoked / Image Served	Notes	Links To:
Unsubscribe.html	Unsubscribe.html	Unsubscribe confirmation	
UnsubscribeCancel.html	UnsubscribeCancel.html	Cancel Unsubscribe confirmation	
ChangeOfAddress.html	ChangeOfAddress.html	Change of Address confirmation	
ChangeOfFormat.html	ChangeOfFormat.html	Message format preference (HTML or Text) confirmation	
ChangeOfAddressInvalid.html	ChangeOfAddressInvalid.html	Change of Address form displayed in response to entry of an address with invalid syntax	

Forward to Friend Pages

The "forward to friend" landing page allows the user to enter the email addresses of their friend(s) and an optional short message to include with the forwarded email. The page flow for this feature is described in the following diagram:

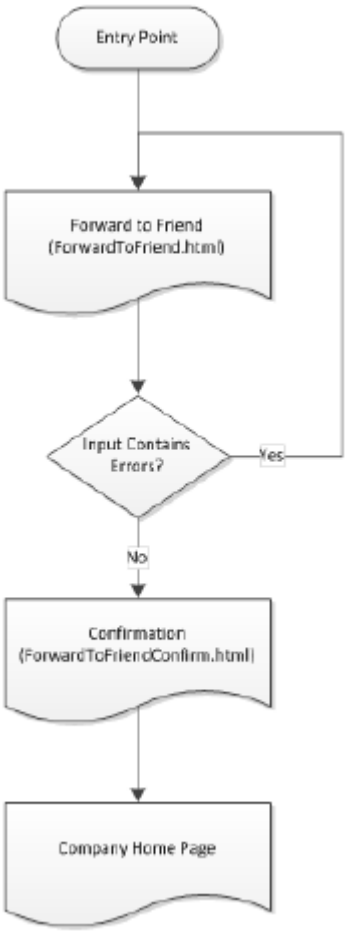


Figure 45: Forward to a Friend Page Flow

The default page is configured with 5 input fields for friend email addresses and a text area that accepts a short introduction message. It also includes optional support for a captcha to help prevent automated attempts to forward messages using the EM service. The Forward to Friend and Confirmation pages can be customized as necessary.

Infor Email Marketing integrates with the Google ReCaptcha™ service to provide additional security for the forward to friend features. This assists EM in preventing automated attempts to forward messages. The captcha is customizable and will look similar to the following:

ReCaptcha™ works by asking the user to type two words that are displayed on the form. These words are distorted in a way that makes them difficult for automated systems to decipher. Once the user

submits the form the words are evaluated by Google to check if they are correct. The Forward to Friend request will be submitted once the captcha is entered correctly.

In order to use the ReCaptcha™ service you must register with the service and obtain a public/private key to be used for captcha requests. The public and private key must be entered into the tenant settings in the configuration manager (**Configuration Manager > Tenants Menu > Tenant Settings**).

For more details on the Google ReCaptcha™ service or information on how to obtain a public/private key set please visit the following URL: http://www.google.com/recaptcha

Infor Email Marketing Incoming Services Default Pages

The Infor Email Marketing Incoming Services Default Pages allow you to configure the error-message Web pages that are returned when a requested link is out of date or cannot be found. Standard Infor Email Marketing installations generally have no need to alter these Web pages.

Support is added for `< MailerData >\INFOR\WebPages\< TenantName >\*.http` files which can include HTTP headers along with text or HTML.

Most of the error pages do not return a successful HTTP status code and some of them use headers that are not used in other simple Web pages. Because of this, we have added support for HTTP files. These files contain all HTTP headers (except Content-Length which is automatically appended at the end of the headers) followed by an empty line (CRLF) and the body of the HTML page. For example, the following page:

```
01 ServerVersion` 302 Object Moved
02 Expires: Mon, 01 Jan 1996 00:00:01 GMT
03 Date: `CurrentDate`
04 Location: `TargetURL`
05 Cache-Control: private
06 Content-type: text/html
07
08 <html>
09 <head><title>Object moved</title></head>
10 <body><h1>This object may be found
11 <a HREF="`TargetURL`">here</a></body>
```

```
12 </html>

+
```

- Lines 01-06 are the HTTP Headers
- All header lines must be terminated with a CRLF (RFC 2616).
- The headers are separated from the main body with a blank line (Line 07)
- All pages can be localized.

  All preference pages, error pages, and images can be localized. The Incoming Service has been modified to do variant selection based on the Accept-Language header that most Web browsers send with the HTTP request. This is similar to the method used by popular Web servers such as Apache. To use the localization feature, create a localized version of the page and save it into the same directory as the original page. Add an additional file extension for the language-locale. For example:

  - Preference.html—fallback page in case a localized version can not be found
  - Preference.html.en—generic English version of the page
  - Preference.html.en-us—United States English version of the page
  - Preference.html.ja—Japanese version of the page

See the following section for more information about localization.

Variant Selection

HTTP allows Web-site authors to put multiple versions of the same information under a single URL. Clickback implements a simple selection mechanism that transparently selects the version that has the highest quality value based on information that is provided by the Web browser. This mechanism is called variant selection.

The variant selection is based on two factors:

- Which version or variants of the file are available
- Which versions are acceptable to the user agent (as indicated by the Accept-Language HTTP header)

Given this information, clickback scores each possibility and returns the one with the highest score or quality factor.

For example, if a request came in for Preference.html, we first get a list of the versions that are available. Suppose that we have the following 4 versions:Preference.html, Preference.html.en, Preference.html.es, Preference.html.ja. The next thing that we look at is the Accept-Language header which tells us which version are acceptable to the user-agent and indicates a quality value for each one. For example:

Accept-Language: fr; q=1.0, en; q=0.9, es; q=0.5

Given this information we can score our four versions as follows:

- Preference.html 0.0
- Preference.html.en 0.9

- Preference.html.es 0.5
- Preference.html.ja 0.0

The English version has the highest quality value so it is the one that is returned.

Controlling the Accept-Language Header in IE

The Accept-Language header can be controlled in IE by editing the languages listed in the **Language Preference** dialog. The**Language Preference** dialog can be found by clicking **Languages** in the general tab of the **Tools > Internet Options** dialog.

Controlling the Accept-Language Header in Netscape

The Accept-Language header can be controlled in Netscape by editing the languages listed in the Language for Web Pages section of the **Preferences** dialog. The **Preferences** dialog can be found by selecting **Edit > Preferences** from the menu.

Remote Incoming Service

You can synchronize Web pages to the remote incoming service automatically by running Infor Email Marketing Outgoing Services (outgoingsvc).

Response Handling

Infor Email Marketing collects all reply Email from Infor Email Marketing recipients and by default processes it every ten minutes. It can automatically handle routine bounces, out-of-office auto-replies, and unsubscribe requests with the word “unsubscribe” (or other phrases and words described in section "Filtering Incoming Email" on page 65) in the subject line or message body. All messages that cannot be processed automatically are forwarded to the Email account specified in Configuration Manager.

Email Confirmations

Confirmation messages are generated in response to the following requests:

- Change of Address (via Web preference page)
- Resubscribe (via Web preference page if an Email recipient chooses to unsubscribe and then clicks **Undo** at the Unsubscribe Confirmation Web page.)
- Unsubscribe (via Web preference page)
- Unsubscribe (via reply Email)

In the case of a change of address, the confirmation Email is sent to both addresses. The confirmation messages are short, fixed-text messages that are typically mailed within a few hours after the action takes place.

This confirmation message system is a fully automated process built into the Infor Email Marketing Incoming Services. It is possible to use a custom profile management system rather than the provided Infor Email Marketing Web Preference system. To do so, the unsubscribe message should contain a link to that custom system rather than to Infor Email Marketing's built-in system. However, the Infor Email Marketing Incoming Services continues to process incoming Email. If someone unsubscribes via an Email, it is processed normally.

Handling Viruses

When sending mass Email, it is completely normal to have virus-infected Email sent to your Infor Email Marketing Incoming Services. Most email viruses only work if you run the virus script or by opening the attachment. Infor Email Marketing passes this attachment along, so if the mail goes to the forwarding address unfiltered, the person accessing the forwarded mail will need to be educated on how to safely deal with that Email. This is, don't open the attachment, and use a mail client with "safe" reading abilities.

Simply opening a virus-infected file in a bare-bones text editor, such as Notepad (Windows) or vi (Unix), does not infect your machine. For instance, any one of the .vbs viruses requires the user to execute those viruses.

The way that viruses "enter" Infor Email Marketing is through the Infor Email Marketing Incoming Services. This process accepts incoming mail for From Email addresses configured on the Infor Email Marketing Outgoing Services, and stores these messages on disk, in the InBox/YYYY_MM_DD_smtp.log file. Incoming processing then reads this file, and performs a text-based scan over that file, attempting to match against the filtering criteria. (See "Filtering Incoming Email" on page 65 for additional information.).

Infor Email Marketing must be able to completely process the incoming Email and to forward that Email as described above. Virus checkers can inhibit this activity by moving these files from where Infor Email Marketing expects them to be for processing. By moving the relevant files from Infor Email Marketing's view, Infor Email Marketing is unable to process important conversations with your customers, such as unsubscribes.

We recommend that you place a mail filter or other virus scanning software on the forwarding address to clean the messages as they go through to the end user.

You may still wish to have virus-checking software running on your Infor Email Marketing Incoming Services. This is recommended. However, you need to make sure that your software is configured to leave the Infor Email Marketing Incoming Services files in the < MailerData >/Infor/InBox, Outbox, and Logs directories alone and accessible to Infor Email Marketing's Incoming Processing.

You can safely remove a day's incoming files once you have confirmed that they have been processed completely, and once you are sure that you will not need these files for later reference. For instance, if you have a customer dispute about an unsubscribe, these are important records to have—both the

intact original Email, and how that Email was processed by the Infor Email Marketing Incoming Services. KB article #11641 on “Manual File Decimation” provides information on how to safely remove logs).

Any anti-virus software can read byte-by-byte over any file on the system, perform byte-pattern matching, and find that a file is infected. Often, with viruses, they will actually insert their commands into an executable, such that the executable then is infected by the virus.

It is likely that over the course of a campaign that you will receive an Email virus. Infor Email Marketing stores all incoming Emails for a given day in a single file. Therefore, this single file can be comprised of hundreds or thousands of Emails. A small percentage of these Emails could be detected as SPAM (i.e. your campaign contains the Email address of someone whose computer is infected by an Email-related virus). When your message arrives in their inbox, it may trigger a virus Email to be sent back to you. In short, sending bulk Email may cause numerous SPAM/virus Emails to be sent back to you.

Since Log Processing is only doing a character scan of the text, it's not likely that it will be infected by text-parsing the incoming messages. We recommend that you leave the inbox/outbox files alone until they have been properly handled by the Infor Email Marketing system. These depend on very specific things to be in place.

Infor Email Marketing Metadata

8

Initializing an EpiMeta with Infor Email Marketing adds the following additional objects to your metadata:

Configuration

Settings

- Behavior\CME
  - AllowAttachments
  - DefaultToMultipartAlternative
  - HTMLCapabilityDetection
  - JobLongevity
  - MaximumEmailDimensions
  - MaxRecordsForPreview
  - UseSSL
- ExternalInterfaces\CME
  - AdminEmailAddresses
  - CompanyCode
  - Password
  - Server
  - Username

Schema

Base Dimensions

- Infor Email Marketing URL
- EM Social Event

Degenerate Dimensions

- EM Email type
- EM Error Code
- EM IP address
- EM Other Address
- EM Status Code
- EM User Agent

Dimension Roles

- EM Sent Date
- EM Social Event
- EM URL

Facts

- EM Message Response
- EM Messages

Extraction

Jobs

- Infor Email Marketing Configuration Update
- Infor Email Marketing Extraction
- Load Infor Email Marketing Codes

Steps

- E6 CME Configuration Update
- Infor Email Marketing Extraction
- Load Infor Email Marketing Codes

External Tables

- EM dim data stage
- EM trans data stage
- Error codes (EM)
- Status Codes (EM)

Measures

Measures

- Avg num Days Between Sent and Clicked [EM]
- Avg num Days Between Sent and Unsubscribe [EM]
- Avg num Days Between Sent and Viewed [EM]
- Avg num Days Between Sent and Viewed in Browser [EM]
- Avg num Days Between Viewed and Clicked [EM]
- Avg num Days Between Viewed and Unsubscribe [EM]
- Bounced - % of Delivered [EM]

- Bounced - % of Sent [EM]
- Click-Throughs - % of Delivered [EM]
- Click-Throughs - % of Sent [EM]
- Click-Throughs - % of Viewed [EM]
- Click-Throughs - % of Views [EM]
- Click-Throughs by Friend - % of Delivered [EM]
- Click-Throughs by Friend - % of Sent [EM]
- Click-Throughs by Friend[EM]
- Count Repeat Views - % of Delivered [EM]
- Count Repeat Views - % of Sent [EM]
- Count Repeat Views [EM]
- Cumulative Click-Throughs - % of Dlvrd [EM]
- Cumulative Click-Throughs - % of Sent [EM]
- Cumulative Click-Throughs - % of Viewed [EM]
- Cumulative Click-Throughs - % of Views [EM]
- Cumulative Number of Click-Throughs [EM]
- Cumulative Number of Custom Link Clicks [EM]
- Cumulative Number Unsub - % of Dlvrd [EM]
- Cumulative Number Unsub - % of Sent [EM]
- Cumulative Number Unsubscribed [EM]
- Cumulative Number Viewed - % of Dlvrd [EM]
- Cumulative Number Viewed - % of Sent [EM]
- Cumulative Number Viewed [EM]
- Custom Link Clicks - % of Delivered [EM]
- Custom Link Clicks - % of Sent [EM]
- Delivered - % of Delivered [EM]
- Delivered - % of Sent [EM]
- Do Not Solicit - % of Delivered [EM]
- Do Not Solicit - % of Sent [EM]
- Duplicate - % of Delivered [EM]
- Duplicate - % of Sent [EM]
- Field Ignored - % of Delivered [EM]
- Field Ignored - % of Sent [EM]
- Forward to Friend - % of Delivered [EM]
- Forward to Friend - % of Sent [EM]
- Forward to Friend - Cumulative [EM]
- Forward to Friend [EM]
- Friend Clicks - Distinct IP Address [EM]
- Not Sent No Translate - % of Delivered [EM]

- Not Sent No Translate - % of Sent [EM]
- Number Bounced [EM]
- Number Complained [EM]
- Number Delivered [EM]
- Number Distinct IP Address [EM]
- Number Do Not Solicit [EM]
- Number Duplicate [EM]
- Number Field Ignored [EM]
- Number Not Sent No Translate [EM]
- Number of Click-Throughs [EM]
- Number of Custom Link Clicks [EM]
- Number Sent [EM]
- Number Undelivered [EM]
- Number Unsubscribe Requested [EM]
- Number Unsubscribed [EM]
- Number Unsubscribed [EM]
- Number Unsubscribed No Such User [EM]
- Number Unsubscribed via Complaint [EM]
- Number Viewed [EM]
- Number Viewed in Browser [EM]
- Percent Bounced [EM]
- Percent Delivered [EM]
- Percent Do Not Solicit [EM]
- Percent Duplicate [EM]
- Percent Field Ignored [EM]
- Percent Not Sent No Translate [EM]
- Percent Sent [EM]
- Percent Undelivered [EM]
- Sent - % of Sent [EM]
- Social Event by Friend - % of Delivered [EM]
- Social Event by Friend - % of Sent [EM]
- Social Event by Friend [EM]
- Social Event by Recipient - % of Delivered [EM]
- Social Event by Recipient - % of Sent [EM]
- Social Event by Recipient[EM]
- Total Views [EM]
- Total Views in Browser [EM]
- Undelivered - % of Delivered [EM]
- Undelivered - % of Sent [EM]

- Unsubscribed - % of Delivered [EM]
- Unsubscribed - % of Sent [EM]
- Unsubscribed by Friend - % of Delivered [EM]
- Unsubscribed by Friend - % of Sent [EM]
- Unsubscribed by Friend[EM]
- Viewed in Browser - % of Delivered [EM]
- Viewed - % of Delivered [EM]
- Viewed - % of Sent [EM]
- Viewed - Distinct IP Address [EM]
- Viewed by Friend - % of Delivered [EM]
- Viewed by Friend - % of Sent [EM]
- Viewed by Friend - Distinct IP Address [EM]
- Viewed by Friend[EM]
- Viewed in Browser - % of Sent [EM]
- Viewed in Browser by Friend - % of Delivered [EM]
- Viewed in Browser by Friend - % of Sent [EM]
- Viewed in Browser by Friend - Distinct IP Address [EM]
- Viewed in Browser by Friend[EM]

Note: “Number Delivered” (defined as “Number Sent” - “Number Bounced”) can be negative if the bounce occurs on a different day from the day sent and a date filter is used. In this case, the negative number is an adjustment to the positive number previously reported.

Measure Layouts

- 1-Column EM Cumulative Layout
- 1-Column EM Layout (No Percentages)
- Average Number of Days between EM measures layout
- EM Click-Throughs
- EM Unsubscribed
- One-Column EM Layout
- Two-Column EM Layout

Transaction Type Sets

- All EM Bounced
- All EM Clicked
- All EM Complaint Received

- All EM Custom Link Click
- All EM Friend Activity
- All EM Incoming
- All EM Sent
- All EM Social Data
- All EM Undelivered
- All EM Unsubscribe
- All EM Viewed
- All EM Viewed in Browser
- All EM With IP Address
- EM Unsubscribe Reply Received

Transtypes

- Bounced (EM)
- Clicked (EM)
- Clicked Again (EM)
- Clicked by Friend (EM)
- Complaint Received (EM)
- Custom Link Click (EM)
- Custom Link Click Again (EM)
- Do Not Solicit (EM)
- Duplicate (EM)
- Field Ignored (EM)
- Forward to Friend (EM)
- Not Sent No Translate (EM)
- Resubscribe (EM)
- Sent (EM)
- Social Networking Event (EM)
- Social Networking Event by Friend (EM)
- Social Networking View (EM)
- Unsubscribe (EM)
- Unsubscribe by Friend (EM)
- Unsubscribe via "No Such User" (EM)
- Unsubscribe via Complaint (EM)
- Viewed (EM)
- Viewed Again (EM)
- Viewed Again in Browser (EM)

- Viewed by Friend (EM)
- Viewed in Browser (EM)
- Viewed in Browser by Friend (EM)

Presentation

Attributes

- Campaign Code [EM]
- Campaign File Name [EM]
- Campaign ID [EM]
- Campaign Label [EM]
- Cell ID [EM]
- Cell Label [EM]
- Cell Size [EM]
- Communication Code [EM]
- Day [EM]
- Days Since [EM]
- Days Since Sent [EM]
- Email Content Full Path [EM]
- Email Content Name [EM]
- Error Code [EM]
- Fiscal Month [EM]
- Fiscal Quarter [EM]
- Fiscal Week [EM]
- Fiscal Year [EM]
- IP Address [EM]
- Months Since [EM]
- Months Since Sent [EM]
- No Column Selected [EM]
- No Row Selected [EM]
- Social Event [EM]
- Social Service [EM]
- Status Code [EM]
- URL [EM]

- URL Description [EM]
- User Agent [EM]
- Weeks Since [EM]
- Weeks Since Sent [EM]

Templates

- Email Address Template [EM]
- Email Format Preference Template [EM]
- Email HTML Capability Template [EM]
- Email Undeliverable Count Template [EM]
- Email Unsubscribe Template [EM]

Note: When you enable a base dimension for Infor Email Marketing in the Base Dimension dialog box, Infor Marketing Manager automatically makes copies of the built-in template attributes and configures these copies for use with your designated dimension.

Attribute Layouts

- Additional Email Information Codes [EM]
- Date Attributes [EM
- Days Since Attributes [EM]
- Demographic Attributes [EM]
- Demographic Attributes for Preview [EM]
- Email Campaign Reporting [EM]
- Email Cell Reporting [EM]
- Optional Campaign Reporting [EM]
- Optional Cell Reporting [EM]
- Social Event [EM]

Transaction Filters

- Clicked Again Template [EM]
- Clicked Template [EM]
- Received Template [EM]
- Sent Template [EM]
- Unsubscribed Template [EM]
- Viewed Again In Browser Template [EM]
- Viewed Again Template [EM]

- Viewed In Browser Template [EM]
- Viewed Template [EM]

Note: When you enable a base dimension for Infor Email Marketing in the Base Dimension dialog box, Infor Marketing Manager automatically makes copies of the built-in template transaction filters and configures these copies for use with your designated dimension.

Web Pages

- Infor Email Marketing Highs and Lows
- Infor Email Marketing Lifecycles
- Infor Email Marketing Profiles
- Infor Email Marketing Reporting
- Infor Email Marketing Reporting by URL

Topics/Templates

- Infor Email Marketing Analysis
- Infor Email Marketing Analysis Template
- Infor Email Marketing Measures

Note: Before making changes to the Infor Email Marketing Analysis topic, duplicate it from the template and use the duplicate as the topic.

Glossary Entries

- Avg Number of Days Between Sent and Clicked (EM)
- Avg Number of Days Between Sent and Unsubscribed (EM)
- Avg Number of Days Between Sent and Viewed (EM)
- Avg Number of Days Between Viewed and Clicked (EM)
- Avg Number of Days Between Viewed and Unsubscribed (EM)
- Avg Number of Days Btwn Sent and Viewed in Browser (EM)
- Bounced (EM)
- Campaign Code (EM)
- Campaign File Name (EM)
- Campaign ID (EM)
- Campaign Label (EM)
- Cell ID (EM)

- Cell Label (EM)
- Cell Size (EM)
- Click-Through (EM)
- Click-Through Rate (EM)
- Click-Through Rate (per sent) (EM)
- Click-Through Rate (per viewed) (EM)
- Click-Throughs by Friend (Distinct IP Address) (EM)
- Click-Throughs by Friend (Per Delivered) (EM)
- Click-Throughs by Friend (Per Sent) (EM)
- Click-Throughs Per View (EM)
- Complaint Received (EM)
- Count Repeat Views - % of Delivered [EM]
- Count Repeat Views - % of Sent [EM]
- Count Repeat Views [EM]
- Cumulative Click-Throughs (% of Delivered) (EM)
- Cumulative Click-Throughs (% of Sent) (EM)
- Cumulative Click-Throughs (% of Viewed) (EM)
- Cumulative Click-Throughs Per View (EM)
- Cumulative Number of Click-Throughs (EM)
- Cumulative Number of Custom Link Clicks (EM)
- Cumulative Number Viewed (EM)
- Cumulative Unsubscribed (% of Delivered) (EM)
- Cumulative Unsubscribed (% of Sent) (EM)
- Cumulative Unsubscribed (EM)
- Cumulative Viewed (% of Delivered) (EM)
- Cumulative Viewed (% of Sent) (EM)
- Custom Link Click (EM)
- Delivered (EM)
- Distinct IP addresses (EM)
- Do Not Solicit (EM)
- Duplicate (EM)
- Email Address (EM)
- Email Content Full Path (EM)
- Email Content Name (EM)
- Email Format Preference (EM)
- Email HTML Capability (EM)
- Email Undeliverable Count (EM)
- Email Unsubscribe (EM)
- Error Code [EM]

- Field Ignored (EM)
- IP Address (EM)
- Mailed (EM)
- Not Sent No Translate (EM)
- Number of Click-Throughs by Friend (EM)
- Number of Custom Link Clicks (EM)
- Number of Distinct IP View by Friend (EM)
- Number of Distinct IP View by Friend in Browser (EM)
- Number of Forward to Friend Requests (EM)
- Number of Social Events by Friend (EM)
- Number of Social Events by Recipient (EM)
- Number Unsubscribe by Friend (EM)
- Number Viewed by Friend (EM)
- Number Viewed in Browser by Friend (EM)
- Repeat Views [EM]
- Resubscribe (EM)
- Sent (EM)
- Status Code [EM]
- Unsubscribe (EM)
- Unsubscribe by Friend (Per Sent) (EM)
- Unsubscribe Request (EM)
- Unsubscribe via Complaint (EM)
- Unsubscribe via No Such User (EM)
- Unsubscribed by Friend (Per Delivered) (EM)
- User Agent (EM)
- Viewed (EM)
- Viewed Again (EM)
- Viewed in Browser (EM)
- Views (EM)

Link Categories

- Reserved_Emailer

Security / Storage

Output Processors

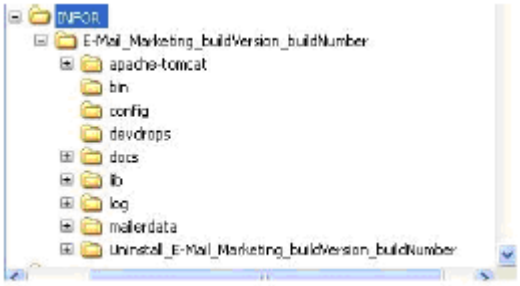
- Infor Email Marketing Output Processor

List of Installed Components and Files

9

This chapter provides a list of all installed components and files

In a 'Typical' install, three components - Outgoing Service, Incoming Service and Email Client - are installed. The installed files are interspersed in the folder structure as shown in the following figure.



Installed Components

The following tables list the components installed on your Email Marketing system and Marketing server machines.

Folder/File Name	Description
apache-tomcat	The web applications of the Outgoing Service are run in the embedded Tomcat server.
bin	Contains all executables and related files
config	Contains all configuration related files.
devdrops	Contains an index.txt file that specifies the order of the devdrops. If necessary any devdrops you received will be stored in this directory.
docs	Contains readme file, license files and related documents.
lib	Contains all application and thirdparty libraries.

Folder/File Name	Description
log	Contains all application logs
mailerdata	Contains Campaign files, identity web pages and related data files.
Uninstall_Email_Marketing_buildVers ion_buildNum-ber	Contains an uninstaller that removes all files and actions that occur during installation.
Email_Marketing_buildVersion_ buildNumber_In-stallLog.log	Contains standard install logs provided by InstallAnywhere.
em_install.txt	Customized logs of all activities during the install. If the install doesn't complete successfully, this file can be recovered from <user.home>/installog/ directory.

Outgoing Service

The following table lists the description of important files that are installed when the Outgoing Service component is selected.

Folder/File Name	Description
Apache-tomcat	
\conf\tomcat-users.xml	Contains users and roles that are permitted to administer and configure the Outgoing Service.
\webapps	The web applications to administer and configure the Outgoing Service are deployed in this folder.
\webapps\ EM_SysAdminGuide.pdf	*Infor Email Marketing System Administration guide*.
\webapps\ EM_InstallationGuide.pdf	Infor Email Marketing Installation guide.
Bin	
outgoingsvc.bat	Executable batch file installed on Windows platforms. Used to launch the Outgoing Service.
outgoingsvc	Executable shell script installed on Unix platforms. Used to launch the Outgoing Service.
runcmd.bat	Executable batch file used to launch miscellaneous commands associated with the Outgoing Service.
runcmd	Executable shell script installed on Unix platforms. Used to launch the miscellaneous commands associated with the Outgoing Service.

Folder/File Name	Description
DevDropInstaller.bat	Executable batch file used to install developer debug code or patches.
DevDropInstaller	Executable shell script file used to install developer debug code or patches.
Config	
EMConfig.xml EMConfig.xsd	Main configuration file and a schema file for validation.
EditEMConfig.xml	The changes through Configuration Manager are contained in this file until they are pushed to the main file.
EMConfigRules.xml EMConfigRules.xsd	Contains rules for the configuration files.
SpamKeywords.xml SpamKeywords.xsd	A file that lists the possible keywords used to identify SPAM rejections. This is used to help the admin identify domains that may be blocking you for SPAM reasons.
DomainInfo.xml DomainInfo.xsd	Contains information that allows the admin to control the behavior of the Email delivery engine by domain.
JobReport.xsd	Contains schema for job reports that are generated about the record in the job file.
StateCount.xsd	Schema for displaying the state count statistics.
Locale.conf	Contains a list of locales that is displayed under the Language for Tenant locale settings on the Configuration Manager interface.
wrapper.conf	Configuration file for running the Outgoing Server as Windows services.
OutgoingServiceLogConf.xml	Log4j configuration file for the Outgoing Service logs.
ctgkeystore	Keystore for storing certificates that support SMIME functionality. **Note:** This is a different keystore that you select during install to secure the access to Outgoing and Incoming Servers.
dkimprop.config	Contains properties for configuring DKIM Header Signatures.
Lib	

Folder/File Name	Description
EM.jar	Infor Email Marketing Server library
OutgoingService.jar	Contains manifest file documenting all the third party libraries installed.
/jaxws-ri	Java API for XML Web Service library
/ jasper	Jasper library used for reporting
/Jdom	Library for XML parsing
Log	
/Service	Contains logs when the Outgoing Server is run as Windows services.
OutgoingService.log	Contains outgoing service rolling logs
LogProcessing.log	Contains logprocess related rolling logs
Mailerdata	
`/Tenant ID`	Generated during install or when a new tenant is created. It contains the campaign job files.
`/Infor/Outbox`	Contains files created during normal operation.
`/Infor/Logs`	
`/Infor/Temp`	Campaign files are copied to this directory.
`/Webpages`	Contains identity webpages.
/suppression_db `/suppression_db/<tenant-id>`	Contains database files used to store unsubscribe information.

Incoming Service

The following table lists the description of important files that are installed when the Incoming Service component is selected.

Folder/File Name	Description
Bin	
incomingsvc.bat	Executable batch file installed on Windows platforms. Used to launch the Incoming Service
incomingingsvc	Executable shell script installed on Unix platforms. Used to launch the Incoming Service
Config	

Folder/File Name	Description
IncomingServiceAdminStatistics.xsd	Schema for displaying the admin statistics
IncomingServiceIdentStatistics.xsd	Schema for displaying the IDENT statistics
IncomingServiceJobChangeNotification. xsd	Schema for displaying whether the job with an ID is loaded or not.
IncomingServiceSMTPStatistics.xsd	Schema for displaying the SMTP statistics
IncomingServiceStatus.xsd	Schema for displaying the status of the Incoming Service
IncomingServiceWWWStatistics.xsd	Schema for displaying the statistics for the WWW services
JobInfo.xsd	Schema for the <job-id>.jobinfo.xml file
RedirectURLs.xsd	Schema for the <job-id>.RedirectURLs. xml file
Wrapper_in.conf	Configuration file for running the Incoming Server as Windows services.
IncomingServiceLogConf.xml	Configuration file for customizing the Incoming Service logs.
Lib	
EM.jar	Infor Email Marketing Server library
IncomingService.jar	Contains manifest file documenting all the third party libraries installed.
/mina	Contains Apache Mina (Multipurpose Infrastructure for Network Applications) related libraries
/slf4j	Simple Logging Façade for Java.
Log	
`/Service`	Contains logs when the Incoming Server is run as Windows services.
IncomingService.log	Contains Incoming service rolling logs
Mailerdata	
`/Infor/Inbox`	Contains files created during normal operation.
`/Webpages`	Contains identity WebPages.

Email Client

The following table lists the description of important files that are installed when the Email Client component is selected.

Folder/File Name	Description
Bin	
client.bat	Executable batch file installed on Windows platforms.
client	Executable shell script installed on Unix platforms
Config	
custom-schema.xml	Client binding configuration file
custom-client.xml	Client binding configuration file
buildjob.properties	Properties file
Lib	
EM.jar	Infor Email Marketing Server library
EMClient.jar	Contains manifest file documenting all the third party libraries installed.

Common Files

As multiple instances of the Infor Email Marketing servers can be installed on the same machine, a registry file is created to keep track of the installed instances. After a successful installation, an entry is added to the registry file. When a server instance is uninstalled, the appropriated entry is deleted from the registry file.

In the event of partial installation, the registry entry is edited to reflect the installed component only. During uninstall, the registry related activities are captured in the `<user.home>/uninstallog/em_uninstall.txt` log file.

The following table lists the description of important files that are installed on the Server machine in different directories.

Folder/File Name	Description
Windows	
`C:\Windows\System\emenv`	Custom registry file
`<user.home>/uninstallog/ em_uninstall.txt`	Custom registry file related un-installation logs
`/Programs/Infor/buildVersion/buildNumber/Email Marketing/`	Contains shortcuts to executables and documents

Folder/File Name	Description
Linux/Solaris	
/etc/init.d	Strartup files
/etc/rc3.d	Start and stop soft links
AIX	
/etc/rc.d/init.d	Strartup files
/etc/rc.d/rc2.d	Start and stop soft links
HP-UX	
/sbin/init.d	Strartup files
/sbin/rc3.d	Start and stop soft links

Files created during normal operation of the Infor Email Marketing Server

Storage Management (the STM column in the table below) refers to the period of time in days that **<**files in question**>** are kept assuming that they are completely processed.

These periods are defined in the EMConfig.xml files

```
<property name="STMJobDataArchiveDelay" type="int" category="Storage
Management Settings">

    <item>30</item>

    </property>
```

The following table lists the files that are created during normal operation of the Infor Email Marketing Server.

Located in <install directory>/logs				
Filename	**Description**	**STM**	**Incoming**	**Outgoing**
OutgoingService.log	The current Outgoing Service log file.	14		X
LogProcessing.log	The current Log Processing log file.	14		X
IncomingService.log	The current Incoming Service log file.	14	X	

Located in <install directory>/logs				
OutgoingService.log.YYYY-MM-DD	The Outgoing Service log file for a previous day.	14		X
LogProcessing.log.YYYY-MM-DD	The Log Processing log file for a previous day.	14		X
IncomingService.log.YYYY-MM-DD	The Incoming Service log file for a previous day.	14	X	

Located in <mailerdata>/INFOR				
Filename	**Description**	**STM**	**Incomin**	**Outgoing**
DeliveryRateStatistics.txt	Persistent Email delivery rate statistics.	N/A		X
NextJobNumber.txt	A file to track the next job number.	N/A		X

Located in <mailerdata>/INFOR/InBox				
Filename	**Description**	**STM**	**Incomin**	**Outgoing**
YYYY_MM_DD_www_http.log	Incoming HTTP response information.	30	X	X
YYYY_MM_DD_www_http.log.position	Position file used to keep track of how much of the http log file has been processed.	30		X
YYYY_MM_DD_admin_http.log	Internal HTTP log file for the admin service.	30	X	X
YYYY_MM_DD_ident.log	IDENT log file.	30	X	X
YYYY_MM_DD_smtp.log	Incoming SMTP response information.	30	X	X
YYYY_MM_DD_smtp.log.position	Position file used to keep track of how much of the SMTP log file has been processed.	30		X
<incoming file prefix>_ YYYY_MM_DD_smtp.log & <incoming file prefix>_ YYYY_MM_DD_www_http.lo g	These files will be created after synchronizing remote incoming servers with outgoing server. The format of file name is: <incoming file prefix>_YYYY_MM_DD_smtp.log & <incoming file prefix>_YYYY_MM_DD_www_http.log	30		X

Located in <install directory>/logs				
<incoming file prefix>_YYYY_MM_DD_smtp.serverpos & <incoming file prefix>_YYYY_MM_DD_www_http.serverpos	These files will be created for downloading each incoming server's HTTP & SMTP log files. They store the last position of log files on the server. This is only applicable when downloading incoming SMTP and HTTP files. The position file has the same name as the incoming file that you are downloading, except instead of a ".log" extension it should have a ".serverpos" extension. Inside the file, the file position can be stored (as one long integer number). Note that the position is the download position or, in other words, it is the position where you will start downloading the next time. Example: incoming1_2008_02_13_smtp.serverpos & incoming1_2008_02_13_www_http.serverpos	30		X

Located in <mailerdata>/INFOR/OutBox				
Filename	**Description**	**STM**	**Incomin**	**Outgoing**
<unique_id>.eml	A single outgoing admin or preview Email.	14		X
YYYY_MM_DD.outbox	A batch of outgoing reply confirmation Emails.	14		X
log\internal_smtp_YYYY_MM_DD.l og	Log file for the internal SMTP server.	14		X
SaveEml\<unique_id>.eml	Saved copies of outgoing admin or preview Emails.	14		X

Located in <mailerdata>\<tenant>\<JobID>				
Filename	**Description**	**STM**	**Incomin**	**Outgoing**
<JobID>.JobInfo.xml	Job file information.	120	X	X
<JobID>.RedirectURLs.xml	Index of Tracked URLs, used for redirection purposes.	120	X	X

Located in <install directory>/logs			
<JobID>.arg	Campaign job creation arguments.	90	X
<JobID>.hdr	The campaign header file as exported by OM.	90	X
<JobID>.job	The campaign job file.	90	X
<JobID>.job-Address-Index	An job file index used to lookup records by Email address.	90	X
<JobID>.job-RecordId-Index	An job file index used to lookup records by Record ID.	90	X
<JobID>.job-Transaction	Transaction file, stores feedback information.	90	X
<JobID>.job.log	Outgoing SMTP transaction log file.	90	X
<JobID>_*.log	Campaign fulfillment log file.	90	X
<JobID>_*.eml	Saved copies of generated preview messages.	90	X
<JobID>_*_<format>.fmt	TEXT or HTML Email template files.	90	X
*.etc	Email communication context as exported from Marketing.	90	X
*.lst	Campaign list file as exported from Marketing.	90	X
*.rec	Campaign list record definition as exported from Marketing.	90	X

Reviewing Log Files

During install if there is any problem and the install procedure is not successful, the customized installation logs can be retrieved from `<user.home>/installog/ em_install.txt`. Once the installation process is completed, this file is copied to the root of the installation directory. In the event of any issues, this file should be referenced. This file contains the results of all important actions executed by the install.

In addition, the standard logs that are generated by the InstallAnywhere can also be viewed. These logs are also located at the root of the Infor Email Marketing Server installation directory.

The Outgoing and Incoming services can be run using Console and also as Windows Services. If the Servers are not coming up properly, the files under the log folder should be viewed.

DKIM

10

Introduction

'Domain Keys Identified Email' (DKIM) is a mechanism that enables an organization to assert responsibility for email messages associated with their domain. It is supported by all major email service providers including Yahoo, Gmail, and Hotmail. Message content and MIME headers are digitally signed by the Infor Email Marketing server, just before delivery, using public/private key encryption technology. DKIM uses DNS to share information about the public key in additional to policy information for your domain. The receiving system can use the information stored in DNS to validate the DKIM signature attached to the message. Validating the DKIM signature verifies that the message content did not change in a significant way and also attempts to verify that the sender was authorized to sign the message on behalf of the domain. Including a DKIM signature on your outbound email messages will help to improve the overall deliverability of your Infor Email Marketing campaigns.

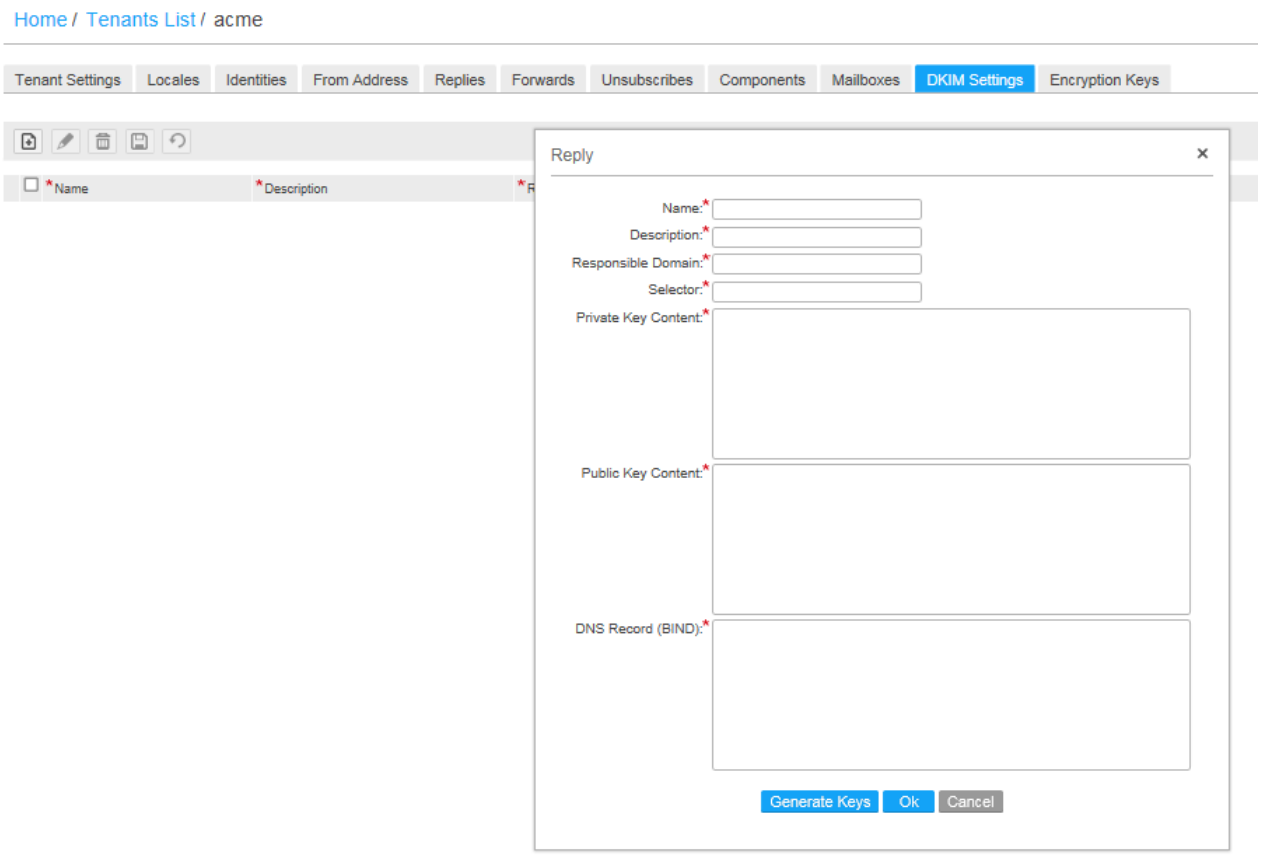
The DKIM feature can be used with Infor's Email Marketing product by creating a DKIM configuration and associating it with FROM addresses and Replies in the tenant configuration. If your deployment uses multiple domains for sending outbound emails then multiple DKIM configurations can be set up and associated with the appropriate domains. The configuration manager also provides assistance in generating the necessary DNS entries.

Note: Infor's Email Marketing product does not support DomainKeys which is an earlier technology developed by Yahoo. DKIM is a newer mechanism that combines features from DomainKeys with another technology, developed by Cisco Systems, called "Identified Internet Mail".

Configuration

Public key information needs to be configured in the DNS system in order for DKIM to function correctly. The examples shown in this document assume that you are using the ISC BIND DNS server. If you are using any other DNS software, please consult the corresponding product documentation for details on how to format and add DNS records to your server. These details are outside the scope of this document.

New DKIM keys can be created with the Infor Email Marketing Configuration Manager (**Tenants > DKIM Settings**).

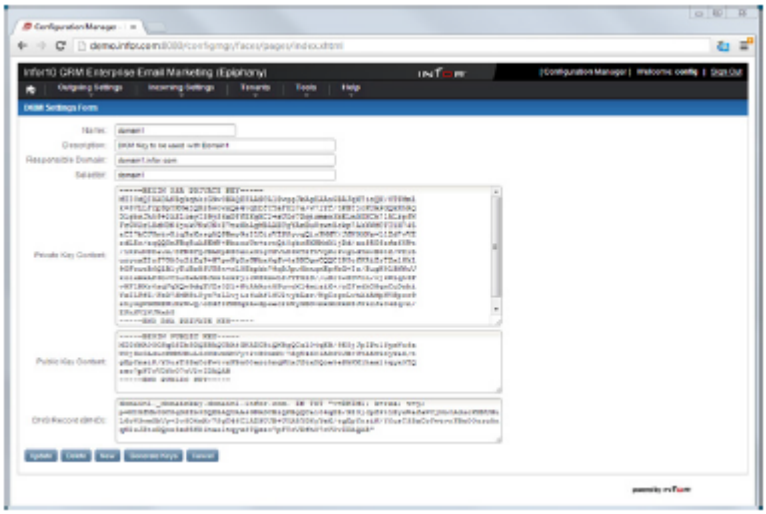


You can create a new DKIM key by clicking on the "New" button or delete an existing DKIM key by clicking on the "delete" link associated with the key that you want to delete.

To create a new key enter the desired information for the following fields:

Field Name	Description
Name	Internal name for the DKIM key, used when associated the key with FROM addresses and Replies.
Description	An internal description of the DKIM key for administrative purposes. This can serve as a reminder of what the key will be used for.
Responsible Domain	The domain that email signed with this key will be sent FROM. This must match the domain part of the FROM address / Reply address.
Selector	A unique identifier for this key.

Click the "Generate Keys" button to create a Public/Private key set.



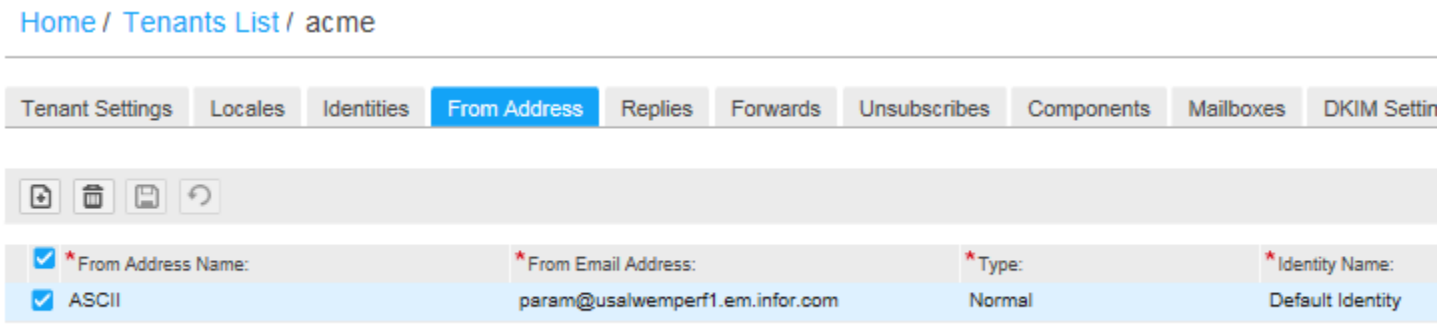
If you are using ISC BIND as your DNS server then you can copy the generated DNS record directly into your zone file. For other DNS servers create a TXT record for the given domain. The data for the DNS key is all text in-between and including the opening and closing quotation marks.

For example the data from the above screenshot is as follows:

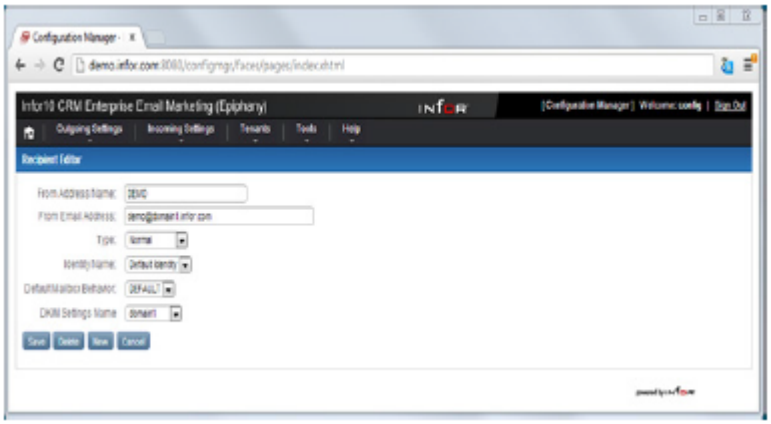
```
"v=DKIM1; k=rsa; t=y; p=MIGfMA0GCSqGSIb3DQEBAQUAA4GNADCBiQKBgQCal04q
EB/9E0jJpZPt1SyxWafaWCjHo0AducKMMUHuL6oW3wmGhVy+2v8O4mH/7SgU46Cl
AD3UJB+UYA5YG6yYeX/tgEpYnsiN/Y0usT33xCoFwtvrFBnO0arc5nqN2xJZtxDQoe5e
S5KX1haxltqyx3TQzeo7pFTcVDfhO7cV2wIDAQAB"
```

Associating DKIM Keys with FROM Addresses

In order to enable DKIM for regular outbound email delivery you will need to associate it with a FROM address:



Likewise, to enable DKIM for reply confirmation messages you will need to associate it with the respective replies:



Upgrading DKIM Keys from Previous Versions

The application will automatically upgrade any DKIM keys created in previous installations. This is done when the applications is started for the first time. Once upgraded you should review the new DKIM settings and double check that the DKIM keys are properly associated with the correct FROM addresses and Replies.

Manual Upgrade

Existing DKIM Keys can be manually upgraded by executing the following commands:

- The private key (ctg.private.pem) needs to be converted to a different format (PKCS#8). To do this run the following command:

```
openssl pkcs8 -topk8 -in ctg.private.pem -out ctg.pri    vate.pkcs8.
pem -nocrypt
```

The openssl tool is available on most Unix/Linux systems. On Windows it is available as part of Cygwin (http://www.cygwin.com) or you can download it from here: http://www.openssl.org/related/binaries.html

- After converting the private key then just paste the values into the configuration. The contents of the converted ctg.private.pkcs8.pem file should be pasted into the "Private Key Content" field. The contents of ctg_pub.pem should be pasted into the "Public Key Content" field.

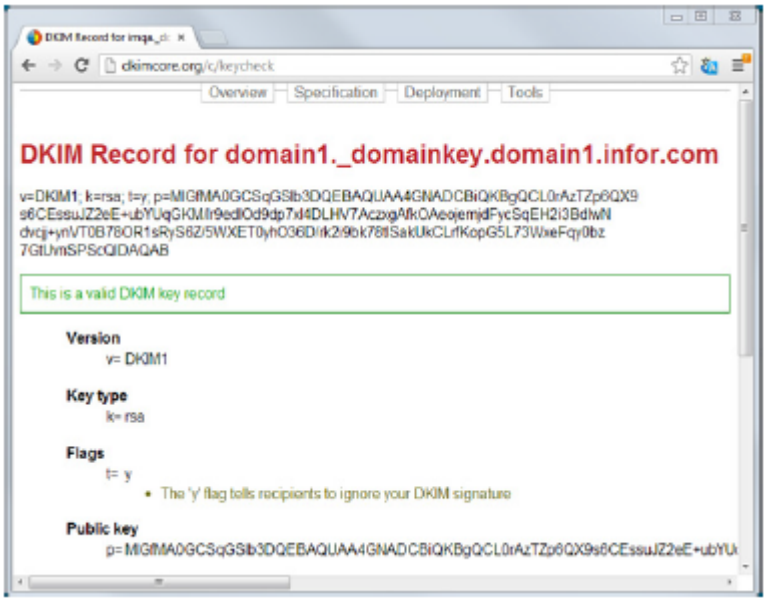
Verifying DKIM Records

A useful link to verify the DKIM records is:

http://dkimcore.org/tools/keycheck.html

The link will launch a web page that will allow us to test the DKIM key, whether it is publicly available and whether it is valid or not.

When the information is submitted the resulting page should look something like the following:



Spam Scoring

11

Overview

The Spam Scoring feature gives you the ability to generate a spam score for your email creative content. The information provided in the spam score will enable you to proactively fix any potential problems before executing the campaign. This extra step can improve the campaigns delivery rate, by reducing the possibility that an email will be flagged as SPAM by the target email service providers.

Spam scoring executes as part of the normal campaign submission process. This includes both preview and regular campaign types. The system may be configured to reject any outbound email campaign with spam scores greater than a configurable threshold.

Infor Email Marketing utilizes the Apache 'SpamAssassin' product as the back end for spam scorning. To enable this feature, SpamAssassin must be downloaded and installed separately.

Installing SpamAssassin

It is recommended that SpamAssassin be installed on a separate machine from Infor Email Marketing; however, it can be installed on the same machine for lower volume deployments. Specific installation instructions for UNIX and Windows can be found in the following sections. For more advanced installations, please refer to the SpamAssassin documentation at:

http://spamassassin.apache.org/doc.html

For details on how the execute SpamAssassin, please review the documentation at the following URL:

http://spamassassin.apache.org/full/3.3.x/doc/spamd.html

Installing SpamAssassin on Linux or UNIX Machines

Installing SpamAssassin on Linux and UNIX is an advanced operation. The installation instructions will vary between different operating systems and even different machines, depending on the package manager and the packages already installed on the system. The following is one representative example of installing SpamAssassin on a Red Hat Enterprise Linux 6 operating system.

1 Install SpamAssassin using the package manager provided by the operating system.

```
[ec2-user@ip-10-182-152-43 ~]$ sudo yum install spamassassin

Loaded plugins: amazon-id, rhui-lb, security

rhui-REGION-client-config-server-6                       | 2.6 kB
  00:00

rhui-REGION-client-config-server-6/primary_db            | 5.1 kB
  00:00

rhui-REGION-rhel-server-releases                         | 3.7 kB
  00:00

rhui-REGION-rhel-server-r 31% [====-          ]  0.0 B/s | 7.0 MB
  --:-- ETA

rhui-REGION-rhel-server-r 60% [=========      ]  11 MB/s |  13 MB
  00:00 ETA

rhui-REGION-rhel-server-r 89% [============   ]  11 MB/s |  20 MB
  00:00 ETA

rhui-REGION-rhel-server-releases/primary_db              |  22 MB
  00:01

rhui-REGION-rhel-server-releases-optional                | 3.5 kB
  00:00

rhui-REGION-rhel-server-releases-optional/primary_db     | 2.4 MB
  00:00

Setting up Install Process

Resolving Dependencies

--> Running transaction check

---> Package spamassassin.x86_64 0:3.3.1-2.el6 will be installed

--> Processing Dependency: perl(NetAddr::IP) >= 4.000 for package:
spamassassin-

3.3.1-2.el6.x86_64

--> Processing Dependency: procmail for package: spamassassin-3.3.1-
2.el6.x86_64

--> Processing Dependency: perl(Net::DNS) for package: spamassassin-
```

```
3.3.1-2.el6.

x86_64

--> Processing Dependency: perl(Mail::DKIM) for package: spamassassin-
3.3.1-2.el

6.x86_64

--> Processing Dependency: perl(IO::Socket::SSL) for package:
spamassassin-3.3.1

-2.el6.x86_64

--> Processing Dependency: perl(IO::Socket::INET6) for package:
spamassassin-3.3

.1-2.el6.x86_64

--> Processing Dependency: perl(Encode::Detect) for package:
spamassassin-3.3.1-

2.el6.x86_64

--> Running transaction check

---> Package perl-Encode-Detect.x86_64 0:1.01-2.el6 will be installed

---> Package perl-IO-Socket-INET6.noarch 0:2.56-4.el6 will be installed

--> Processing Dependency: perl(Socket6) for package: perl-IO-Socket-
INET6-2.56-

4.el6.noarch

---> Package perl-IO-Socket-SSL.noarch 0:1.31-2.el6 will be installed

--> Processing Dependency: perl(Net::SSLeay) >= 1.21 for package:
perl-IO-Socket

-SSL-1.31-2.el6.noarch

--> Processing Dependency: perl(Net::LibIDN) for package: perl-IO-
Socket-SSL-1.3

1-2.el6.noarch

---> Package perl-Mail-DKIM.noarch 0:0.37-2.el6 will be installed

--> Processing Dependency: perl(Mail::Address) for package: perl-Mail-
DKIM-0.37-

2.el6.noarch
```

```
--> Processing Dependency: perl(Crypt::OpenSSL::RSA) for package:
perl-Mail-DKIM

-0.37-2.el6.noarch

---> Package perl-Net-DNS.x86_64 0:0.65-4.el6 will be installed

--> Processing Dependency: perl(Digest::HMAC_MD5) for package: perl-
Net-DNS-0.65

-4.el6.x86_64

---> Package perl-NetAddr-IP.x86_64 0:4.027-7.el6 will be installed

---> Package procmail.x86_64 0:3.22-25.1.el6 will be installed

--> Running transaction check

---> Package perl-Crypt-OpenSSL-RSA.x86_64 0:0.25-10.1.el6 will be
installed

--> Processing Dependency: perl(Crypt::OpenSSL::Random) for package:
 perl-Crypt-

OpenSSL-RSA-0.25-10.1.el6.x86_64

--> Processing Dependency: perl(Crypt::OpenSSL::Bignum) for package:
 perl-Crypt-

OpenSSL-RSA-0.25-10.1.el6.x86_64

---> Package perl-Digest-HMAC.noarch 0:1.01-22.el6 will be installed

--> Processing Dependency: perl(Digest::SHA1) for package: perl-Digest-
HMAC-1.01

-22.el6.noarch

---> Package perl-MailTools.noarch 0:2.04-4.el6 will be installed

--> Processing Dependency: perl(Date::Parse) for package: perl-Mail
Tools-2.04-4.

el6.noarch

--> Processing Dependency: perl(Date::Format) for package: perl-Mail
Tools-2.04-4

.el6.noarch

---> Package perl-Net-LibIDN.x86_64 0:0.12-3.el6 will be installed
```

```
---> Package perl-Net-SSLeay.x86_64 0:1.35-9.el6 will be installed

---> Package perl-Socket6.x86_64 0:0.23-3.el6 will be installed

--> Running transaction check

---> Package perl-Crypt-OpenSSL-Bignum.x86_64 0:0.04-8.1.el6 will be
 installed

---> Package perl-Crypt-OpenSSL-Random.x86_64 0:0.04-9.1.el6 will be
 installed

---> Package perl-Digest-SHA1.x86_64 0:2.12-2.el6 will be installed

---> Package perl-TimeDate.noarch 1:1.16-11.1.el6 will be installed

--> Finished Dependency Resolution

Dependencies Resolved

================================================================================


 Package            Arch   Version       Repository
       Size

================================================================================


Installing:

 spamassassin       x86_64 3.3.1-2.el6   rhui-REGION-rhel-server-
releases 1.1 M

Installing for dependencies:

 perl-Crypt-OpenSSL-Bignum

                    x86_64 0.04-8.1.el6  rhui-REGION-rhel-server-
releases  34 k

 perl-Crypt-OpenSSL-RSA

                    x86_64 0.25-10.1.el6 rhui-REGION-rhel-server-
releases  38 k

 perl-Crypt-OpenSSL-Random

                    x86_64 0.04-9.1.el6  rhui-REGION-rhel-server-
releases  22 k

 perl-Digest-HMAC   noarch 1.01-22.el6   rhui-REGION-rhel-server-
releases  21 k
```

```
 perl-Digest-SHA1   x86_64 2.12-2.el6    rhui-REGION-rhel-server-
releases  49 k

 perl-Encode-Detect x86_64 1.01-2.el6    rhui-REGION-rhel-server-
releases  80 k

 perl-IO-Socket-INET6

                    noarch 2.56-4.el6    rhui-REGION-rhel-server-
releases  17 k

 perl-IO-Socket-SSL noarch 1.31-2.el6    rhui-REGION-rhel-server-
releases  69 k

 perl-Mail-DKIM     noarch 0.37-2.el6    rhui-REGION-rhel-server-
releases 121 k

 perl-MailTools     noarch 2.04-4.el6    rhui-REGION-rhel-server-
releases 101 k

 perl-Net-DNS       x86_64 0.65-4.el6    rhui-REGION-rhel-server-
releases 232 k

 perl-Net-LibIDN    x86_64 0.12-3.el6    rhui-REGION-rhel-server-
releases  35 k

 perl-Net-SSLeay    x86_64 1.35-9.el6    rhui-REGION-rhel-server-
releases 173 k

 perl-NetAddr-IP    x86_64 4.027-7.el6   rhui-REGION-rhel-server-
releases  96 k

 perl-Socket6       x86_64 0.23-3.el6    rhui-REGION-rhel-server-
releases  23 k

 perl-TimeDate      noarch 1:1.16-11.1.el6

                                         rhui-REGION-rhel-server-
releases  34 k

 procmail           x86_64 3.22-25.1.el6 rhui-REGION-rhel-server-
releases 163 k

Transaction Summary

================================================================================

Install      18 Package(s)



Total download size: 2.3 M
```

```
Installed size: 6.0 M

Is this ok [y/N]: y

Downloading Packages:

(1/18): perl-Crypt-OpenSSL-Bignum-0.04-8.1.el6.x86_64.rp |  34 kB
  00:00

(2/18): perl-Crypt-OpenSSL-RSA-0.25-10.1.el6.x86_64.rpm  |  38 kB
  00:00

(3/18): perl-Crypt-OpenSSL-Random-0.04-9.1.el6.x86_64.rp |  22 kB
  00:00

(4/18): perl-Digest-HMAC-1.01-22.el6.noarch.rpm          |  21 kB
  00:00

(5/18): perl-Digest-SHA1-2.12-2.el6.x86_64.rpm           |  49 kB
  00:00

(6/18): perl-Encode-Detect-1.01-2.el6.x86_64.rpm         |  80 kB
  00:00



(7/18): perl-IO-Socket-INET6-2.56-4.el6.noarch.rpm       |  17 kB
  00:00

(8/18): perl-IO-Socket-SSL-1.31-2.el6.noarch.rpm         |  69 kB
  00:00

(9/18): perl-Mail-DKIM-0.37-2.el6.noarch.rpm             | 121 kB
  00:00

(10/18): perl-MailTools-2.04-4.el6.noarch.rpm            | 101 kB
  00:00

(11/18): perl-Net-DNS-0.65-4.el6.x86_64.rpm              | 232 kB
  00:00

(12/18): perl-Net-LibIDN-0.12-3.el6.x86_64.rpm           |  35 kB
  00:00

(13/18): perl-Net-SSLeay-1.35-9.el6.x86_64.rpm           | 173 kB
  00:00

(14/18): perl-NetAddr-IP-4.027-7.el6.x86_64.rpm          |  96 kB
  00:00

(15/18): perl-Socket6-0.23-3.el6.x86_64.rpm              |  23 kB
  00:00
```

```
(16/18): perl-TimeDate-1.16-11.1.el6.noarch.rpm          |  34 kB
  00:00

(17/18): procmail-3.22-25.1.el6.x86_64.rpm               | 163 kB
  00:00

(18/18): spamassassin-3.3.1-2.el6.x86_64.rpm             | 1.1 MB
  00:00



--------------------------------------------------------------------------------

Total                                             897 kB/s | 2.3 MB
  00:02


Running rpm_check_debug

Running Transaction Test

Transaction Test Succeeded

Running Transaction

  Installing : perl-Encode-Detect-1.01-2.el6.x86_64
       1/18

  Installing : perl-Net-SSLeay-1.35-9.el6.x86_64
       2/18

  Installing : perl-Crypt-OpenSSL-Bignum-0.04-8.1.el6.x86_64
       3/18

  Installing : perl-NetAddr-IP-4.027-7.el6.x86_64
       4/18

  Installing : perl-Socket6-0.23-3.el6.x86_64
       5/18

  Installing : perl-IO-Socket-INET6-2.56-4.el6.noarch
       6/18

  Installing : 1:perl-TimeDate-1.16-11.1.el6.noarch
       7/18

  Installing : perl-MailTools-2.04-4.el6.noarch
       8/18

  Installing : perl-Crypt-OpenSSL-Random-0.04-9.1.el6.x86_64
       9/18
```

```
Installing : perl-Crypt-OpenSSL-RSA-0.25-10.1.el6.x86_64
    10/18

Installing : procmail-3.22-25.1.el6.x86_64
    11/18

Installing : perl-Digest-SHA1-2.12-2.el6.x86_64
    12/18

Installing : perl-Digest-HMAC-1.01-22.el6.noarch
    13/18

Installing : perl-Net-DNS-0.65-4.el6.x86_64
    14/18

Installing : perl-Mail-DKIM-0.37-2.el6.noarch
    15/18

Installing : perl-Net-LibIDN-0.12-3.el6.x86_64
    16/18

Installing : perl-IO-Socket-SSL-1.31-2.el6.noarch
    17/18

Installing : spamassassin-3.3.1-2.el6.x86_64
    18/18

Verifying  : perl-Crypt-OpenSSL-RSA-0.25-10.1.el6.x86_64
     1/18

Verifying  : perl-Net-LibIDN-0.12-3.el6.x86_64
     2/18

Verifying  : perl-IO-Socket-SSL-1.31-2.el6.noarch
     3/18

Verifying  : perl-Digest-SHA1-2.12-2.el6.x86_64
     4/18

Verifying  : procmail-3.22-25.1.el6.x86_64
     5/18

Verifying  : perl-IO-Socket-INET6-2.56-4.el6.noarch
     6/18

Verifying  : perl-Digest-HMAC-1.01-22.el6.noarch
     7/18

Verifying  : perl-Crypt-OpenSSL-Random-0.04-9.1.el6.x86_64
     8/18
```

```
  Verifying  : spamassassin-3.3.1-2.el6.x86_64
       9/18

  Verifying  : 1:perl-TimeDate-1.16-11.1.el6.noarch
      10/18

  Verifying  : perl-MailTools-2.04-4.el6.noarch
      11/18

  Verifying  : perl-Mail-DKIM-0.37-2.el6.noarch
      12/18

  Verifying  : perl-Socket6-0.23-3.el6.x86_64
      13/18

  Verifying  : perl-NetAddr-IP-4.027-7.el6.x86_64
      14/18

  Verifying  : perl-Crypt-OpenSSL-Bignum-0.04-8.1.el6.x86_64
      15/18

  Verifying  : perl-Net-SSLeay-1.35-9.el6.x86_64
      16/18

  Verifying  : perl-Encode-Detect-1.01-2.el6.x86_64
      17/18

  Verifying  : perl-Net-DNS-0.65-4.el6.x86_64
      18/18

Installed:

  spamassassin.x86_64 0:3.3.1-2.el6

Dependency Installed:

  perl-Crypt-OpenSSL-Bignum.x86_64 0:0.04-8.1.el6

  perl-Crypt-OpenSSL-RSA.x86_64 0:0.25-10.1.el6

  perl-Crypt-OpenSSL-Random.x86_64 0:0.04-9.1.el6

  perl-Digest-HMAC.noarch 0:1.01-22.el6

  perl-Digest-SHA1.x86_64 0:2.12-2.el6

  perl-Encode-Detect.x86_64 0:1.01-2.el6

  perl-IO-Socket-INET6.noarch 0:2.56-4.el6

  perl-IO-Socket-SSL.noarch 0:1.31-2.el6
```

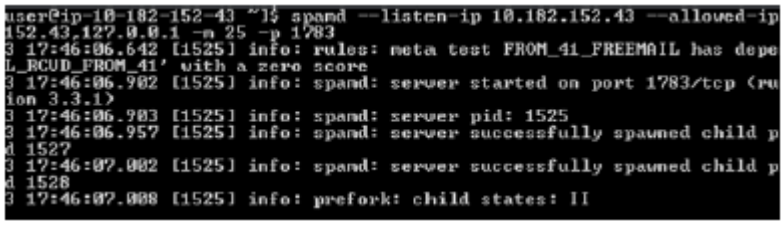
```
  perl-Mail-DKIM.noarch 0:0.37-2.el6

  perl-MailTools.noarch 0:2.04-4.el6

  perl-Net-DNS.x86_64 0:0.65-4.el6

  perl-Net-LibIDN.x86_64 0:0.12-3.el6

  perl-Net-SSLeay.x86_64 0:1.35-9.el6

  perl-NetAddr-IP.x86_64 0:4.027-7.el6

  perl-Socket6.x86_64 0:0.23-3.el6

  perl-TimeDate.noarch 1:1.16-11.1.el6

  procmail.x86_64 0:3.22-25.1.el6

Complete!

[ec2-user@ip-10-182-152-43 ~]$
```

Note: This installation requires a properly configured package manager such as YUM. Without the help of a package manager, you would need to download and install SpamAssassin and all of its dependencies manually.

2 Execute spamd with the following command:

```
spamd --listen-ip 10.182.152.43 --allowed-ips 10.182.152.43,127.0.0.
1 -m 25
```

You will need to change the IP addresses specified in the ‘listen-ip’ and ‘allowed-ips’ parameters to match those used on your network. Run "spamd -help" to get more details on the available options. This will look like the following:



Note: The example shows spamd running on port 1783. If you want to run on the default port of 783, then you would need to execute the spamd process with root privileges.

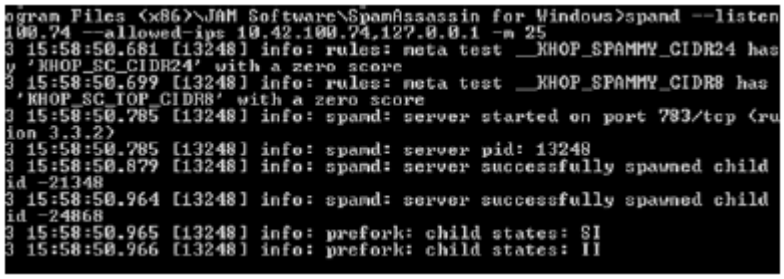
Installing SpamAssassin on Windows Machines

These instructions assume that you will be installing the pre-compiled Windows version of SpamAssassin provided by JAM Software. If you are installing any other version of SpamAssassin, please refer to the documentation of that version for installation instructions.

1. Install SpamAssassin from http://www.jam-software.com/spamassassin/. The installation process is simple and will install the necessary executables under the '`C:\Program Files (x86)\JAM Software\SpamAssassin for Windows`' directory.
2. From the 'C:\Program Files (x86)\JAM Software\SpamAssassin for Windows' directory, run `spamd` with the following command:

```
spamd --listen-ip 10.42.100.74 --allowed-ips 10.42.100.74,127.0.0.1
-m 25
```

You will need to change the IP addresses specified in the 'listen-ip' and 'allowed-ips' parameters to match those used on your network. Run "spamd -help" to get more details on the available options. This will look like the following:

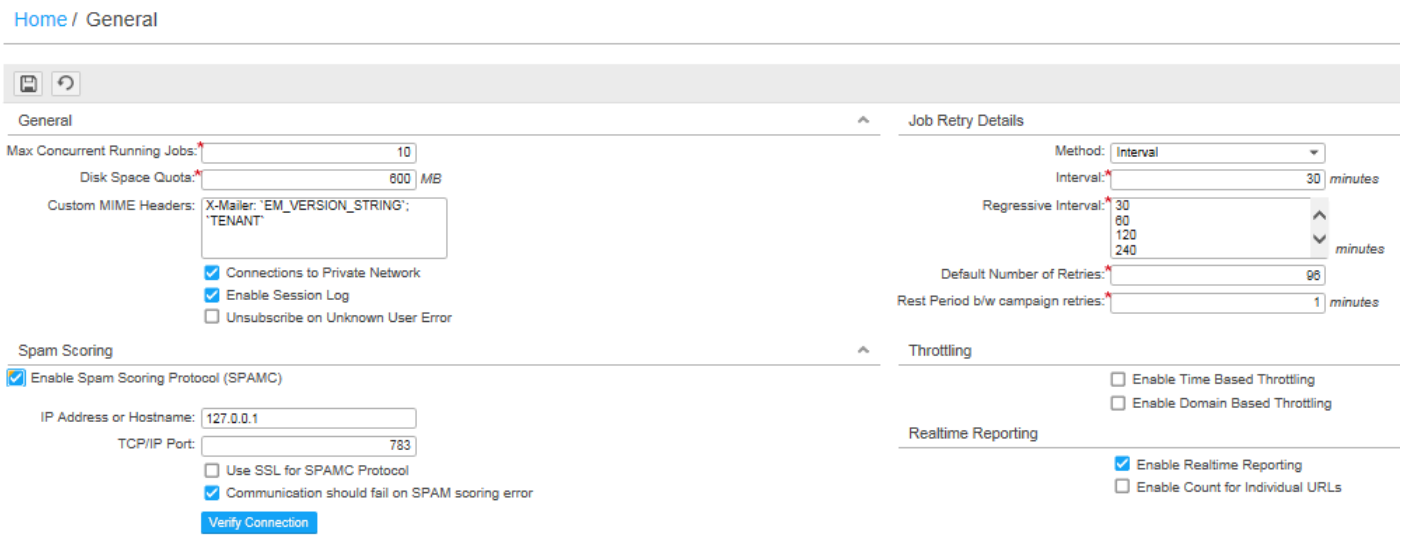


Configuration

Spam scoring is configured system-wide but also has some tenant specific settings that can enable or disable the feature and fine tune the behavior at the tenant level. The following sections describe the configuration in more detail.

System Configuration

The system configuration for spam scoring is configured on the '**Outgoing Settings > Outgoing Mailing > General**' screen in the configuration manager.



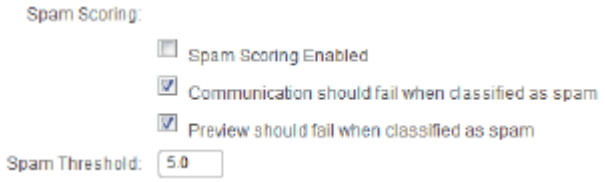
Each of the configuration fields is described in the following table:

Field Label	Description
Spam Scoring Protocol	Specifies the spam scoring protocol to use. The following choices are supported: OFF – Spam Scoring is disabled globally. REST – Specifies that Infor's REST API for Spam Scoring should be used. Support for this protocol is not yet available. SPAMC – Specifies that Infor Email Marketing should communicate directly with SpamAssassin using the SpamAssassin network protocol.
IP Address or Hostname	When using the SPAMC protocol, this is the IP Address or Hostname of the SpamAssassin service. Specify the IP Address of the machine when SpamAssassin is installed.
TCP/IP Port	When using the SPAMC protocol, this is the TCP port number of the SpamAssassin service. The default port number used by SpamAssassin is 783.
REST Api URL	When using the REST protocol, this is the URL of Infor's Restful Spam Scoring Service.
Api Key	When using the REST protocol, this is the application API key that will be used for authenticating with the spam scoring service.
Use SSL for SPAMC Protocol	Indicates if SSL should be used when communicating to the SpamAssassin service.
Communication should fail on SPAM scoring error	Indicates that campaigns submission should fail for any preview or regular campaign, if the applica-

Field Label	Description
	tion encounters an error communicating with the spam scoring service.
Get Api Key (button)	Retrieves a new Api Key for use with the REST service.
Verify Connection (button)	Verifies that the above settings are correct, by attempting to open a connection to the spam scoring service.

Tenant Configuration

The tenant configuration for spam scoring is configured on the **Tenants > <tenant> > Tenant Settings** screen in the configuration manager.



Each of the configuration fields is described in the following table:

Field Label	Description
Spam Scoring Enabled	Enables or disables spam scoring for the given tenant.
Communication should fail when classified as spam	Indicates that the campaign/communication should fail, if one or more test messages are classified as SPAM.
Preview should fail when classified as spam	Indicates that the preview campaign/communication should fail, if one or more test messages are classified as SPAM.
Spam Threshold	Indicates the minimum spam score required for a message to be classified as spam.

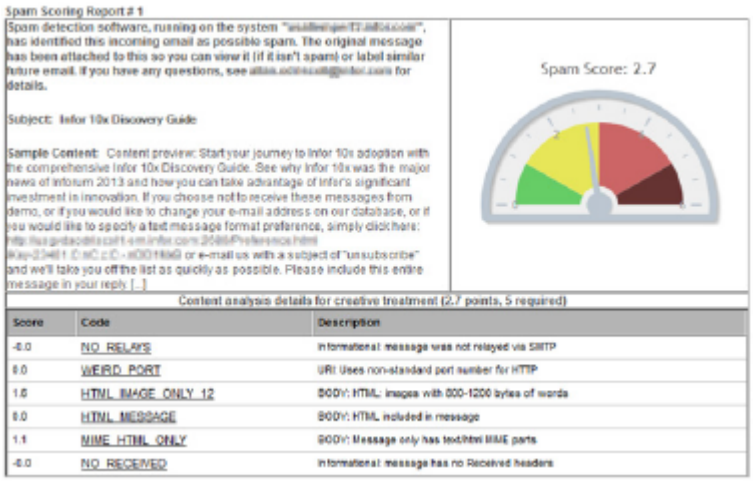
Reports

Admin Manager Reporting

Spam scoring reports are available on the 'Job Details' page in the admin manager. To view the spam scoring report, do the following:

1. Open the Admin Manager.
2. View the Job Details page by clicking on **Controls > Job Details** from the menu.
3. Select the job to view the spam scoring report.
4. Click the '**Spam Scoring Report**' link on the '**Job Controls and Details**' modal window.

The spam scoring report will look something like the following:



The report lists a summary of the message for easy identification, as well as a list of rules that were violated. The table of rule violations includes the following fields:

Column Name	Description
Score	The score for the individual rule violation. This shows the impact of the rule violation on the overall message score. Informational messages will have a score of 0.0 (or -0.0). These do not affect the overall spam score. Violations with a positive score report that the given aspect of the message content is considered an indication that the message may be SPAM.

Column Name	Description
	Violations with a negative score report that the given aspect of the message content is an indication that the message may not be SPAM. The scores for each individual rule violation are summed together to calculate the overall spam score. If the overall spam score is equal to or greater than the configured spam threshold, then the message will be considered to be SPAM.
Code	The SpamAssassin code for the rule violations. In many cases you can click on the spam code link to get additional background for the rule violation.
Description	A short description of the rule violation from SpamAssassin.

Campaign Submission Report

A text version of the spam scoring report is also available in the campaign fulfillment log file. This will be visible from the Marketing front-end.

```
--BEGIN SPAM SCORING REPORT--
```

```
Report ID: 1
```

```
Panel Key: treatment
```

```
Spam Score Status: NOT_SPAM
```

```
Subject: Infor 10x Discovery Guide
```

```
Score: 2.7
```

```
Spam Threshold: 5.0
```

```
Content Preview: Content preview:  Start your journey to Infor 10x
adoption with the comprehensive    Infor 10x Discovery Guide. See why
 Infor 10x was the major news of Inforum    2013 and how you can take
 advantage of Infor's significant investment in   innovation. If you
choose not to receive these messages from demo, or if you    would like
 to change your e-mail address on our database, or if you would    like
 to specify a text message format preference, simply click here: http:
//demo.infor.com/Preference.html/Key-24901.C.nC.z.C.-.nHTfJ3V    or e-
mail us with a subject of "unsubscribe" and we'll take you off the list
```

```
   as quickly as possible. Please include this entire message in your
 reply.    [...]
```

```

```

```
Rule: NO_RELAYS, -0.0, Informational: message was not relayed via SMTP
```

```
Rule: WEIRD_PORT, 0.0, URI: Uses non-standard port number for HTTP
```

```
Rule: HTML_IMAGE_ONLY_12, 1.6, BODY: HTML: images with 800-1200 bytes
 of words
```

```
Rule: HTML_MESSAGE, 0.0, BODY: HTML included in message
```

```
Rule: MIME_HTML_ONLY, 1.1, BODY: Message only has text/html MIME parts
```

```
Rule: NO_RECEIVED, -0.0, Informational: message has no Received headers
```

```

```

```
--END SPAM SCORING REPORT--
```

```

```

This report includes the same information as shown above in the report from the admin manager.

Troubleshooting

In the event of any errors with Spam Scoring, please check the following logs:

1 `OutgoingService.log` file when debug messages are enabled.
   a Enable debug for com.infor.em.spamscore and com.infor.spam packages.

```
<logger name="com.infor.em.spamscore" additivity="true">
    <level class="org.apache.log4j.Level" value="debug" />
    <appender-ref ref="OutgoingService" />
</logger>
<logger name="com.infor.spam" additivity="true">
    <level class="org.apache.log4j.Level" value="debug" />
    <appender-ref ref="OutgoingService" />
</logger>
```

2 Fulfillment log file
3 ‘ `SpamAssassin log` ’ output or console output.

Reputation Analysis

12

Overview

Infor's Email Marketing project provides several features to assist in monitoring the reputation of the system. These include:

- Automatic processing for Email Feedback Loops.
- Automatic Blacklist Monitoring and Alerting.
- Spam Statistics for outbound message delivery
- Reply Statistics for messages sent to Abuse, Postmaster, and Complaint email addresses.
- Statistics on SMTP Error Categories.

The following sections will describe each of these features.

Email based Feedback Loops

Email-based Feedback loops provide a mechanism for an email service provider to send complaint information back the Infor Email Marketing system. Complaints are generally triggered when an email recipient clicks the "This is Spam" button in the email client. The email service provider will generally forward the complaint via email back into the source system. These messages are formatted in ‘Abuse Reporting Format’ and can be automatically processed by Log Processing. The admin may specify the behavior of the system when a feedback message is received. Possible behaviors include forwarding the message to another mailbox for external processing, or generating an automatic unsubscribe.

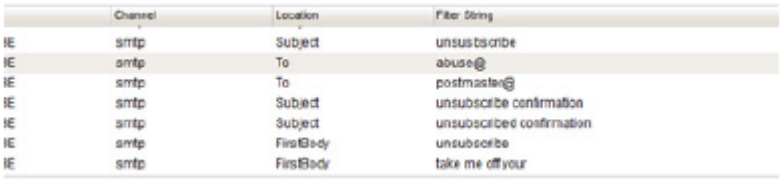
The Infor Email Marketing service will automatically accept feedback loop messages that are addressed to any of the configured email addresses, including the following:

- complaints@<your domain>
- abuse@<your domain>
- postmaster@<your domain>

Most major domains support feedback looks and the admin must sign up for this service from each of the individual domains that they would like to receive feedback from. In some cases, this may involve signing a contractual agreement. There is no standard process to sign up for all domains. However,

there are third party services, such as ‘Return Path, Inc.’ who can assist with the configuration of these feedback loops.

Note that if the incoming message is not in "Abuse Reporting Format"1, then normal processing will occur based on the processing rules defined in the configuration. Specifically, messages that are addressed to abuse@<your domain> or postmaster@<your domain> are processed as unsubscribe requests. This behavior can be changed by editing the relevant processing rules.



	Channel	Location	Filter String
IE	smtp	Subject	unsubscribe
IE	smtp	To	abuse@
IE	smtp	To	postmaster@
IE	smtp	Subject	unsubscribe confirmation
IE	smtp	Subject	unsubscribed confirmation
IE	smtp	FirstBody	unsubscribe
IE	smtp	FirstBody	take me off your

The following is a short list of email service providers that are known to support feedback loops. If the desired domain is not listed here then you will need to contact the domains postmaster directly for details about their feedback loop service.

- AOL.com:
  (http://postmaster.aol.com/Postmaster.FeedbackLoop.php)
- Comcast.net:
  (http://feedback.comcast.net)
- Cox.net:
  (http://fbl.cox.net)
- Earthlink.net:
  (email fblrequest@abuse.earthlink.net with "feedback loop request" in the subject line)
- Hotmail.com, Live.com, Msn.com:
  (https://support.msn.com/eform.aspx?productKey=edfsjmrpp&page=support_home_options_form_byemail&ct=eformts&scrx=1)
- Yahoo.com:
  (http://feedbackloop.yahoo.net/)

Most ISP's have a short web-based form that allows you to sign up for the service. You will generally need to provide contact information, a list of IP Addresses of your sending servers, and the email address which should receive the complaint messages (i.e. complaints@<your domain>). The Infor Email Marketing Incoming server must be publically available in order to receive these complaint messages.

Note: Email service providers do not have a test mode that enables testing of this feature. Once you sign up for the service it will be live.

Configuration

The behavior of feedback loop processing can be configured in the tenant settings page in the configuration manager (**Tenants > [tenant] > Tenant Settings**).

The ‘Complaint Behavior’ specifies the action to take when processing a feedback loop message. Valid options are as follows:

Option Name	Description
Ignore	Ignore the complaint message.
Forward	Forward the complaint message to the address specified by the ‘Complaints Forward Address’ setting.
Unsubscribe	Automatically unsubscribe the email recipient.
Unsubscribe/Reply	Automatically unsubscribe the email recipient and generate a reply confirmation message.

Blacklist

Infor's Email Marketing product provides an automatic mechanism to monitor external email black list services. This works by monitoring a configurable list of servers and querying for the blacklist status of a set of external IP addresses. By default, the status is updated every 20 minutes.

Configuration

Blacklist entries are configured in an XML file called ‘ `dnsbl.xml` ’ which is located in the config directory of the EM installation. Each entry in the configuration specifies the following attribute fields:

XML Attribute Name	Description
display.name	The name that is displayed in the admin manager UI.
url	The URL for the blacklisting service. This is generally the URL that the admin would need to visit to investigate a listing.
dns.base	The based DNS domain name used for blacklist queries.

XML Attribute Name	Description
Type	They type for this blacklist entry. This should be set to an integer value of “1”. This field is reserved for future use.

A sample XML file with a single entry looks like the following:

```
<lists>
```

```
   <dnsbl display.name="The Spamhaus Project" url=http://www.spamhaus.
org/
```

```
           dns.base="pbl.spamhaus.org" type="1"/>
```

```
</lists>
```

Infor Email Marketing ships with a list of 45 blacklist services. This list may be customized for your installation by adding or removing entries from the ‘ `dnsbl.xml` ’ file.

You may configure the set of IP Addresses that will be monitored by editing the ‘External IP Addresses’ field on the **Outgoing Settings > Network** page in the configuration manager. The input field can list one or more IP Addresses that should be monitored. These IP Addresses should be the external IP Address that is used to source outbound email.

You may also configure the update interval by editing the ‘Blacklist Update Interval’ field on the **Outgoing Settings > Network** page in the configuration manager. This is the number of minutes between each update.

Reporting

The admin manager provides a blacklist report by going to the **Statistics > Blacklist** page. This report looks like the following:

Alert Email Messages

If your external IP address is listed on one or more of the configured blacklist servers, then EM will send an alert email notifying the admin of the condition. To correct the situation, you will generally need to visit the web site for the blacklist server and request that your IP address be removed. Clicking on the name column on the Blacklist Statistics screen will take you to the necessary web site. Depending on the black list service they may also have additional details indicating why you were listed.

Spam Statistics

The ‘Spam Statistics’ report in the Admin Manager provides details on the number of delivery attempts that were rejected because they were classified as SPAM. A spam classification may be based on the content of the message or it could be based on other factors such as IP Reputation or past behavior. The system only reports the failures. It cannot do anything directly to prevent them.

Configuration

Spam keywords are configured in the `<installation directory>\config\SpamKeywords.xml` file. This file contains a list of keywords or regular expressions that indicate that the outgoing message was classified as SPAM. For example, the file may look like the following:

```
<spam.keywords>
```

```
  <keyword value="spam" regular.expression="false" case.insensitive=
"true" id="1" />
```

```
  <keyword value="5.7.1" regular.expression="false" case.insensitive=
"true" id="2" />
```

```
  <keyword value="policy" regular.expression="false" case.insensitive=
"true" id="3" />
```

```
  <keyword value="SpamAssassin2" regular.expression="false" case.
insensitive="true" id="4" />
```

```
  <keyword value="Blocked" regular.expression="false" case.insensitive=
"true" id="5" />
```

```
  <keyword value="rejected" regular.expression="false" case.insensitive=
"false" id="6" />
```

```
</spam.keywords>
```

The file consists of one or more ‘keyword’ elements contained inside a single ‘spam.keywords’ element. The ‘keyword’ element has the following attribute values:

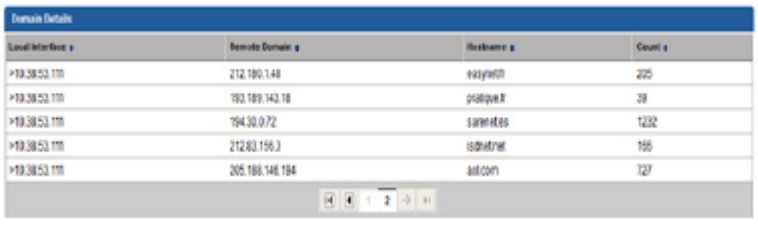
Attribute Name	Description
value	The keyword value or search string.
regular.expression	A Boolean value indicating if the keyword is a regular expression or not. This should be either “true” or “false”
case.insensitive	A Boolean value indicating if the keyword is case sensitive or not. This should be either “true” or “false”
id	A unique numeric value. Keyword elements should be numbered sequentially.

Note: Any changes to the ‘ `SpamKeywords.xml` ’ file will require the Outgoing Service application to be restarted in order for the changes to be re-loaded.

Reports

Domain Details

The ‘Domain Details’ report shows the number of messages delivered to a given domain.

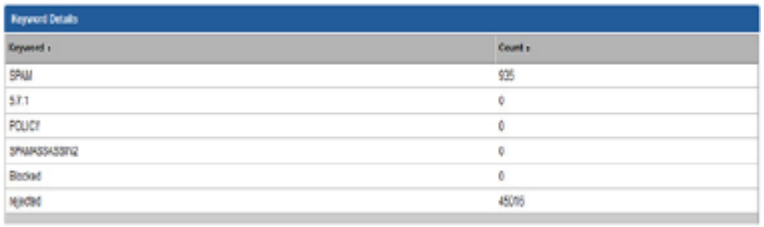


The columns in the report are defined as follows:

Column Name	Description
Local Interface	The IP Address of the local network interface.
Remote Domain	The IP Address of the remote SMTP server.
Hostname	The domain name of the remote SMTP server.
Count	The number of messages delivered to this server.

Keyword Details

The ‘Keyword Details’ report shows the number of delivery attempts that failed because the message or connection was classified as SPAM.

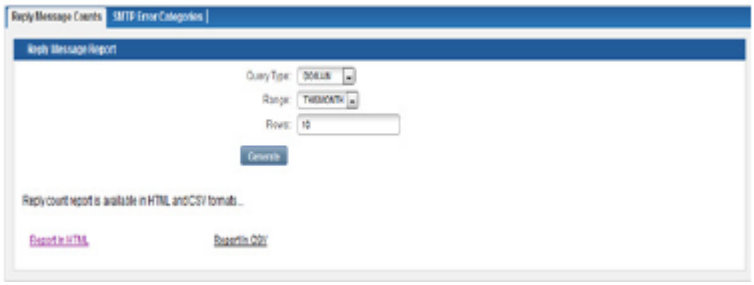


Delivery Info

The ‘Delivery Info’ reports in the admin manager provide details on the number of messages delivered vs. the number of reply messages received (i.e. complaint, abuse, and postmaster). Another report called ‘SMTP Error Categories’ shows the number of messages delivered vs. delivery failures of various reasons. These reports can be useful when analyzing the delivery statistics for a given campaign or the system as a whole.

Reply Message Counts

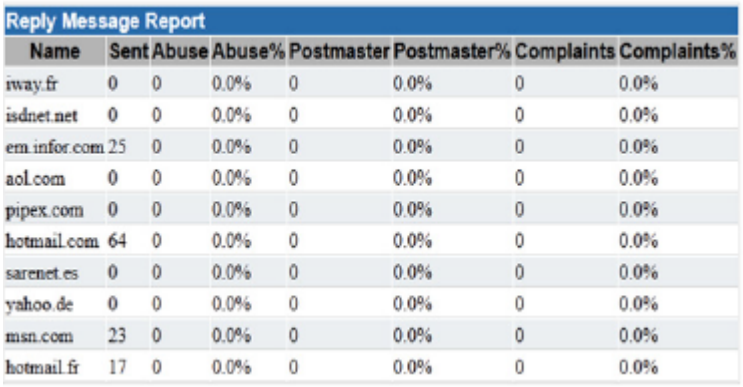
The ‘Reply Message Counts’ report shows the number of messages sent vs. the count and percentage of replies received to Abuse, Postmaster, and Complaints email addresses. The report can be viewed either by domain or by campaign, and can be downloaded in either HTML or CSV format.



To generate the report:

1. Choose the ‘**Query Type**’. This is either by ‘DOMAIN’ or ‘CAMPAIGN’.
2. Choose the time range. Current options are: ‘TODAY’, ‘THISWEEK’, or ‘THISMONTH’.

3 Choose the number of rows to output in the report.
4 Click the "**Generate**" button to create the report.
5 Click the desired format to view the report.
The following is an example of what the Reply Message Report looks like in HTML format:



Reply Message Report

Name	Sent	Abuse	Abuse%	Postmaster	Postmaster%	Complaints	Complaints%
iway.fr	0	0	0.0%	0	0.0%	0	0.0%
isdnet.net	0	0	0.0%	0	0.0%	0	0.0%
em.infor.com	25	0	0.0%	0	0.0%	0	0.0%
aol.com	0	0	0.0%	0	0.0%	0	0.0%
pipex.com	0	0	0.0%	0	0.0%	0	0.0%
hotmail.com	64	0	0.0%	0	0.0%	0	0.0%
sarenet.es	0	0	0.0%	0	0.0%	0	0.0%
yahoo.de	0	0	0.0%	0	0.0%	0	0.0%
msn.com	23	0	0.0%	0	0.0%	0	0.0%
hotmail.fr	17	0	0.0%	0	0.0%	0	0.0%

SMTP Error Categories

The 'SMTP Error Categories' report summarizes the number of message delivered vs. the number of failures of various reasons.

Configuration

The SMTP Error categories are configurable by editing the <installation directory>\config\errortree.xml file. The file contains one or more nested 'search.node' elements contained within a single 'search.tree' element. The following is an example of what the `errortree.xml` file might look like:

```
<search.tree>
```

```
    <search.node id="1" search.string="RECIPIENT" type="SIMPLE">
```

```

```

```
        <search.node id="2" search.string="ADDRESS REJECTED"
type="SIMPLE" category="NOSUCHUSER"/>

        <search.node id="3" search.string="RECIPIENT REJECTED"

          type="SIMPLE" category="NOSUCHUSER"/>

        <search.node id="4" search.string="INVALID RECIPIENT"

          type="SIMPLE" category="NOSUCHUSER"/>

        <search.node id="5" search.string="NEVER LOGGED ONTO"

          type="SIMPLE" category="NOSUCHUSER"/>

    </search.node>

    <search.node id="6" search.string="ENVELOPE" type="SIMPLE">
```

```
        <search.node id="7" search.string="TEMPORARY ENVELOPE
   FAILURE"


         type="SIMPLE" category="SERVERERROR"/>


    </search.node>


    <search.node id="8" search.string="SPAM" type="SIMPLE" cat
egory="SPAM"/>


    <search.node id="9" search.string="ABUSE" type="SIMPLE" cat
  egory="SPAM"/>


</search.tree>
```

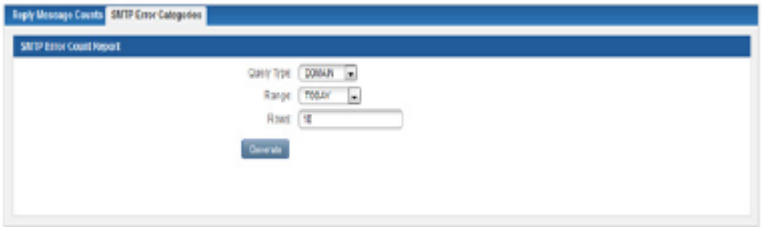
The ‘search.node’ element contains the following attributes:

Attribute Name	Description
id	A unique numeric ID value. ID values should increment sequentially.
search.string	The case insensitive string for which to search.
type	The type of the search string. This may be either ‘SIMPLE’ or ‘REGEX’.
category	For leaf nodes, this attributes provides the final error category.

The ‘search.node’ element may also contain nested ‘search.node’ elements. The Infor Email Marketing application loads this file into a tree structure and will search the tree looking for matching nodes. If a match is found, then it will continue searching the nested nodes until a matching node is found that includes a ‘category’ attribute.

Viewing the Report

The ‘SMTP Error Categories’ report shows the number of messages sent vs. the count of messages rejected for various reasons. The report can be viewed either by domain or by campaign, and can be downloaded in either HTML or CSV format.



To generate the report:

1. Choose the ‘Query Type’. This is either by DOMAIN or CAMPAIGN.
2. Choose the time range. Current options are TODAY, THISWEEK, or THISMONTH
3. Choose the number of rows to output in the report.
4. Click the "Generate" button to create the report.
5. Click the desired format to view the report.

   The following is an example of what the ‘Reply Message Report’ looks like in HTML format:

SMTP Error Categories

Name	Sent	Spam	Unknown User	Protocol Error	Server Error
cix.co.uk	2,865	0	45	0	0
domain1.com	32,423	0	1,845	0	0
domain2.com	8,438	0	1,807	62	0
em.infor.com	24	0	0	0	0
infor.com	9	0	0	0	0

Email Markup Language

13

This chapter provides a reference to Email Markup Language (EML). EML is used to customize and personalize content files and is executed dynamically when Email is created and sent.

Caution: Do not copy and paste commands, scripts or code from this document. Line breaks, quotes, and some other characters picked up when you copy from the PDF can cause errors in the pasted text. Text copied from other word processors (such as Microsoft Word) may cause similar syntax errors.

Quote characters used for parameters within EML tags must be the standard ASCII quote character (u0022). Other unicode quote characters will not be recognized and will cause content generation errors.

Command Syntax

The following syntax rules apply to all EML commands:

- Content insert directives are inserted into text with the back-tick (`) escape character at the beginning and end of the command string.

  To insert a back tick character into your message body content, use two back ticks together. Back ticks are not supported within EML functions, even within quoted strings.

- Double quotes (“)are used to designate literal values such as character string parameter values in EML function calls. Apostrophes (‘) are interpreted as any other character. For example: `` `URL ("http://www.infor.com/fred's-place.html")` ``
- Commands are case insensitive EML Tag names, and substitution field names must begin with a unicode letter or digit. Subsequent characters may contain unicode letter, digit, underscore, or space characters. If the name includes anything other than these characters, then a parser exception will be generated.
- EML functions can be nested in other EML functions. Omit the back tick when nesting EML within another EML function
- Optional parameters can be omitted from function calls. See "URL" on page 328 for an example.

- Commas after parameters can be omitted when there are no further parameters. For example, `` `URL("http://www.infor.com")` `` and `` `URL("http://www.infor.com", )` `` are equivalent.
- HTML and EML can be intermingled.
- If a directive not recognized, an evaluation exception will be generated with the following text: "Unknown EML Tag". The exception text will contain the name of the invalid EML Tag:

  “Unknown Content Insert: “ String

EML Command Reference

The EML commands described in this section are displayed in alphabetic order.

AttachFile

Attaches a file to the Email.

Usage:

```
`AttachFile(SourceFileName, TargetFileName, MimeType)`
```

- ‘SourceFileName’ indicates the path of the file to attach. This may be a local or remote file (specified by a URL)
- ‘TargetFileName’ is the name of the attached file as seen in the E-Email.
- ‘MimeType’ is the content type of the file being attached. A complete list of mime types can be found at the following web site: http://www.iana.org/assignments/media-types/

Examples:

```
`AttachFile("CN1248282.pdf", "statement.pdf", "application/pdf")`
`AttachFile("http://content.example.com/myfile.txt", "yourfile.txt",
"text/plain")`
```

AttachFileInline

Attaches the specified file to the Email inline. This is generally used to reference images that are included in the email. In addition to attaching a file to the email, it will output a content reference (i.e. " `cid:121324234.212a233b3.1282388` ") which uniquely identifies the attachment.

Usage:

```
`AttachFileInline(SourceFileName, TargetFileName, MimeType)`
```

'SourceFileName' indicates the path of the file to attach. This may be a local or remote file (specified by a URL)

'TargetFileName' is the name of the attached file as seen in the email.

'MimeType' is the content type of the file being attached. A complete list of mime types can be found at the following web site: http://www.iana.org/assignments/media-types/.

Examples:

```
<img src="`AttachFileInline("CN1248282.jpg", "ad1.jpg", "image/jpeg")
`"/>
```

```
<img src="`AttachFile("http://content.example.com/logo.gif", "logo.
gif", "image/gif")`"/>
```

AttachFileInlineRaw

Attaches the specified file to the Email inline. This is generally used to reference images that are included in the email. In addition to attaching a file to the email, it will output a content reference (i.e. "cid:121324234.212a233b3.1282388") which uniquely identifies the attachement. See AttachFile for details on the usage of this tag.

Capitalize

This function capitalizes a word. See also "CasualName" on page 296 for additional information.

Usage:

Capitalize(FieldA {, FieldB ...})

All fields are capitalized, and then concatenated and separated by a single blank. Leading and trailing white space is deleted.

Example:

Dear ‘Capitalize(firstName , lastName)‘,

Result:

Dear Jerry Garcia,

CasualName

This function generates a casual name (usually the first name).

Rules for the selection of the name include:

- Replace any underscore with a space.
- Delete any spaces before or after a dash.
- Strip any leading or trailing white space.
- Skip any prefixes like MR, MS, MRS, MISS, DR, or REV.
- If name contains a comma, take the last word.
- If name does not contain a comma, take the first word.
- If the chosen name is only one character (not counting any periods), use the full name.

Usage:

```
CasualName(Name)
```

Examples:

`CasualName("MR PHIL_LESH JR")`	Phil
`CasualName("W B_KREUTZMANN")`	W B Kreutzmann
`CasualName("MR P_ROWAN")`	P Rowan
`CasualName("MR STEVE_KIMOCK")`	Steve

`CasualName("MS ROSALIE_MCFALL")`	Rosalie
`CasualName("MRS DONNA J_GODCHAUX")`	Donna
`CasualName("MISS CAROLYN MG_GARCIA")` 93	Carolyn
`CasualName("MR RON P_MCKERNAN JR")`	Ron
`CasualName("ALTHEA_CARTER")`	Althea
`CasualName("DR ROBERT_HUNTER")`	Robert
`CasualName("REV JOHN P_BARLOWE")`	John
`CasualName(" Bob Brown")`	Bob
`CasualName("Susey Wong")`	S.Wong
`CasualName("Hunt, Helen ")`	Helen
`CasualName(" Silver, SR, David ")`	David
`CasualName("Mrs Lubia")`	Lubia

ClientName

Outputs the tenant name. This can be useful if you need a way to quickily identity which tenant the message was generated from. This tag is only available for WebPages within the incoming service.

Usage:

`ClientName'

Example:

`ClientName`

Concatenate

This function concatenates values and/or list fields into a single string.

Usage:

```
Concatenate( s1, s2 {, s3 } }
```

Surround literal values with quotes, but do not use quotes for list column names. All leading and trailing spaces are trimmed.

Example:

```
`Concatentate("Dear Comrade ", Last Name)`
```

Condition

Determine if the given condition is true or false.

Usage:

`Condition(conditional expression)`

Where "conditional expression" results in a Boolean true or false value. The expression can include the following operators:

Field a field from the master list file

RecordField a field from a transaction list file

Variable an EML variable.

Literal a literal number or string.

=Tests for equality

>Greater than

>=Greater than or equal to

<Less than

<=Less than or equal to

!=Not equal to

Example:

`If (Condition (Age >= 65)) `

You'll also receive our senior discount!

`End`

Note: In some cases (such as when using `If` and `For` tags) Condition is implied.

ContextValue

Outputs a value from the current URL context. Context values are available for "SocialNetworkingFlag", "FriendRequest", and "Friend". This tag is only available for WebPages within the incoming service.

Usage:

`ContextValue(VALUE_NAME)`

Where:

VALUE_NAME is the name of the context value to insert. This can be one of: "SocialNetworkingFlag", "FriendRequest", or "Friend".

Example:

`ContextValue("SocialNetworkingFlag")` -> Outputs "true" if the social networking flag is set for the request, otherwise it will output "false".

`ContextValue("FriendRequest")` -> Outputs "true" if the friend flag is set for the request, otherwise it will output "true".

`ContextValue("Friend")` -> Outputs the friend email address if available.

CurrentDate

Outputs the current date in the format required by the HTTP specification. This tag is only available for WebPages within the incoming service.

Usage:

`CurrentDate`

Example:

`CurrentDate`

This will output the current date and time in a format similar to the following:

Thu, 19 Apr 2012 10:57:44 EDT

CustomLink

Inserts a custom link with an associated HTML anchor tag. This tag can be used to provide integration with external systems that have special requirements for the URL. For example it can be used to provide integration with an external privacy management system. Usage of this tag requires an implementation of the custom link API. Usage of the tag is dependent on the actual implementation.

CustomLinkRaw

Inserts a custom link. This tag can be used to provide integration with external systems that have special requirements for the URL. For example it can be used to provide integration with an external privacy management system. Usage of this tag requires an implementation of the custom link API.

Date

This function generates the current date and/or time, at message transmission, in a locale-sensitive manner. An optional parameter can be used to specify the format to be used for the date. If a format parameter is not specified, then the date will be formatted in standard RFC822 format (equivalent to "EEE, dd MMM yyyy HH:mm:ss Z (z)")

The date formatter uses the simple Java date formatting as defined on the following web page: http://java.sun.com/javase/6/docs/api/java/text/SimpleDateFormat.html

A summary of the available date and time components is listed in the following table:

Letter	Date or Time Component	Examples
G	Era designator	AD
y	Year	1996; 96
M	Month in year	July; Jul; 07
w	Week in year	27
W	Week in month	2
D	Day in year	189
d	Day in month	10
F	Day of week in month	2
E	Day in week	Tuesday; Tue
a	Am/pm marker	PM
H	Hour in day (0-23)	0
k	Hour in day (1-24)	24
K	Hour in am/pm (0-11)	0
h	Hour in am/pm (1-12)	12
m	Minute in hour	30
s	Second in minute	55
S	Millisecond	978

Letter	Date or Time Component	Examples
z	Time zone	Pacific Standard Time; PST; GMT-08:00
Z	Time zone	-800

Pattern letters are usually repeated, as their number determines the exact presentation:

Text: If the number of pattern letters is 4 or more, the full form is used; otherwise, a short or abbreviated form is used if available.

Number: The number of pattern letters is the minimum number of digits, and shorter numbers are zero-padded to this amount.

Year: If the number of pattern letters is 2, the year is truncated to 2 digits; otherwise, it is formatted as a number (see above).

Month: If the number of pattern letters is 3 or more, the month is formatted as text; otherwise, it is formatted as a number (see above).

A second optional parameter can be included to specify the locale to be used when formatting the date. The date will be formatted using the standard conventions defined by this language and locale argument or, if not specified, then the language locale of the sending FROM address (i.e. language_LOCALE linked to the Identity of the From Address). The language_LOCALE is specified in the tenant settings in the configuration manager (Locales tab). See Appendix A for a list of support locales.

Usage

`Date(Format,Locale)`

Where Format is an optional pattern string as defined above.

Locale is an optional Java language locale string.

Example

The following examples show how date and time patterns are formatted in the U.S. locale (en_US). The given date and time are 2010-03-07 14:35:13 local time in the U.S. “Eastern Daylight Time” time zone.

Date and Time Pattern	Result
`Date(“yyyy.MM.dd G 'at' HH:mm:ss z”)`	2010.03.16 AD at 14:35:13 EDT
`Date(“EEE, MMM d, ''yy”,"en_US")`	Tue, Mar 16, '10
`Date(“h:mm a”)`	2:35 PM
`Date(“hh 'o''clock' a, zzzz”)`	02 o'clock PM, Eastern Daylight Time
`Date(“K:mm a, z”,"en_US")`	2:35 PM, EDT
`Date(“yyyyy.MMMMM.dd GGG hh:mm aaa”)`	02010.March.16 AD 02:35 PM
`Date(“EEE, d MMM yyyy HH:mm:ss Z”)`	Tue, 16 Mar 2010 14:35:13 -0400

The following examples show how the date would be formatted in the France locale (fr_FR).

Date and Time Pattern	Result
`Date(“yyyy.MM.dd G 'at' HH:mm:ss z”)`	2010.03.16 ap. J.-C. at 14:35 :13 EDT
`Date(“EEE, MMM d, "yy”,"fr_FR")`	mar., mars 16, '10
`Date(“h:mm a”)`	2:35 PM
`Date(“hh 'heure' a, zzzz”)`	02 heure PM, Heure avancée de l'Est
`Date(“K:mm a, z”,"fr_FR")`	2:35 PM, EDT
`Date(“yyyyy.MMMMM.dd GGG hh:mm aaa”)`	02010.mars.16 ap. J.-C. 02:35 PM
`Date(“EEE, d MMM yyyy HH:mm:ss Z”)`	mar., 16 mars 2010 14:35:13 -0400

Default

Same as DefaultCapitalizeAnyBlank except without capitalization.

DefaultCapitalize

Alias for DefaultCapitalizeAnyBlank.

DefaultCapitalizeAnyBlank

This function capitalizes a word or inserts a default string if any of the listed fields is blank or unknown.

To provide compatibility with data mart extractors that use a predefined list of unknown values, `DefaultCapitalizeAnyBlank()` checks the Infor Email Marketing configuration data for the unknown values that should be used for this function. A sample list of unknown values might include:

- `[Invalid Values]`
- `UNKNOWN, UNKNWN, UNKNWON, UNKOWN, UNKWON, 1900-01-01 00:00:00, ETC.`

These values are set in the Configuration Manager. See "Configuring Tenant Pages" on page 101 for additional information.

Usage:

- `DefaultCapitalizeAnyBlank(` DefaultString , FieldA {, FieldB ...})

Where DefaultString is the text to insert if any of the other fields have a blank value (a string of length zero, or a value of NULL). All fields are capitalized, and then concatenated and separated by a single blank. Leading and trailing white space is deleted. If a field is invalid, an error is generated.

Examples:

- ‘DefaultCapitalizeAnyBlank(“Valued Customer”, firstName , lastName)‘

results in:

Result	firstName	lastName
“Bob Weir”	“Bob”	“Weir”
“Bob Weir”	“ Bob”	“Weir ”
“Bob Weir”	“bob”	“weir”
“Bob Weir”	“Bob”	“Weir”
“Valued customer”	“Bob”	(blank)
“Valued customer”	(blank)	(blank)

DefaultIf

Same as DefaultCapitalizeAnyBlank, except without capitalization.

DefaultIfEmpty

This function returns a specified default value if any of the supplied fields contain a blank or unknown value. If the default is not used, the other fields are concatenated, separated by a single blank, and used as the result value of the function.

To provide compatibility with data mart extractors that use a predefined list of unknown values, `DefaultIfEmpty()` checks the Infor Email Marketing configuration data for the unknown values that should be used for this function. A sample list of unknown values might include:

- `[Invalid Values]`
- `UNKNOWN, UNKNWN, UNKNWON, UNKOWN, UNKWON, 1900-01-01 00:00:00, ETC.`

These values are set in the Configuration Manager. See "Configuring Tenant Pages" on page 101.

Usage:

- `DefaultIfEmpty(` Default_String , FieldA {, FieldB ...})

Where Default_String is the text to insert if any of the other fields contain a blank value. Note that no leading or trailing blanks are used within the fields.

Example:

```
‘DefaultIfEmpty("unknown product",Product SKU)‘
```

Encrypt

Encrypts the input data using the supplied encryption configuration. See section XXX for details on how to configure encryption.

A content generation error may be thrown in several situations including the following:

- Incorrect parameters of an invalid number of parameters.
- Incorrect encryption configuration.
- Security provider for the chosen encryption configuration is not available.
- Error encrypting data.

Usage:

```
`Encrypt(ENCRYPTION_CONFIGURATION_NAME, DATA1 [,DATA2, …, DATA(n)])`
```

Where:

ENCRYPTION_CONFIGURATION_NAME is the name of the encryption configuration to use. Currently only "DEFAULT" is supported. The default encryption algorithm is "AES/ECB/ISO10126Padding" with a shared secret key.

DATA1 - DATA(n) are the parameters to encrypt. These parameters may be simple literal strings, numbers, Booleans, Expressions, or any other type of EML tag. All parameters will be evaluated and then concatenated together to form the input data to be encrypted.

Example:

`Encrypt("DEFAULT", "C=", CustomerNumber)`

End

Specifies the end of an EML block started by `For`,` ForEachRecord`, or `If` statement.

Usage

<EML Block using ‘For’, or ‘ForEachRecord’ or ‘If’...**>**

`End`

Example:

`If(FirstName == "Allan")`

Hello Allan!

`End`

Evaluate

Evaluates the given mathematical expression.

Usage:

`Evaluate(expression)`

Where expression can include the following operators:

- Field a field from the master list file
- RecordField a field from a transaction list file
- Variable an EML variable.
- Literal a literal number.
- + additional
- - subtraction
- / division
- * multiplication

Example:

`Set(MyCount, Evaluate(MyCount + 1))`

FileInsert

`FileInsert` accepts a local file specification or a URL. If a URL is specified, it downloads the file from the remote HTTP server. If the file is local, it verifies that the file is located within the job directory. Any extra parameters passed into this EML function are appended together to create a filename. This allows you to create dynamic file names.

Usage:

- `FileInsert(File Name)`

Examples:

```
FileInsert("Webdata/myfile.html")
```

```
FileInsert("http://www.myserver.com/myfile.html")
```

File inserts are cached in memory for the duration of the job pass. If multiple recipients include the same offer, the content will be downloaded once on the first request.

FileInsertNoCache

FileInsert accepts a local file specification or a URL. If a URL is specified, it downloads the file from the remote HTTP server. If the file is local, it verifies that the file is located within the job directory. Any extra parameters passed into this EML function are appended together to create a filename. This allows you to create dynamic file names. This tag is different than FileInsert only in that it doesn't attempt to cache the result. A new HTTP request will be made for each request. See FileInsert for additional details on usage.

ForEachRecord

Executes the following block of EML once for each record in the specified record set.

Usage:

`ForEachRecord(record set name)`

Where record set name is the named record set which was previously queried via the `GetRecordSet` EML tag.

Example:

```
`GetRecordSet("transactions.lst", "MyTransactions", CustomerNumber)`

`ForEachRecord("MyTransactions")`

<Do Something...>


`End`
```

ForwardToFriendLink

Generates a URL linking the the ForwardToFriend landing page on the incoming service. If inserted into an HTML message part then it will also generate an anchor tag. Otherwise the raw link will be output.

Usage:

`ForwardToFriendLink(Click_Over_Text)`

Where:

Click_Over_Text is the option text displayed as the link in lieu of the URL.

Example:

`ForwardToFriendLink("here")`

ForwardToFriendLinkRaw

Generates a raw URL linking to the ForwardToFriend landing page on the incoming service. See ForwardToFriendLink for additional information on usage.

ForwardToFriendRequest

Resolves to TRUE in the content generator if the active request is the result of a forward to friend request.

Usage:

`ForwardToFriendRequest`

Example:

`if(ForwardToFriendRequest)`

The current request is a forward to friend request.

`end`

FTFRequest

Resolves to TRUE in the content generator if the active request is the result of a forward to friend request. See ForwardToFriendRquest for more details.

GetRecordSet

Get a record set from a given transaction file.

Usage:

`GetRecordSet(transaction file, record set name, key value)`

Where:

Transaction file - is the name of the input transaction list file. This could be a file in the job directory or somewhere else on the system.

Record set name - is a name given to this record set.

Key value - is the value that should be used for the lookup.

Example:

`GetRecordSet("securities.lst", "CurrentSecurity", ticker)`

NOTE: The first record in the result set is made the current record.

HomeUrl

Inserts the home URL configured for the tenant. This tag is only available for WebPages within the incoming service.

Usage:

`HomeUrl`

Example:

`HomeUrl`

HtmlDetection

Inserts an image reference to a 1x1 pixel transparent image which is used to detect if the recipient is HTML capable and also if the email was opened. This tag only applies to HTML message parts where HTML Detection is enabled. If this tag is not found in the message body then the 1x1 pixel image will automatically be inserted at the bottom of the email. Use this tag to control the location where it gets inserted.

Syntax:

`HtmlDetection`

Example:

```
`HtmlDetection`
```

If

Execute a block of EML, if the specified condition evaluates to true.

Usage:

`If(condition)`

Where condition is evaluated via `Condition` EML tag.

Example:

`If(Today == "Monday")`

Back to work.

`End`

IntroductionMessage

This tag is a placeholder for an introduction message.This allows someone who is forwarding a message to a friend to supply a short introduction (i.e. a reason why they are forwarding the message) and specifies the placement of that message in the email.

By default a text area for the introduction message is found on the ForwardToFriend landing page (i.e. `WebPages\ForwardToFriend.html`). When the ForwardToFriend request is submitted the value of this text area will be inserted into into the message content at the point where the IntroductionMessage tag is found. If the IntroductionMessage is not used within the message content for the ForwardToFriend feature then the associated text area on the landing page should also be removed.

Usage:

`IntroductionMessage`

Example:

`IntroductionMessage`

JobId

Outputs the job ID in the format YYYY_MM_DD__HH_MM_SS_TENANT. This can be useful if you need a way to quickly identity which job the message was generated from.

Usage:

`JobId`

Example:

```
'JobId`
```

Result:

Output will resemble something like: "2007_10_09__12_00_00_tenant"

JoinWithRandomOrder

Joins the supplied parameters together into a single string using the specified delimiter. Parameters are evaluated and then shuffled into a random order before joining.

Usage:

`JoinWithRandomOrder(DELIMITER, PARAM1, PARAM2[, PARAM3, …, PARAM(n)])`

Where:

DELIMITER is the delimiter used to join parameter together.

PARAM1 - PARAM(n) 2 or more parameter to join together using the specified delimiter.

Example:

```
`JoinWithRandomOrder("&", "x=1", "y=2", "z=3", Concatinate(RandomAlpha
Numeric(4,8),"=", RandomAlphaNumeric(3,9))` might produce "y=2&eQww3=
32P4j32f&x=1&z=3"
```

JobNumber

Outputs the job number. This can be useful if you need a way to quickly identity which job the message was generated from.

Usage:

```
`JobNumber`
```

Example:

```
`JobNumber`
```

ListUnsubscribe

Adds a List-Unsubscribe MIME header to the generated email message. This provides the necessary information to the email client so that it can enable a consistent unsubscribe mechanism for marketing messages. When the list unsubscribe link is provided in the email, the client will generally display an unsubscribe button or link near the top of the message. When the user clicks this button, a browser window should open and the unsubscribe page will load.

Usage:

```
`ListUnsubscribe(Url, {Additional Url, …})`
```

- Url is an optional parameter that specifies the base URL to include in the List-Unsubscribe header
- Any Additional Url parameters are concatenated together with the base Url to form the complete URL.

Examples:

```
`ListUnsubscribe()`
```

```
`ListUnsubscribe(URLGenerate("Preference.html"))`
```

```
`ListUnsubscribe(URLTrackRaw("http://some.domain.com/some_path?C=",
"List-Unsubscribe",,"data/",CustomerId))`
```

- The URL provided to the ListUnsubscribe tag need not use the default EM unsubscribe mechanism. If you have your own unsubscribe/preference management system, then the link may point to an external site maintained for this purpose.
- The ListUnsubscribe tag doesn't automatically provide any additional tracking, however, it doesn't prevent any tracking either. For example, in the last example listed above, the URL is tracked and because it uses a unique value in the description parameter of the URLTrackRaw tag (i.e. "List-Unsubscribe"), the List-Unsubscribe link can be tracked independently from any other tracked URLs.

Lookup

The Lookup function uses an XML document as a data source for looking up offers.

Usage:

- Lookup(Driver,Database,Table,LookupColumnName,LookupValue,ResultColumnName,MissingDefaultValue)

Where:

`'Driver'` is XML.

`'Database'` is the name of the XML file.

`'Table'` is the record set or path within the XML file that you choose from. Each element in the path is delimited by a forward slash.

`'LookupColumnName'` is the attribute or element (they are treated the same) within the selected record in which the lookup key can be found.

`'ResultColumnName'` is the name of the element that should be inserted into the message.

Example:

- ‘Lookup("XML","offers.xml","offers/message","code",P1,"content","MissingDefaultValue")‘

‘Lookup("XML","offers.xml","offers/message","code",P1,"content","MissingDefaultValue")‘

The elements in the specified path are resolved in the following order:

1. Check for a valid XML element or attribute name.
2. Check for a valid field name.
3. Check for a valid Content Generation Parameter.

   This allows you to dynamically specify the XML path.

   The XML file will be read into an internal database structure on the first request and will remain in memory for the duration of the pass.

   The `Lookup` function supports any record-based XML structure such as ones that are generated by standard database tools (SQL Server 2000). The following example is a simple record-based structure that can be used to store multiple offers in several different formats and locales. Each message element is identified by it's code attribute and contains the contents for a single offer. The message element contains one or more content elements each in a different format (text, HTML,

AOL). The format of the content is identified by the name of the content element. This structure is defined as follows:

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<offers>
```

```
<message code="message-code">
```

```
 <text>
```

```
   …
```

```
 </text>
```

```
 <html>
```

```
   …
```

```
 </html>
```

```
…
```

```
</message>

<message code="message-code">

 <text>

  …

 </text>

 <html>

  …

 </html>

 …

</message>
```

```
…
```

```
</offers>
```

Notice that the encoding type is UTF-8. This allows you to support multiple locales in a single XML file. If there are multiple locales, the locale should be concatenated with the message code. The following example shows how each lookup in the ETC file might be modified to accomplish this:

```
`
Lookup("XML","offers.xml","offers/message","code", concatinate(locale,
P1),"text","Error")
`
```

The XML file includes the locale as part of the message code. The following example shows how this works:

```
… <message code="EN_US_MC001"> … </message> …
```

Alternatively, a separate XML file can be generated for each locale. An example of each of these methods follows. In this case the filename (offers.xml) changes to a locale-specific file. This filename

is dynamically generated by concatenating the locale field with the fixed part of the filename. For example:

```
`
Lookup("XML",concatinate(locale,"offers.xml"),"offers/message", "code",
P1,"text","Error")
`
```

Message-Id or MessageIdentifier

Outputs the message id. This message id is used to re-associate any response Email with the originating job and recipient record so that feedback information can be recorded. By default, the Message-Id will automatically be inserted at the bottom of the email unless this tag is found somewhere in the email. You can use this tag to place the Message-Id at the desired location. If you do not want to Message-Id to appear in your email, then you can disable it in the Configuration Manager.

Usage:

`Message-Id` or `MessageIdentifier`

Example:

```
`Message-Id` or `MessageIdentifier`
```

Result:

Will output text similar to the following:

```
Message-Id: <20070730060033.294243539.0.-2-6@info@example.com>
```

MessageIdentifierRaw

Same as Message-Id except it output the Message-Id in the raw form.

MimeHeader

Allows the marketer to add arbitrary MIME headers to the generated email message. A set of reserved headers are disallowed including the following: Date, From, To, Message-Id, Subject, Mime-Version, Content-Type, Content-Transfer-Encoding, X-Mailer, DKIM-Signature, and any header beginning with 'X-Infor'.

Usage:

```
`MimeHeader(Name, Value, {Additional Value, …})`
```

- Name is the name of the new MIME header. Header names must contain only upper and lower case letters a-z, digits 0-9, or the dash character. If the name contains any characters other than these then content generation will fail while processing this tag.
- Value is the value to include with the new MIME header. Values must not contain any embedded carriage return or line feed characters.
- Any Additional Value parameters are concatenated together with the base Value to form a single value field.

Examples:

```
`MimeHeader("List-Unsubscribe", "<", URLTrackRaw("http://some.domain.
com/some_path?C=","List-Unsubscribe",,"data/",CustomerId) , ">")`

`MimeHeader("Require-Recipient-Valid-Since", Recipient, "; ", "Tue, 01
 Jan 2013 12:00:00 -0400")`
```

- The header value passed into the MimeHeader EML tag must be formatted as required by the specification for the given mime header. This is an advanced feature and the application doesn't provide any automatic formatting. For example, in the first example listed above, the value includes angle-brackets which are required by the specification of the List-Unsubscribe mime header. If these angle-brackets are missing then the feature may not function as expected.

NameFixup

This function applies the proper capitalization to a name field. It also replaces underscores with spaces.

Usage:

```
NameFixUp(Field)
```

Example:

```
‘NameFixUp(Name)‘
```

Param

The Param tag lets the marketer insert or reference the value of a parameter that was passed into a component tag. Parameters can be referenced within the component just like any other EML tag. However referencing a parameter outside the context of a component will result in a content generation error. Referencing a parameter with an out-of-bounds index will also result in a content generation error. Parameters can be referenced by their ordinal number of by a user defined name.

Usage:

`Param(ORDINAL)` or `Param(NAME)`

Where:

ORDINAL is the index of the parameter starting with 1.

NAME is the name of the parameter as specified in the component configuration.

Example:

`Param("url")`

ParamValue

Inserts the value of an HTML parameter that was passed from a previous page. Note that this tag is only available on the incoming server. It is not used for standard content generation.

Usage:

```
`ParamValue(PARAMETER_NAME)`
```

Example:

```
`ParamValue("email1")`
```

RandomAlphaNumeric

This tag will produce a random number, between the minimum and maximum values, of random alpha numeric characters. The purpose of this is to simply add some extra randomness to the data being encrypted. If used then the random data should be included in a way such that the decrypting application will be able to remove/ignore it.

Usage:

`RandomAlphaNumeric(MINIMUM_NUMBER_OF_CHARACTERS [,MAXIMUM_NUMBER_OF_CHARACTERS])`

Where:

MINIMUM_NUMBER_OF_CHARACTERS is the minimum number of random characters to generate.

MAXIMUM_NUMBER_OF_CHARACTERS is an optional maximum number of random characters to generate. If not specified then the maximum will be equal to the minimum (i.e. fixed length).

Example:

`RandomAlphaNumeric(6,10)` might produce "xy17EqW"

Recipient

This function inserts the Email address of the recipient.

Example:

```
'Recipient'
```

RecordField

Evaluate a field from the current record of the given record set.

Usage:

```
`RecordField(record set name, value name)`
```

Where:

`Record set` name - is the name of the record set previously loaded via the `GetRecordSet` EML tag.

`Value Name` - is the name of the value in the current record to use.

Example:

`GetRecordSet("products.lst", "CurrentProduct", ProductId)`

`RecordField("Current Product", "Description")`

SecureEmail

Indicates that the email should be digitally signed using either SMIME or PGP. Note that both of these methods require digital certificates and additional DNS configuration.

Usage:

```
`SecureEmail(Type)`
```

Where 'Type' is either SMIME or PGP.

Example:

```
`SecureEmail("SMIME")`
```

```
`SecureEmail("PGP")`
```

Set

Set an EML variable to the given expression.

Usage:

`Set(variable name, expression)`

Where:

Variable name - is the name of the EML variable to set.

Expression - is evaluated via the `Evaluate` EML tag.

Example:

`Set("TotalCost", PricePerUnit * Units)`

ShortUrl

Generates a shortened version of the given URL. This is intended for use with twitter or other services that limit the size of a post. This tag is intended to be used in specific situations where a short URL is required. It should not be used as a general purpose URL shortener. For example it could be used on the custom web page for a social networking event when generating a social networking link for a twitter post.

Usage:

`ShortURL(URL)`

Where URL is the URL to shorten.

Example:

`ShortURL(ViewInBrowserRaw("here","html","twitter"))`

The shortened URL may look like the following:

```
http:/demo.em.infor.com/Ukq1
```

SocialNetworkingAction

Resolves to the social networking action encoded in the URL for a social networking event. This can be used to introduce conditional content based on the supplied action.

Usage:

`SocialNetworkingAction`

Example:

`if(SocialNetworkingAction == "post")`

The social networking action is a "post".

`end`

SocialNetworkingEvent

Generates a URL for a social networking event. This is similar to a ViewInBrowser URL except that it contains additional tracking information for the social networking service and action. The email content may contain conditional content that is only rendered for social networking events. This allows the marketer to create a custom web page for the event.

Usage:

`SocialNetworkingEvent(SERVICE,ACTION,CLICKOVER)`

Where:

SERVICE is a user defined name for the social networking service (i.e. facebook, twitter, etc)

ACTION is a user defined name for the action performed by the link. (i.e. post, join, follow, etc)

CLICKOVER is the text that should be display for the html link.

Example:

`SocialNetworkingEvent("facebook","share","here")`

The actual out of this tag will be something like the following:

```
<a href=" http://demo.em.infor.com:1580/SocialNetworkingEvent/facebook/
list1/.J18X1T/Key-2001.C.J.z.F.Zj1qb2Uuc21pdGhAZW0uaW5mb3IuY29tfHM9Zm
FjZWJvb2t8YT1zaGFyZQ.nCWQ0LD">here</a>
```

SocialNetworkingEventRaw

Generates a URL for a social networking event. This is similar to a ViewInBrowser URL except that it contains additional tracking information for the social networking service and action. The email content may contain conditional content that is only rendered for social networking events. This allows the marketer to create a custom web page for the event. This tag is similar to SocialNetworkingEvent except that it generates a raw URL. See SocialNetworkingEvent for details on usage.

SocialNetworkingEventRequest

Resolves to TRUE in the content generator if the active request is the result of a social networking event.

Usage:

`SocialNetworkingEventRequest`

Example:

`if(SocialNetworkingEventRequest)`

The current request is a social networking event.

`end`

SocialNetworkingLink

Generates a tracked social networking URL, including html anchor tag, for a given service an action.

Usage:

`SocialNetworkingLink(TARGET_URL,SERVICE,ACTION,CLICKOVER,PARAM1,[PARAM(n)])`

Where:

TARGET_URL is the base URL for the social networking site to link to. If the URL contains dynamic parts then do not include them here. Dynamic URL components / parameters should be included in the PARAM fields.

SERVICE is a user defined name for the social networking service (i.e. facebook, twitter, etc)

ACTION is a user defined name for the action performed by the link. (i.e. post, join, follow, etc)

CLICKOVER is the text that should be display for the html link.

PARAM1 - PARAM(n) are any dynamic parameters to be included in the generated URL. All parameters are concatenated together to form the complete URL. Dynamic parts of the URL are not considered for tracking purposes.

Example:

`SocialNetworkingLink("http://twitter.com/share?url=","twitter","post","here",

ViewInBrowserRaw("here","html","twitter"))`

This will generate a tracked URL to "http://twitter.com/share?url=...". The base part of the URL will be used for tracking purposes. The social networking service will be set to "twitter" with an action of "post".

The actual output of this tag will be something like the following:

```
<a href=" http://demo.em.infor.com:1580/bdata/aHR0cDovL2RlbW8uZW0ua
W5mb3IuY29tOjE1ODAvVmlld0luQnJvd3Nlci9saXN0MS9KMThYMVQvaHRtbC9LZXktMj
AwMS5DLkouei5GLlpqMXFiMlV1YzIxcGRHaEFaVzB1YVc1bWIzSXVZMjl0ZkhNOWJHbHVh
MlZrYVc0Lm5KWFhRUmY/Key-2001.C.J.D.F.Zj1qb2Uuc21pdGhAZW0uaW5mb3IuY29tf
HM9bGlua2VkSW58YT1hY3Rpb24.nGV8Yh0">here</a>
```

Note: Many social networking links will include a URL as parameter. For example, you may want to allow the email recipient to post a link to the view in browser page for a given email campaign. If you do this, you must make sure that the target link is accessible externally from the social networking service. This is because the service may attempt to query the link in order to generate a thumbnail of the web page. If the link is not accessible then some services may reject the request. This generally won't be an issue for production systems but may be a concern for test systems.

\

SocialNetworkingLinkRaw

Generates a tracked social networking URL for a given service an action. This tag is like the SocialNetworkingLink tag except that it generates a raw URL. See SocialNetworkingLink for additional information.

SocialNetworkingService

Resolves to the social networking service encoded in the URL for a social networking event. This can be used to introduce conditional content based on the supplied service.

Usage:

`SocialNetworkingService`

Example:

`if(SocialNetworkingService == "facebook")`

The social networking service is "facebook"

`end`

TargetUrl

Inserts the target URL upon redirection of a tracked URL. This tag is only available for WebPages within the incoming service.

Usage:

`TargetUrl`

Example:

`TargetUrl`

Tenant

Outputs the tenant name.

Usage:

`tenant`

Example:

`tenant`

TenantName

Outputs the tenant name. This can be useful if you need a way to quickly identity which tenant the message was generated from.

Usage:

```
`TenantName`
```

Example:

```
`TenantName`
```

TenantProperty

Inserts the value of a tenant configuration setting. Note that this tag is only available on the incoming server. It is not used for standard content generation.

Usage:

`TenantProperty(PROPERTY_NAME)`

Where:

PROPERTY_NAME is the name of the tenant configuration setting.

Example:

`if(TenantProperty("UseReCaptcha"))`

… ReCaptcha related HTML code …

`end`

UniqueKey

Outputs the unique key or dimension ID for the recipient for which the message is being generated.

Usage:

```
`UniqueKey`
```

Example:

```
`UniqueKey`
```

UnsubscribeLanguage

This function selects the Unsubscribe Language Set to use. (See the “Unsubscribe Messages” section of the Infor Email Marketing Installation Guide for more information on Unsubscribe Language Sets.)

Failure to include an UnsubscribeLanguage command or specification of an unknown UnsubscribeLanguage command results in the automatic insertion of `‘UnsubscribeLanguage(“Default”)‘` at the bottom of the template.

Usage:

- `UnsubscribeLanguage(UnsubscribeLanguageName,FormatType)`

Where:

- `UnsubscribeLanguageName` is the name of a defined unsubscribe language set.
- `FormatType` is “AOL,” “Text,” or “HTML.” If `Format_Type` is not specified, the content generator uses the format that it deems most appropriate.

Examples:

- `‘UnsubscribeLanguage()‘` (indicates the default set with the best format for the specified Email address)
- `‘UnsubscribeLanguage(“MyUnsubscribeSet”)‘`
- `‘UnsubscribeLanguage(“MyUnsubscribeSet”,“HTML”)‘`

URL

This function inserts a URL for which click-throughs are not recorded by the Infor Email Marketing Incoming Services. Clicking on the URL takes the recipient directly to the destination Web site.

Usage:

- `URL(Target-URL{,` Click_Over_Text `} )`

If Click_Over_Text is omitted, the Target-URL is used as click-over text.

Examples:

```
‘URL(“http://www.infor.com")’

‘URL("http://www.infor.com","Infor Global Solutions")’
```

URLBare

Alias for URLRaw.

URLEncode

This function is used to perform standard CGI encoding on parameters appended to a URL. Without this encoding, some parameters are not interpreted correctly by destination Web sites. Any parameter that contains invalid URL characters, such the space, greater-than (>), less-than (<), and ampersand (&), must be encoded.

Usage:

- `URLEncode(String)`

Example:

In the following example, parts of the extra path must be encoded while other parts should not (for example, the '&' used to concatenate parameters in a CGI string should not be encoded):

- `'URLTrack("http://www.site.com?","Description","ClickOverText","data/param1=",URLEncode(First Name),"&param2=",URLEncode(Last Name),"&param3=",URLEncode(Hobby))'`

If the following three parameters are passed into the example, the resulting URL is as indicated below:

- `First Name "Jerry"`
- `Last Name "O'Connell II"`
- `Hobby "Food & Wine"`

Resulting URL:

- www.site.com?param1=Jerry&param2=O%27'Connell+II&param3=Food+%26+Wine

Note that following hex values are used:

- + [space]
- 26 [&]
- 27 ['']

URLGenerate

This function generates a link to a URL that leads to Web pages served from the Infor Email Marketing Incoming Services. These Web pages are the survey pages that enable the Email recipient to unsubscribe, change their Email address, or request a change in the Email message format. URLGenerate is included in the UnsubscribeLanguage sets, and is not normally seen elsewhere in content files.

Note that URLGenerate can be useful for inclusion in a hand-coded `<A HREF>` tag where both the opt-out URL and click-over text is provided, or used as part of the URL() command.

Usage:

- `URLGenerate(SurveyOrCustomWebPageID)`

where `SurveyOrCustomWebPageID` is a predefined survey page known to the Infor Email Marketing Incoming Services, or an installation-defined preference Web page. The Infor Email Marketing server ships with a set of standard preference pages. These pages allow the email recipient to unsubscribe, change their email address, and change their email format preference. The starting page for this preference system is Preference.html. You may use these default pages or you can create your own.

Example:

```
Click 'URLGenerate(Preference.html)' to be removed from future mailings.
```

This example serves a link to the home page for the set of Infor Email Marketing-provided `preference` pages, the most common use for URLGenerate.

URLTrack

This function inserts a tracked click-through URL. A recipient's initial page request goes through the Infor Email Marketing Incoming Services so that the click-through to the client's Web site can be logged by Infor Email Marketing. There is no limit to the number of URLs per campaign that can be tracked.

Usage:

- `URLTrack(Tracked_URL, {URLDescriptionText}, {ClickOverText}, {ExtraData})`

Where:

- `TrackedURL` is a URL in the form of a string beginning with `"http:"` or `"https:"`
- `URLDescriptionText` is optional descriptive text meaningful to the creator of the content file. This text is used exclusively by the content generator to differentiate between click-throughs to the same URL. URLs with different descriptions are tracked separately.
- `ClickOverText` is optional text displayed as the link in lieu of the URL.
- `ExtraData` is a string of characters beginning with the key string, "data/" or "bdata/" that is appened to the end of the redirected URL. The string of characters following "data/" or "bdata/" is sent on to the destination web site. If this string does not begin with the key string, "data/" or "bdata/", nothing is passed on to the destination site.When passing data with "data/" it will be sent as is in raw form. If the data contains characters which are unsafe for URLs or if the data should not be sent in clear text then it is recommend to use "bdata/" which causes the data to be base64 encoded first before being appended to the URL. The data will then be decoded before being sent to the destination web site.

In text messages the URLs appear as an `http://` string that contains the long, encrypted key that points to the Infor Email Marketing Incoming Services site. This encrypted key includes the job and

recipient ID. In HTML messages, the URL is included in an `<A HREF>` anchor tag where the optional click-over text can be used to hide the encrypted key.

Examples:

- This example inserts a clickable link with click-over text:

  `'URLTrack("http://www.GoSFGiants.com ",,"Go Giants!",)'`

  `Go Giants!`

  results in:

- URLTrack("http://www.site.com?ID=","Description","Click OverText","bdata/",CustomerID)‘
  Might generate a URL that looks like this.
  http://www.site.com?ID/bdata/MTIzNDU2Nzg/Key-7.PT0g3t.C.C.MPSRrH

- This example causes a clickable link that passes a “data path” to the Web server:

  `'URLTrack("http://www.Website.com","Description","data/app/fs")'`

  results in a text message of:

  `http://Email Marketing_Server_Domain_Name/app/fs/Key=3888.EgfPLw.B.pRCut`

  and an HTML message of:

  `http://www.Website.com`

- This example displays a clickable link showing “My Featured Selection” that passes to the Web server an “extra path” that points to a specific Web page on the client site:

```
' URLTrack("http://www.musicservice.com","FS","My Featured Selection","data/
app/fs") '
```

Note: If you use the same URL with different descriptions to obtain two separate click-through counts in Infor Email Marketing using the URLTrack Email Markup Language command, AS cannot report two separate counts.

To collect the information from a campaign that has been run:

1. In the <Job ID>.job.redirectURLs.xml file, find the index number for each of your URL/description combinations. The index number will be between 1 and 127.
2. Run Statecount.
3. In the Statecount output find "Total Web URL" for each of the index values. These are the click-through counts for each URL/description.

   Note: the maximum default tracked URL length is 450 bytes. (On the Marketing side of an Marketing/Email Marketing integration, the length of the column in the datamart can be increased to 2000 bytes, but the default in 450). For information on how to increase the URL length, see the section “Length of Trackable URLs” in chapter 11 -Configuring Marketing- in the *EM Installation Guide*.

URLRaw

Similar to URL, except outputs raw URL instead of formatting with <a href...

URLTrackRaw

`URLTrackRaw()` is identical to `URLTrack()` except that it generates a raw URL without click-over text. You can use this function to track image references. For all other tracking use `URLTrack()` instead.

Usage:

```
URLTrackRaw(TrackedURL, {URLDescriptionText}, {ParameterIgnored}, {Extra Data})
```

Where:

- `Tracked_URL` is a URL in the form of a string beginning with `"http:"` or `"https:"`
- `URLDescriptionText` is optional descriptive text meaningful to the creator of the content file. This text is used exclusively by the content generator to differentiate between click-throughs to the same URL. URLs with different descriptions are tracked separately.
- `ExtraData` is a string of characters beginning with the key string, `"data/"` that is appended to the end of the redirected URL. The string of characters following `"data/"` is sent on to the destination Web site. If this string does not begin with the key string, `"data/"`, nothing is passed on to the destination site.

Example:

```
<A HREF="`URLTrackRaw("http://computers-r-us.com/model2001",,)`"><IMG
 src=model2001.gif></A>
```

When an Email recipient clicks on the model 2001 image, they are taken to the location of the Web site where model 2001 products are displayed.

Notice the double quote and backtick in the above example. Both are necessary.

ViewInBrowser

The ViewInBrowser EML tag has one primary function which is to generate a link to be inserted into the generated message.This feature allows the marketer to insert a link in the email, generally near the top of the text, which gives the ability to view the email in the Browser instead of the email client.

‘View in Browser’ is a feature that enables the marketer to create web- ready emails, allowing recipients to view their email in a web browser on- the-fly. This feature is especially helpful because not all email clients can display email content as intended by the marketer.

This features is best used when:

- The email client blocks images from being displayed.
- Text-only email clients cannot display images or HTML correctly.

When an email recipient clicks the link to view their email in a browser, a request will be made to the incoming service which will re-generate the email and will display the HTML version if available; otherwise the TEXT version will be displayed. The message should be identical to the (HTML) one that they received in their email, including all personalization, messages and offers.

View in Browser events will be recorded and processed similar to the way that an Open event is currently processed. It will appear in feedback and can be reported on along will all other events.

Usage:

ViewInBrowser(Click_Over_Text, DesiredFormat, Social_Networking_Service)

Where:

Click_Over_Text is the text displayed for the link in lieu of the URL.

DesiredFormat is an optional parameter that specifies the format of the message that will be displayed. Valid options are "text" and "html"..

Social_Networking_Service is an optional parameter that specifies the user-defined name of the social networking service related to this view in browser link.

The ViewInBrowser optionally accepts two parameters: click through text and the desired format. If the click through text parameter is not present, then the generated URL itself will be used as the click-over text. The desired format parameter determines whether the user will see a text email in the browser, or an HTML email in the browser. The output from the View in Browser tag should be as follows:

For TEXT messages:

- (RAW URL}

For HTML messages:

- {CLICK-OVER TEXT}

Where:

- {RAW URL} is the actual generated URL
- {CLICK-OVER TEXT} is the click-over text that is specified or the generated URL if not specified.

An alias EML tag called ViewInBrowserRaw is also available which generates the raw URL (no HTML). This raw tag can be used if the user has special formatting considerations that would prevent them from using the simple output specified above. Additional information about ViewinBrowserRaw can be found below.

Example:

`ViewInBrowser("here", “HTML”)`

`ViewInBrowser("here","html")`

`ViewInBrowser("here","html","facebook")`

ViewInBrowserRaw

This function inserts a link into the content that allows the recipient to view a copy of the email in their Internet browser. This tag generates a raw URL; it does not output the associated HTML anchor tag. See ViewInBrowser for more details on usage.

ViewInBrowserRequest

Resolves to TRUE in the content generator if the active request is the result of a view in browser request.

Usage:

`ViewInBrowserRequest`

Example:

`if(ViewInBrowserRequest)`

The current request is a view in browser request.

`end`

VIBRequest

Resolves to TRUE in the content generator if the active request is the result of a view in browser request. See ViewInBrowserRequest for more details.

While

Executes the following block of EML until the given condition is no longer true.

Usage:

`While(condition)`

Where condition is evaluated via `Condition` EML tag.

Example:

`Set(MyCount, 0)`

`While(MyCount < 5)`

<Do Something...>

`Set(MyCount, MyCount + 1)`

`End`

Custom Components

Custom EML components can be configured within the configuration manager. Once configured these components can be used like any other EML tag.

Whenever new components are added to the system they need to be synchronized with Infor Email Marketing 10.1 by running the ConfigUpdate job.

The following custom components are provided as examples. You can modify these or add new components as required.

FacebookShareLink

The Facebook share link creates a URL to post a link to the recipient's Facebook page. This component is generally usable within any email content.

Usage:

`FacebookShareLink(URL,TITLE)`

Where:

URL is the URL to post.

TITLE is the page title for the URL

Example:

`FacebookShareLink("http://www.infor.com", "Infor Global Solutions")`

FacebookLikeButton

The Facebook like button allows users to easily send content to all of their friends. This should not be used directly in email content because it makes use of JavaScript and will be rejected by most email clients. Instead use this tag as part of the content for a Social Networking Event.

Usage:

`FacebookLikeButton(URL)`

Example:

`FacebookLikeButton("http://www.infor.com")`

Reference:

http://developers.facebook.com/docs/reference/plugins/like/

FacebookSendButton

The Facebook send button allows users to privately send content to their one or more of their friends. This should not be used directly in email content because it makes use of JavaScript and will be rejected by most email clients. Instead use this tag as part of the content for a Social Networking Event.

Usage:

`FacebookSendButton(URL)`

Where URL is an optional URL to include in the message.

Example:

`FacebookSendButton("http://www.infor.com")`

Reference:

http://developers.facebook.com/docs/reference/plugins/send/

TwitterTweetButton

This button allows the email recipient to share content on their twitter account. This should not be used directly in email content because it makes use of JavaScript and will be rejected by most email clients. Instead use this tag as part of the content for a Social Networking Event.

Usage:

`TwitterTweetButton(URL,FEEDNAME)`

Where:

URL is a URL to share.

FEEDNAME is the twitter feed to share (via).

Example:

`TwitterTweetButton("@Infor")`

Reference:

http://twitter.com/about/resources/tweetbutton

TwitterFollowButton

Inserts the twitter following button for a given twitter feed. This should not be used directly in email content because it makes use of JavaScript and will be rejected by most email clients. Instead use this tag as part of the content for a Social Networking Event.

Usage:

`TwitterFollowButton(URL, FEEDNAME)`

Where:

FEEDNAME is the name of the twitter feed to follow.

Example:

`TwitterFollowButton("@infor")`

Reference:

http://twitter.com/about/resources/followbutton

TwitterTweetLink

Generates a URL to the twitter status update page. This component is generally usable within any email content.

Usage:

`TwitterTweetLink(STATUS)`

Where:

STATUS is the default status message to be posted.

Example:

`TwitterTweetLink("http://www.infor.com%20-%20Infor%20Global%20Solutions")`

TwitterFollowLink

Generates a URL to the twitter follow page for a given feed name. This component is generally usable within any email content.

Usage:

`TwitterFollowLink(FEEDNAME)`

Where:

FEEDNAME is the twitter feed name to follow.

Example:

`TwitterFollowLink("@infor")`

MyspaceShareButton

Inserts the **Myspace share** button.

Usage:

`MyspaceShareButton`

Example:

`MyspaceShareButton`

Reference:

http://developerwiki.myspace.com/index.php?title=How_to_Add_Share_on_MySpace_to_Your_Site

LinkedInShareButton

Inserts Linkedin's **Share** Button.

Usage:

`LinkedInShareButton`

Example:

`LinkedInShareButton`

Reference:

http://www.linkedin.com/publishers

LinkedInRecommedButton

Inserts Linkedin's Recommend Button

Usage:

`LinkedInRecommedButton(COMPANYID,PRODUCTID)`

Where:

COMPANYID is the id of the company to recommend.

PRODUCTID is the id of the product to recommend.

Example:

`LinkedInRecommendButton("INFOR","Marketing")`

Reference:

http://blog.linkedin.com/2010/12/10/linkedin-recommend-widget/

Passing Parameters when Redirecting to a Target URL

It is possible to pass parameter values to a target URL when tracking click-throughs with the Infor Email Marketing Incoming Services. The following three examples demonstrate this functionality:

Simple Case A

In this case no special characters, such as an embedded space or ampersand (&), are used in the data, and only one parameter is passed to the target URL:

```
‘URLTrack("http://www.site.com?ID=","Description","Click OverText",
"data/",
CustomerID
)‘
```

where `CustomerID` is a customer ID column provided in the list sent to the Infor Email Marketing Incoming Services. This EML command results in the following redirected URL (where the `CustomerID` is `18393`):

```
www.site.com?ID=18393
```

Simple Case B

In this case no special characters are used in the data, but multiple parameters are passed to the target URL:

```
‘URLTrack("http://www.site.com?","Description","Click OverText","data/
","CustID=",
CustomerID
,"ProdID=",
ProductID
)‘
```

This EML command results in the following redirected URL (where `CustomerID` is `18393` and `ProductID` is `AB001`):

```
www.site.com?CustID=18393&ProdID=AB001
```

Complex Case

In this case special characters can be used in the data and multiple parameters are passed to the target URL. To handle the special characters (which require CGI encoding) an additional EML function—`URLEncode()` —is necessary.

Parts of the data path must be encoded while other parts should not be encoded (for example, the '&' used to concatenate parameters in a CGI string should not be encoded):

```
‘
URLTrack("http://www.site.com?","Description","Click OverText","data/
param1=",URLEncode(First Name),"&param2=",URLEncode(Last Name),"&param3=
",URLEncode(Hobby))
‘
```

This EML command results in the following redirected URL (where `First Name` is “ `Jerry`,” `Last Name` is “ `O’Connell II`,” and `Hobby` is “ `Food & Wine`”:

```
www.site.com?param1=Jerry&param2=O%27Connell+II&param3=Food+%26+Wine
```

Note that following hex values are used:

- + [space]
- 26 [&]
- 27 [']

Substitution_Field_Name

This function inserts the value for a substitution field defined in an Email campaign. The value is not manipulated except for the deletion of leading and trailing white space.

Usage

```
Substitution_Field_Name
```

Where Substitution_Field_Name is the name of a defined substitution field.

Example

- ‘ Email Address ‘

Note: When referencing substitution field names, you will generally enter the name as it was defined in Infor Omni-Channel Campaign Management . When the campaign is exported the system may prefix the name with a number in order to make the substitution field name unique. The content will also be adjusted automatically to reflect the modified name. However, this will not be the case for content that is stored outside of Infor Omni-Channel Campaign Management (i.e. content that is included via FileInsert). In order to resolve substitution fields in these cases, the content generator will use the following rules:

- If an exact match on the substitution field name is found then it will be used.
- If an exact match is not found then the content generator will strip the numeric prefix from the available field names and search again.
- If multiple fields match after stripping the numeric prefix, then a content generation error will result (i.e. a field name is ambiguous) and the campaign will fail.
- If a single field matches after stripping the numeric prefix then that field will be used.
- If no fields match after stripping the numeric prefix then a content generation error will result and the campaign will fail.

Hardware Migration

14

This chapter outlines the process used to migrate an installed and configured Infor Email Marketing server to another machine. Due to the many factors and variants involved in migrating an Infor Email Marketing server, the exact procedure used may be slightly different based on your system's installation.

Before You Begin

Infor recommends that you perform a "test" migration before beginning the true migration. This will allow the opportunity to understand any issues you may encounter, and to provide the ability to work around these issues before moving into a production environment.

Do not change the Marketing server configuration or other network configurations while you are migrating the Infor Email Marketing server. Keep the number of variables to a minimum while executing the migration—doing so reduces the difficulty in identifying problems should they occur.

Before migrating the Infor Email Marketing server, Infor strongly recommends reading this Infor Email Marketing *System Administrator's Guide* to fully understand how the Outgoing and Incoming Services work, and which files are involved at each stage of the incoming process.

Before you begin this procedure, make sure you have the answers to the following questions:

- What is the physical location of the new machine?
- What is the logical network location of the new machine? If you are changing network locations, you may need to allow for a longer downtime for the migration.
- What is the Host Name of the new machine? If it is different then the migration will be more complex.
- What is the IP Address of the new machine? If it is the same as the old Infor Email Marketing server the new machine will have to be assigned a temporary address during the transition. The easiest procedure for migration is to keep the same host name and change the IP address for that hostname during the migration.
- Is the Infor Email Marketing server in production? If so how much downtime is acceptable?
- How much data needs to be moved? Infor recommends moving everything under the < MailerData > directory.
- Do you plan on upgrading to a new version of Infor Email Marketing at the time of the migration? This may be a good time to make this change, but upgrading can add additional complexities.

Preparation

Preparing the new Infor Email Marketing server requires the new server to be installed and configured with Infor Email Marketing, the data in which to export is defined, SSL is set up for the new server, and copying configuration information from the old Infor Email Marketing server to the new Infor Email Marketing server. The following procedures describe each of these tasks.

Installing Infor Email Marketing

Refer to the *Infor Email Marketing Installation Guide* for instructions and procedures for installing and configuring the new Infor Email Marketing server.

1. Install and configure the new Infor Email Marketing machine as outlined in the *Infor Email Marketing System Installation Guide*. When you finish this step you should have a fully functional Infor Email Marketing server.

   Note: It is important when installing the Infor Email Marketing Server Software that you choose the same tenant and directory structure as the original Infor Email Marketing server. For example, the installation directory and data directory should be the same. If you need to change the directory structure, then additional steps will be necessary to modify the location of these directories in the Configuration.

2. Backup the entire old Infor Email Marketing server. Ensure this backup is valid, and that it can be restored if necessary.
3. Pull feedback from the old Infor Email Marketing server to the AP server.

Determine Export Data

View the Manual Decimation KB article, and determine what data is not necessary to migrate to your new Infor Email Marketing server. The intent is to minimize the amount of data transferred by removing obsolete or unneeded data.

Verify all processing logs have a corresponding position file, and that the position file lists the exact byte count of the processing log. If this is the case, and the file is older than 10 days, you may delete this file. Otherwise, keep the processing log and position file, and transfer it as part of the migration, making sure that all data is completely processed and that all feedback has been extracted. This will help prevent problems in the future, especially if you are migrating to a different version of Infor Email Marketing.

Infor Email Marketing Server Configuration

Send a final campaign from your old Infor Email Marketing server to a set of test Email addresses for your team. This will allow you to verify that your old Infor Email Marketing server campaigns work after

the migration. You should send this mailing to internal addresses on your network as well as addresses that are accessed externally, from a different network. The purpose of this is to verify that both the internal network and the external Internet are able to access the Infor Email Marketing server consistently and correctly.

Obtain an SSL Certificate

If necessary, you will need to acquire a new SSL certificate that matches your new internal connection host name. If your internal connection host name has not changed, you can reuse the existing certificate If you would like to use a different domain name for your new Infor Email Marketing server for testing, then one can be generated using the Java keytool.

Exporting Configuration Information

1. Copy the `EMConfig.xml` and `EditEMConfig.xml` files from the old Infor Email Marketing Server to the new server and save them into the "config" sub-directory of your installation.
2. If you have made changes to your new Infor Email Marketing server, such as adding a new From Address, you will need to re-add this information after restoring the configuration file.
3. Restart both Outgoing and Incoming Services.

   Verify that you can send test campaigns from your new Infor Email Marketing Server and that the network configuration allows response information to flow back to the Infor Email Marketing server from both internal and external networks.

   > ⚠ **Caution:** Do not send any production campaigns from the new Infor Email Marketing server until after the migration and after you have thoroughly tested the Infor Email Marketing server in its post-migration environment.

4. There are two methods to test the new Infor Email Marketing Server. Infor strongly recommends using option [a] below:
   a. Keep the Production Marketing and Infor Email Marketing systems as is. Install a new development Marketing system, and configure it to connect to the new Infor Email Marketing server.
   b. Use the production Marketing box. When testing the new Infor Email Marketing box, switch the Marketing configuration Infor Email Marketing setting so it connects to the new Infor Email Marketing Server. After the test is complete for the new Infor Email Marketing box, switch the production Marketing configuration setting back to its original setting.
5. Verify that all forwarding Email addresses function properly from on the new Infor Email Marketing server. These are the abuse and postmaster addresses and any administrative addresses configured for each From Address.
6. Verify that the configuration and admin managers are functioning, and that all access lists have been configured correctly on the new Infor Email Marketing server.

7 Delete all jobs from the `< MailerData >\directory` (and all subdirectories) on the new Infor Email Marketing server. It is important that you do not have any jobs with duplicate job numbers on the new Infor Email Marketing server as this can interfere with existing campaign tracked URLs.

8 Make sure there is network connectivity between the old and new Infor Email Marketing servers. You will need to be able to copy files between these two machines.

Migrating the Infor Email Marketing Server

Before migrating the Infor Email Marketing server:

1 Make sure that any active campaigns have completed all of their passes. The Incoming services will still continue to process inbound responses for some time.

Note: DO NOT submit any new campaigns to the old Infor Email Marketing server at this time.

2 Shutdown and disable the `Outgoing Service` on the old Infor Email Marketing server using the services applet in the control panel. This will prevent you from accidentally sending any Email during the migration, and from the mailer locking files while you are performing the migration. NOTE that at this point the Incoming Service will continue to run and collect any campaign responses until the new server is completely active and any DNS changes have fully propagated across the internet.

Miscellaneous Configuration Files

The following files will need to be copied from the old Infor Email Marketing server to the new one:

`<mailerdata>/INFOR/NextJobNumber.txt` - This file stores the next job number to be used when a campaign is submitted.

`<mailerdata>/INFOR/DeliveryRateStatistics.txt` - This file stores aggregate information about email sending rates. Copy this file if you want to keep a history of the delivery rate statistics.

`<mailerdata>/suppression_db` - this directory contains information about users or domains that have been unsubscribed.

`<mailerdata>/WebPages` - Copy this directory if you have customized any of the preference pages.

Initial Data Migration

Synchronize the directory structures and copy the files that are necessary to handle incoming Email and Web traffic.

1 Synchronize the MailerData TenantName directory structures and copy all .xml files to the new Infor Email Marketing server.

a Using a utility such as winzip, archive all *.xml files under the <MailerData> directory, saving full path information while performing this step.

b Unzip the archive to the new Infor Email Marketing server.

c Each job directory with a `<jobid>.RedirectUrls.xml` file included is displayed.

2 Copy all files under `<MailerData>\WebPages` to the new Infor Email Marketing server.

Switching to the New Infor Email Marketing Server

In this phase the new Infor Email Marketing server becomes active. However because Incoming processing is disabled, no updates to the job files will occur and you will not be able to successfully pull feedback.

1 Make any DNS/Network changes that are necessary to make the new Infor Email Marketing server active. This most likely means re-pointing your DNS records to the IP Address of the new Infor Email Marketing server.

2 Double-check the network configuration. At this point incoming Email messages and click throughs should start coming into the new Infor Email Marketing server. Some Incoming Email messages and click through requests will continue to be logged by the old Infor Email Marketing server until the DNS changes have been fully propagated across the Internet.

3 Double-check that Email and click through responses still work for pre-existing campaigns, such as the final test campaign submitted to the old Infor Email Marketing server.

It will take some time for the DNS information to propagate across the Internet. As soon as the old Infor Email Marketing server is no longer receiving Email and click through requests, go to the next step.

4 Monitor response traffic going to the incoming service on the old Infor Email Marketing Server.

5 Make sure that Log Processing is still disabled on both machines.

6 Shutdown and disable the Infor Incoming Services service from the services applet on the old Infor Email Marketing server.

The old Infor Email Marketing server should now be completely inactive.

Manually Processing Incoming Files

Log Processing must be manually run on the old Infor Email Marketing server to ensure that all response data is applied to the job files before they are copied.

To Run Mail Processing Manually

1 Change to the `< MailerData >\INFOR\Inbox` directory.

2 Enter the following command:

```
<installation directory>/bin/runcmd com.infor.logprocessing.Log
Processing -i YYYY_MM_DD_smtp.log
```

Where `YYYY_MM_DD_smtp.log` is the actual name of the incoming file that needs to be processed (for example `2008_02_06_smtp.log`).

3 Repeat this command for each file that needs to be processed.

Data Migration

The final migration step is to copy all the data from the old Infor Email Marketing server to the new Infor Email Marketing server. Because you will be copying a significant amount of data, you may want to use an advanced file copy or directory synchronization application.

1 On the old Infor Email Marketing server, rename the InBox and Outbox directories to “InBoxOLD” and “OutboxOLD.”

2 Copy all files from the < MailerData > directory on the old Infor Email Marketing server to the < MailerData > directory on the new Infor Email Marketing server. This includes all files under the following directories:

```
<
MailerData
><tenant>
```

```
<
MailerData
>\INFOR
```

Post Migration Testing

To test the migration, perform a set of regression tests after the migration has completed as you did previous to the data migration. Verify that your Final test campaign functions properly, and that you are able to pull feedback from that campaign to the Infor Email Marketing server.

Troubleshooting

15

Overview

This chapter contains troubleshooting information for the installation and operation of your Infor Email Marketing system. If the error appears in quotes, it is an error message you see on the screen. If the error is not in quotes, the text describes the error condition.

Cannot Log Into the Configuration Manager

If you experience the following problems:

- You cannot log into Infor Email Marketing Configuration Manager
- You cannot access the Infor Email Marketing Configuration Manager Web site
- An “Access Permission Denied” error message appears
- The program returns to the login screen.

Try these checks and tests detailed below:

Logging in to Configuration Manager

1. Double-check your username and password and reenter the correct username and password.
2. Attempt to connect to:

   `http://<OutgoingMachineHostName>:<port>/configmgr/faces/pages/index.xhtml`

   Where OutgoingMachineHostName is the fully qualified domain name of your Infor Email Marketing Outgoing Services machine (for example, info.infor.com):

   If you still cannot connect, the Infor Infor Email Marketing Configuration Manager access list might not be configured to permit your machine's IP address to access the Configuration Manager Web site.
3. If you still cannot connect, reboot your machine and try the URL again.

Infor Email Marketing Outgoing Services Will Not Start

Make sure that your company's mail server is able to access the Infor Email Marketing Incoming Services from your internal network.

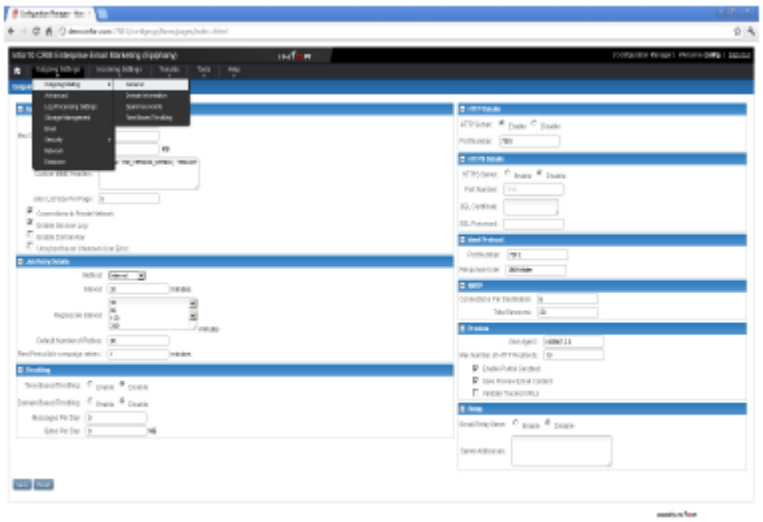
This can be tested by performing a "telnet <IncomingServer> 25" where <IncomingServer> can be either the fully qualified domain name, or the IP address of the Infor Email Marketing Incoming Services machine. If this does not work from your company's mail server, open a console on the Infor Email Marketing Incoming Services, and attempt telnet 127.0.0.1 25, which establishes a connection through port 25 from the Infor Email Marketing Incoming Services to itself. This effectively takes your company's network out the picture, and allows you to determine if this is a problem with your network or with the Infor Email Marketing Incoming Services. The Infor Email Marketing Incoming Services responds with the following if the Infor Email Marketing Incoming Services is running:

```
220 INFOR EM SMTP Server Version 7.1.0.0.3903 at Wed, 12 Mar 2008 23:
20:20 -0700
```

You may also want to do the same test from external machines outside of your corporate network.

Common Errors in the Configuration Manager

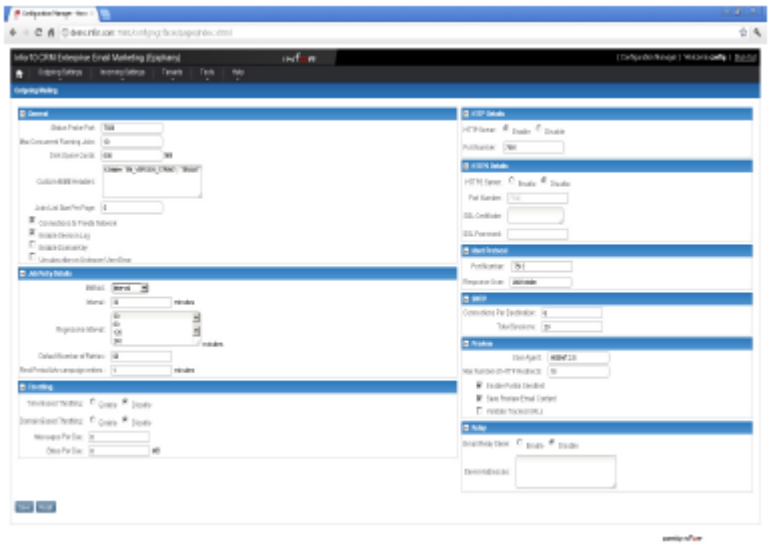
Using the Configuration Manager, the general properties of the Email marketing application can be changed, or new Tenants and Incoming Services can be created (or edited). In order to reflect these changes to the Outgoing Service/Incoming Service, some of the properties require a restart and some elements do not. These settings will be discussed below.



Outgoing Settings

The following details from Outgoing Service Settings requires a restart of Outgoing Service, after updating these changes to the active configuration.

Example:



Changes to port Numbers, IP-Addresses of Advanced Settings, Email Settings, Security Settings, and Network Settings all require a restart of Outgoing Service after updating the changes to the active configuration.

Changes to Log Processing and Storage Management just require updating the configuration to be the active configuration in order to reflect these changes in the Outgoing Service, without the need to restart the Outgoing Service.

Incoming Service Settings:

1. Creating a new Incoming Service requires the administrator to update the active configuration. A restart is not required.
2. Modifying the Incoming Service to enable SSL support will require a restart.
3. Modifications to Incoming Service ports: HTTP, HTTPS, HTTP Admin, HTTPS Admin require a restart of the Incoming Service, if it is already running.

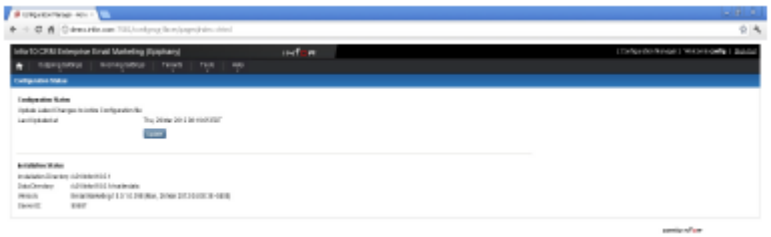
Tenants:

1. Creating a new Tenant requires the active configuration to be updated and also requires the Outgoing Service to be restarted.
2. Modifying a tenant elements like From-Address, Identity, Unsubscribe Language, Locale requires that the active configuration be updated and will also require the administrator to run the ‘ConfigUpdate’ job from OM.

Common Errors

Error: Invalid Tenant Name: firehose

The User created a new Tenant with the name “firehose” using the Configuration Manager, and then updated the active configuration.



Possible Causes:

1. Error occurred while Performing Config Upload from OM:

   Solution: Make sure that the user has updated the changes to the active configuration (the ‘update’ button will then be in the disabled state in the Home Page once they have) and has also restarted the Outgoing Service.

2. Error occurred while trying to submit a Campaign.

   Solution: Verify the active configuration, The campaign submission error message should include details about what caused the error. Make sure that the User has updated the changes to Active Configuration (**Update** button will be in Disable state in Home Page) and restarted the Outgoing Service.

Error: Page Not Found

The user made changes to either the server-name or port numbers of the Outgoing Service and then tried to view the web application with these changed Outgoing Service name/port numbers.

Possible Causes:

Error occurred while viewing the config manager application.

Solution: Make sure that the user has updated their changes to the active configuration (the ‘**update**’ button will then be in the disabled state in Home Page once they have) and has also restarted the Outgoing Service.

Error: ERROR OutgoingService - Unable to start outgoing serviceLifecycle Exception: Protocol handler initialization failed: java.io.IOException: Keystore was tampered with, or password was incorrect

Possible Causes:

Make sure that the provided keystore file and password are correct and, if there are any changes, then update the active configuration and restart your outgoing service.

ERROR NgemResolver - INCONSISTENTDNS

Possible Causes:

Make sure that the DNS Server (IP Addresses) in Network Settings has A, MX, and PTR records configured to include your Outgoing Service Host Name. An ‘A’ or Address record maps a name

(like the Outgoing Service host name) to an IP address. An ‘MX’ or Mail Exchange record specifies the host name of the server which is capable of accepting email for the given domain. A ‘PTR’ or Pointer record maps an IP address to a name. (This is the reverse of an ‘A’ record lookup). The validation cycle is detailed on "SMTP From Line Validation" on page 45 of this manual.

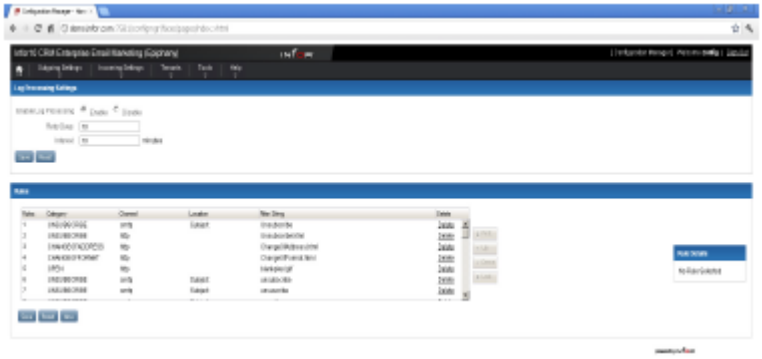
ERROR: Bind Exception. Address already in Use

Possible Causes:

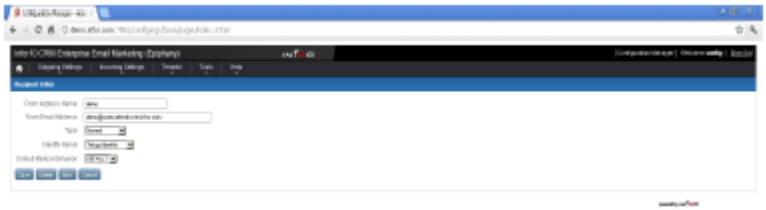
Make sure that you avoid port conflicts with your Incoming-Service (or any other service) by not assigning port numbers used for the incoming Service to any other service (or vice-versa).

ERROR: Incoming email message is not categorized correctly

1. Check the order of the processing rules listed in the configuration manager. Messages will be categorized based on the first matching rule.
2. Check if there are any anti rules that may be changing the expected behavior.
3. If the processing rules are listed in the correct order, then re-verify the settings for the rule that it should be matched on.
   a. Check whether log processing is enabled or not:



   b. Verify the ‘Interval’ setting
   c. Verify the ‘Retry Days’ setting
   d. Check the ‘Recipient Type’ settings



   e. Verify the filter strings, where to search, is case sensitive, and byte to search values of the processing rules.
4. Enable debug logging for LogProcessing to get more details on the processing of messages.
   a. The logprocessing related logging information can be found in the `<installation directory>\log\LogProcessing.log` file.

b By default, the `LogProcessing.log` contains info and error statements. If you want to display the info,debug, and error statements related to log processing, then the priority level of the LogProcessing logger needs to be modified.

c Steps to change the priority of the LogProcessing logger statements:

- Open the `<installation directory>\config\OutgoingServiceLogConf.xml`.
- Open the logprocessing logger file:

```
<logger name="com.infor.logprocessing" additivity="false">
        <level class="org.apache.log4j.Level" value="info" />
        <appender-ref ref="LogProcessing" />
        <appender-ref ref="Console" />
 </logger>
```

- Change ‘info’ to be ‘debug’.

Preview Fails and/or Campaign Submission Fails

You get the following error messages when preview or campaign submission fails.

ERROR: Connection refused: connect” (or) “cannot connect to the outgoing server” (or) “cannot create Job Processing port for outgoing server”

- Make sure that the outgoing server running properly on specified port & on specified machine.
- Make sure that “emailerserver” field is correct in header file & must match fully qualified DNS name of outgoing server machine name & port.

ERROR: The given output processor [<Output Processor>] is not matched to the output processor in header file

- The processor given in client command must match Output Processor specified in header file.

ERROR: Login failed due to Invalid username/password

- Make sure that the campaign submission username & password are correct.

ERROR: Invalid Tenant Name: <tenant name>

- Make sure that the campaign submission tenant name is correct.

ERROR: <file name> file does not exist

- Make sure that all the files provided in header file exist. And the path of each list, etc, recdef & ancillary files is correct.

ERROR: No ETC files listed in the Header to transfer to Server

- Make sure that at least one etc file exist in header file.

ERROR: Tenant is not specified in header file

- Make sure that tenant name exists in header file with field name “emailerclientid”

ERROR: Error while reading header file

- If any read operations on the header file fail, you will get this type of exception. Make sure that header file is already in use and provide all access permissions on the header file in order to prevent access denied errors.

ERROR: Header file doesn't exist: <file name>

- The header file should exist at the specified path.
- Make sure that the header file path given on command line should exist.

ERROR: Invalid from address from etc file < from Address >, it should match one of the recipient email address of Tenant

- This message indicates that the From address listed in the content does not match a From Address configured on your Infor Email Marketing Outgoing Services. Change this From address either in your content, or add this From address to your Infor Email Marketing configuration in the Configuration Manager.

Note: Any other exception should provide a clear description of problem.•

EmailGenerationException Stating That Format Files Do Not Exist

Possible cause: Antivirus Software deleting files.

When you submit a campaign, the format files are created in the content directory under the `Mailerdata` directory. Note down the path of the files given in the exception and check to see if the files do physically exist. If the files in question do not exist, it is possible that these files are being removed by Antivirus Software running checks on the Infor Email Marketing Server machine. Disable the Antivirus Software temporarily and resubmit the campaign. If the Antivirus software is the culprit, ask your System Administrator to configure the software so that these files are not deleted.

Tracked URLs Not Working:

If tracked URLs are not working with Infor Email Marketing Incoming Services, try to view the target URL using your web browser. If URL validation is failing, you should try this directly on the EM server to rule out any possible differences in network connectivity. Otherwise you may also test the URL from other machines on your network.

In addition, these are additional checks you can perform:

- Make sure that the incoming service is running.
- Verify that this information for the job in questions is listed in the incoming service pages of the Admin Manager. Details for the URL should be listed there.
- Make sure that the incoming server is listening on the configured hostname and port number (i.e. you can connect to it using your web browser). Check if tracked URLs from other jobs are work. Check that the preference pages are working.
- Make sure that the job file or job-exist file (.job or .job-exist), job info xml file & redirect URLs xml file exist on incoming server with the job number given in encoded URL. (Here “3” is job number from the tracked URL)
- Make sure that the target URLs from redirects URLs xml files are valid & working fine. Try them from the browser.
- The target URLs as part of TrackURL EML tag (can be found in redirects URLs xml files) in content should not be again a encoded URL from EM.
- When we click on tracked URLs, if it fails, check the IncomingService.log file for error/exceptions messages.

You may find the following error messages in IncomingService.log file or incoming service console log file:

- "HttpProtocolHandler: <followed by detailed exception stack trace>”
- “Invalid RecipientId : <recipient Id>”
- "Invalid URL index: <URL Index> for the job: <job Number>
- "selectPage(): Null Path prefix with zero URL index "
- "Error while decoding URL : <error message with >”
- "Invalid encodedUrl, CRC not matched. "

When you click on the Tracked URLs, You may get the following error pages.

ERROR: General page not found page

- Make sure that incoming service running/listening on specified ports.

ERROR: Hard coded page not found with text “Error 404: Page Not Found

- Make sure all web pages exist under specified path.

ERROR: Server Error page with the following text: “A server error occurred while processing the requested URL”

- Make sure that the content & EML tags in all web pages are accurate & correct.

- Check incoming service log file for detailed error message.

ERROR: Mailing out of date page with the following page “<H1>Outdated Mailing</H1>. This link is no longer active.”

- Make sure that .job or .job-exist file doesn’t exist with particular job number under specified job directory.

ERROR: Expired campaign page with the following text: “<H1>Expired</H1> The requested object does not exist on this server. The URL you entered is outdated. “

- Make sure that the given job number is valid & job directory & job info xml file must exist with that job number.

ERROR: Page not found page with the following text. “<H1>Not Found</H1>The requested object does not exist on this server. The URL you entered is inaccurate.<P>

- Please be sure to include the entire KEY field for proper access.</html>”

Note: Check your Incoming Service log file for detailed error messages.

Feedback Errors

You may encounter the following types of errors while collecting feedback on your server.

ERROR: Invalid header, job file is corrupted/not a valid job

- Make sure that the job file is correct which was generated by EM.

ERROR: Job was canceled(Preview Job): <job File Name > - No feedback available

- No feedback will be generated for preview jobs.

ERROR: Job was aborted: < job File Name > - No feedback available

- When job was aborted for some other reasons & the –showAborted flag is false.

ERROR: Job never approved - Can't feedback job: " <job File Name>

- When job was not approved with some other reasons.

ERROR: Any other error messages with complete exception stack trace.

Check for the following files:

- Make sure that the *.feedback.ack file exist under <mailerdata>/<tenant>/feedback directory after Feedback process is completed.

- For each feedback session, you can log file under <mailerdata>/<tenant>/logs directory. Check this log file for detailed error message.

Cannot Send Mail to the Infor Email Marketing Incoming Services

Make sure that from your internal network, your company's mail server is able to access the Infor Email Marketing Incoming Services.

This can be tested by performing a " `telnet <Incoming Server> PortNumber` " where `IncomingServer` is used with both the fully qualified domain name and the IP address of the Infor Email Marketing Incoming Services machine, and `PortNumber` is the port you have defined for Infor Email Marketing Incoming Services (the default is port number 25). If this does not work from your company's mail server, open a console on the Infor Email Marketing Incoming Services machine, and attempt `telnet 127.0.0.1 PortNumber` , which establishes a loopback connection through the defined Infor Email Marketing Incoming Services port to itself. This effectively takes your company's network out the picture, and allows you to determine if this is a problem with your network or with the Infor Email Marketing Incoming Services. The Infor Email Marketing Incoming Services responds with the following if the Infor Email Marketing Incoming Services is running:

```
220 INFOR EM SMTP Server Version 7.1.0.0.3903 at Wed, 12 Mar 2008 23:
20:20 -0700
```

Cannot Click Through

If click-throughs are working to the Infor Email Marketing Incoming Services, attempt a "telnet < IncomingServer > 80" via your network and on the telnet IncomingServer itself. Once you establish a telnet session, you should be able to type "GET" and have an HTML document returned which (by Infor Email Marketing's default settings) appears as:

```
HTTP/1.0 200 Sending document

Expires: Mon, 01 Jan 1996 00:00:01 GMT

Date: Mon, 24 Sep 2001 21:41:32 GMT

Cache-Control: no-cache
```

```
Content-type: text/html
<html>
      <TITLE>Not Found</TITLE>
<H1>Not Found</H1>
The requested object does not exist on this server.
The URL you entered is inaccurate:
<P>
<P>
Please be sure to include the entire Key field for proper access.
</html>
Connection to host lost.
```

Default Settings for Common Tenant Locale Records

A

Locale	Language, Country	Character Set	HTML Transfer Encoding	Text Transfer Encoding
ar	Arabic	ISO-8859-6	quoted-printable	quoted-printable
ar_AE	Arabic, United Arab Emirates	ISO-8859-6	quoted-printable	quoted-printable
ar_BH	Arabic, Bahrain	ISO-8859-6	quoted-printable	quoted-printable
ar_DZ	Arabic, Algeria	ISO-8859-6	quoted-printable	quoted-printable
ar_EG	Arabic, Egypt	ISO-8859-6	quoted-printable	quoted-printable
ar_IQ	Arabic, Iraq	ISO-8859-6	quoted-printable	quoted-printable
ar_JO	Arabic, Jordan	ISO-8859-6	quoted-printable	quoted-printable
ar_KW	Arabic, Kuwait	ISO-8859-6	quoted-printable	quoted-printable
ar_LB	Arabic, Lebanon	ISO-8859-6	quoted-printable	quoted-printable
ar_LY	Arabic, Libya	ISO-8859-6	quoted-printable	quoted-printable
ar_MA	Arabic, Morocco	ISO-8859-6	quoted-printable	quoted-printable
ar_OM	Arabic, Oman	ISO-8859-6	quoted-printable	quoted-printable
ar_QA	Arabic, Qatar	ISO-8859-6	quoted-printable	quoted-printable
ar_SA	Arabic, Saudi Arabia	ISO-8859-6	quoted-printable	quoted-printable
ar_SD	Arabic, Sudan	ISO-8859-6	quoted-printable	quoted-printable
ar_SY	Arabic, Syria	ISO-8859-6	quoted-printable	quoted-printable
ar_TN	Arabic, Tunisia	ISO-8859-6	quoted-printable	quoted-printable
ar_YE	Arabic, Yemen	ISO-8859-6	quoted-printable	quoted-printable
be	Byelorussian	ISO-8859-5Windows-1251	quoted-printable	quoted-printable

Locale	Language, Country	Character Set	HTML Transfer Encoding	Text Transfer Encoding
be_BY	Byelorussian, Belarus	ISO-8859-5Windows-1251	quoted-printable	quoted-printable
bg	Bulgarian	ISO-8859-5Windows-1251	quoted-printable	quoted-printable
bg_BG	Bulgarian, Bulgaria	ISO-8859-5Windows-1251	quoted-printable	quoted-printable
ca	Catalan	ISO-8859-1	quoted-printable	quoted-printable
ca_ES	Catalan, Spain	ISO-8859-1ISO-8859-15	quoted-printable	quoted-printable
cs	Czech	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
cs_CZ	Czech, Czech Republic	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
da	Danish	ISO-8859-1	quoted-printable	quoted-printable
da_DK	Danish, Denmark	ISO-8859-1ISO-8859-15	quoted-printable	quoted-printable
de	German	ISO-8859-1	quoted-printable	quoted-printable
de_AT	German, Austria	ISO-8859-1ISO-8859-15	quoted-printable	quoted-printable
de_CH	German, Switzerland	ISO-8859-1ISO-8859-15	quoted-printable	quoted-printable
de_DE	German, Germany	ISO-8859-1ISO-8859-15	quoted-printable	quoted-printable
de_LU	German, Luxembourg	ISO-8859-1ISO-8859-15	quoted-printable	quoted-printable
el	Greek	ISO-8859-7	quoted-printable	quoted-printable
el_GR	Greek, Greece	ISO-8859-7	quoted-printable	quoted-printable
en	English	US-ASCIIISO-8859-1	quoted-printable	quoted-printable
en_AU	English, Australia	ISO-8859-1	quoted-printable	quoted-printable
en_CA	English, Canada	ISO-8859-1	quoted-printable	quoted-printable
en_GB	English, United Kingdom	ISO-8859-1ISO-8859-15	quoted-printable	quoted-printable
en_IE	English, Ireland	ISO-8859-1ISO-8859-15	quoted-printable	quoted-printable

Locale	Language, Country	Character Set	HTML Transfer Encoding	Text Transfer Encoding
en_NZ	English, New Zealand	ISO-8859-1	quoted-printable	quoted-printable
en_US	English, United States	US-ASCIIISO-8859-1ISO-8859-15	quoted-printable	quoted-printable
en_ZA	English, South Africa	ISO-8859-1	quoted-printable	quoted-printable
es	Spanish	ISO-8859-1	quoted-printable	quoted-printable
es_AR	Spanish, Argentina	ISO-8859-1	quoted-printable	quoted-printable
es_BO	Spanish, Bolivia	ISO-8859-1	quoted-printable	quoted-printable
es_CL	Spanish, Chile	ISO-8859-1	quoted-printable	quoted-printable
es_CO	Spanish, Colombia	ISO-8859-1	quoted-printable	quoted-printable
es_CR	Spanish, Costa Rica	ISO-8859-1	quoted-printable	quoted-printable
es_DO	Spanish, Dominican Republic	ISO-8859-1	quoted-printable	quoted-printable
es_EC	Spanish, Ecuador	ISO-8859-1	quoted-printable	quoted-printable
es_ES	Spanish, Spain	ISO-8859-1ISO-8859-15	quoted-printable	quoted-printable
es_GT	Spanish, Guatemala	ISO-8859-1	quoted-printable	quoted-printable
es_HN	Spanish, Honduras	ISO-8859-1	quoted-printable	quoted-printable
es_MX	Spanish, Mexico	ISO-8859-1	quoted-printable	quoted-printable
es_NI	Spanish, Nicaragua	ISO-8859-1	quoted-printable	quoted-printable
es_PA	Spanish, Panama	ISO-8859-1	quoted-printable	quoted-printable
es_PE	Spanish, Peru	ISO-8859-1	quoted-printable	quoted-printable
es_PR	Spanish, Puerto Rico	ISO-8859-1	quoted-printable	quoted-printable
es_PY	Spanish, Paraguay	ISO-8859-1	quoted-printable	quoted-printable
es_SV	Spanish, El Salvador	ISO-8859-1	quoted-printable	quoted-printable
es_UY	Spanish, Uruguay	ISO-8859-1	quoted-printable	quoted-printable
es_VE	Spanish, Venezuela	ISO-8859-1	quoted-printable	quoted-printable

Locale	Language, Country	Character Set	HTML Transfer Encoding	Text Transfer Encoding
et	Estonian	ISO-8859-15ISO-8859-4ISO-8859-1Windows-1257	quoted-printable	quoted-printable
et_EE	Estonian, Estonia	ISO-8859-15ISO-8859-4ISO-8859-1Windows-1257	quoted-printable	quoted-printable
fi	Finnish	ISO-8859-1	quoted-printable	quoted-printable
fi_FI	Finnish, Finland	ISO-8859-1	quoted-printable	quoted-printable
fr	French	ISO-8859-1	quoted-printable	quoted-printable
fr_BE	French, Belgium	ISO-8859-1	quoted-printable	quoted-printable
fr_CA	French, Canada	ISO-8859-1	quoted-printable	quoted-printable
fr_CH	French, Switzerland	ISO-8859-1	quoted-printable	quoted-printable
fr_FR	French, France	ISO-8859-1	quoted-printable	quoted-printable
fr_LU	French, Luxembourg	ISO-8859-1	quoted-printable	quoted-printable
hr	Croatian	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
hr_HR	Croatian, Croatia	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
hu	Hungarian	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
hu_HU	Hungarian, Hungary	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
is	Icelandic	ISO-8859-1	quoted-printable	quoted-printable
is_IS	Icelandic, Iceland	ISO-8859-1	quoted-printable	quoted-printable
it	Italian	ISO-8859-1	quoted-printable	quoted-printable
it_CH	Italian, Switzerland	ISO-8859-1	quoted-printable	quoted-printable
it_IT	Italian, Italy	ISO-8859-1	quoted-printable	quoted-printable
iw(he)	Hebrew	ISO-8859-8	quoted-printable	quoted-printable
iw_IL(he_IL)	Hebrew, Israel	ISO-8859-8	quoted-printable	quoted-printable
ja	Japanese	ISO-2022-JPEUC-JPShift_JIS	7-bit	7-bit

Locale	Language, Country	Character Set	HTML Transfer Encoding	Text Transfer Encoding
ja_JP	Japanese, Japan	ISO-2022-JPEUC-JPShift_JIS	7-bit	7-bit
ko	Korean	EUC-KRCP949	7-bit	7-bit
ko_KR	Korean, Korea	EUC-KRCP949	7-bit	7-bit
lt	Lithuanian	ISO-8859-4Windows-1257	quoted-printable	quoted-printable
lt_LT	Lithuanian, Lithuania	ISO-8859-4Windows-1257	quoted-printable	quoted-printable
lv	Latvian (Lettish)	ISO-8859-4Windows-1257	quoted-printable	quoted-printable
lv_LV	Latvian (Lettish), Latvia	ISO-8859-4Windows-1257	quoted-printable	quoted-printable
mk	Macedonian	ISO-8859-5Windows-1251	quoted-printable	quoted-printable
mk_MK	Macedonian, Macedonia	ISO-8859-5Windows-1251	quoted-printable	quoted-printable
nl	Dutch	ISO-8859-1	quoted-printable	quoted-printable
nl_BE	Dutch, Belgium	ISO-8859-1	quoted-printable	quoted-printable
nl_NL	Dutch, Netherlands	ISO-8859-1	quoted-printable	quoted-printable
no	Norwegian	ISO-8859-1	quoted-printable	quoted-printable
no_NO	Norwegian, Norway	ISO-8859-1	quoted-printable	quoted-printable
no_NO_B	Norwegian, Norway (B)	ISO-8859-1	quoted-printable	quoted-printable
no_NO_NY	Norwegian, Norway NY	ISO-8859-1	quoted-printable	quoted-printable
pl	Polish	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
pl_PL	Polish, Poland	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
pt	Portuguese	ISO-8859-1	quoted-printable	quoted-printable
pt_BR	Portuguese, Brazil	ISO-8859-1	quoted-printable	quoted-printable
pt_PT	Portuguese, Portugal	ISO-8859-1	quoted-printable	quoted-printable
ro	Romanian	ISO-8859-2Windows-1250	quoted-printable	quoted-printable

Locale	Language, Country	Character Set	HTML Transfer Encoding	Text Transfer Encoding
ro_MD	Romanian (MD)	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
ro_RO	Romanian, Romania	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
ru	Russian	ISO-8859-5Windows-1251	quoted-printable	quoted-printable
ru_MD	Russian (MD)	ISO-8859-5Windows-1251	quoted-printable	quoted-printable
ru_RU	Russian, Russia	ISO-8859-5Windows-1251	quoted-printable	quoted-printable
sh	Serbo-Croatian	ISO-8859-2	quoted-printable	quoted-printable
sh_YU	Serbo-Croatian, Yugoslavia	ISO-8859-2	quoted-printable	quoted-printable
sk	Slovak	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
sk_SK	Slovak, Slovakia	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
sl	Slovenian	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
sl_SI	Slovenian, Slovenia	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
sq	Albanian	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
sq_AL	Albanian, Albania	ISO-8859-2Windows-1250	quoted-printable	quoted-printable
sr	Serbian	ISO-8859-2ISO-8859-5Windows-1250Windows-1251	quoted-printable	quoted-printable
sr_YU	Serbian, Yugoslavia	ISO-8859-2ISO-8859-5Windows-1250Windows-1251	quoted-printable	quoted-printable
sv	Swedish	ISO-8859-1	quoted-printable	quoted-printable
sv_SE	Swedish, Sweden	ISO-8859-1	quoted-printable	quoted-printable
th	Thai	UTF-8	8-bit	8-bit
th_TH	Thai, Thailand	UTF-8	8-bit	8-bit

Locale	Language, Country	Character Set	HTML Transfer Encoding	Text Transfer Encoding
tr	Turkish	ISO-8859-9	quoted-printable	quoted-printable
tr_TR	Turkish, Turkey	ISO-8859-9	quoted-printable	quoted-printable
uk	Ukrainian	ISO-8859-5Win-dows-1251	quoted-printable	quoted-printable
uk_UA	Ukrainian, Ukraine	ISO-8859-5Win-dows-1251	quoted-printable	quoted-printable
zh	Chinese	GB2312CP936	7-bit	7-bit
zh_CN	Chinese, China	GB2312CP936	7-bit	7-bit
zh_HK	Chinese, Hong Kong	BIG5CP950	7-bit	7-bit
zh_TW	Chinese, Taiwan	BIG5CP950	7-bit	7-bit

Upgrading the Embedded Version of Apache-Tomcat in Infor Email Marketing

B

From time to time, it may be necessary to upgrade the version of apache tomcat used by Infor Email Marketing. The Apache Foundation frequently releases bug fixes and patches related to security issues and other functional areas in their code.

We have tested the following procedure with several different releases of the embedded version of apache-tomcat. However, it is not possible to guarantee compatibility with every version. If you encounter trouble with this procedure, or have encountered compatibility issues with a newer version of apache-tomcat, please contact Infor customer support.

Please follow the procedure carefully, otherwise if a step is missed then the server may not function correctly.

1. Download the new version of apache-tomcat from http://tomcat.apache.org. Note that only 5.5.x versions are currently supported by EM, and only 5.5.17 has been tested. If any errors occur during the upgrade process, then the new version may not be compatible or additional upgrade steps may need to be taken.
   a. Download Core distribution zip file (example: apache-tomcat- 5.5.17.zip).
   b. Download Embedded distribution zip file (example: apache-tomcat-5.5.17-embed.zip).
2. Stop the Outgoing Service.
3. Rename existing apache-tomcat directory to ‘apache-tomcat-old’. This will serve as a backup until the new version is completely tested.
4. Extract apache-tomcat-<version>.zip into your installation directory. This should create a new apache-tomcat-<version> directory.
5. Rename the apache-tomcat-<version> directory to apache-tomcat.
6. Extract apache-tomcat-<version>-embed.zip into the installation directory. This should create a new apache-tomcat-<version>-embed directory.
7. Copy the .jar files from the apache-tomcat-<version>-embed\lib to apache-tomcat\lib. This should be a new directory (not to be confused with common\lib).
8. In the apache-tomcat\lib directory, rename name commons-logging-<version>.jar to commons-logging.jar. Note that the classpath for the outgoing service refers to this file without the version number and will not function if the file cannot be found.

9 In the apache-tomcat\lib directory rename name ‘commons-modeler-<version>.jar’ to ‘commons-modeler.jar’. Note that the classpath for the outgoing service refers to this file without the version number and will not function if the file cannot be found.

10 Copy all .jar files from <EM_HOME>\lib\jaxws-ri\lib into the apache-tomcat\common\lib directory.

11 Copy ‘apache-tomcat-old\conf\tomcat-users.xml’ to the apache-tomcat\conf directory. Overwrite the existing file.

12 Delete the apache-tomcat\webapps directory.

13 Copy the’ apache-tomcat-old\webapps’ directory to the apache-tomcat directory. This puts all the EM specific web application back in the correct place.

14 Start the Outgoing Service and test for correct operation.

15 You can view the current apache-tomcat version from any error page. For example, browse to the following:

   http://<outgoing service host name>:<outgoing service port number>/xyz (i.e. http://localhost:8080/xyz).

   This will give a "page not found" error but will also list the version number at the bottom of the page.

16 Delete the ‘apache-tomcat-<version>-embed’ directory. It is no longer needed after this point. You may also delete the apache-tomcat-old directory but it may be a good idea to keep this around for a while just incase you need to revert back to the prior version.

Glossary

Abuse Forwarding Address – The email address that abuse messages should be forwarded to. These are emails that are addressed to abuse@<from_address_domain>. This assumes that every tenant will have a different domain.

Address (A) Record query – Infor Email Marketing queries the DNS Address (A) Record, to find which IP address matches a given domain name.

Incoming Service Admin Handler – An Incoming Service handler that, in combination with the HTTP Handler, is used for administrative functions between the incoming and outgoing services. This handler will also handles synchronization requests between servers.

Alert Email Address – An email address where messages will be sent if something goes wrong with the campaign.

Apache MINA - (Multipurpose Infrastructure for Network Applications) is a network application framework which helps users develop network applications easily by providing abstractions of network and protocol I/O layers. The Incoming Service uses Apache MINA as a protocol engine to service SMTP, HTTP, and IDENT queries.

Authorization – An encrypted version of the username/password. This is generally found in the Campaign header file.

Blob Data – (deprecated) See List Record Data.

Campaign Description – A textual description of the campaign. This comes from the header file field called Campaignpath.

Campaign Header File – The primary input to EmailMarketingDispatcher. It is a file that includes all necessary information needed for the campaign including connection information, authentication information, and reference to all other campaign export files.

Click-Thru Longevity – The number of days that click-thrus should continue to work for this campaign after it has completed. This field comes from the header file field called “clickthrulongevity”. It has a default value of 90.

CNAME Record query – Infor Email Marketing queries the Canonical Name (CNAME) Record, is used to create aliases that point to other names. The CNAME Record is commonly used to map WWW, FTP and MAIL subdomains to a domain name; for example, the CNAME Record can associate the subdomain FTP.COMPUTERLANGUAGE.COM with COMPUTERLANGUAGE.COM.

Configuration Manager – A web based tool that allows the Infor Email Marketing system administrator to edit the configuration. It is based on JSF using MVC architecture, and resides inside the outgoing service embedded tomcat server.

Configuration XML File - An XML file that is used to store all EM related configuration data.

Content Generator (CTG) - The Infor Email Marketing component that is responsible for generating email content based on input from the campaign list file(s), EML templates, local content files, and possibly remote content servers. It formats the resulting email in a MIME compliant structure for delivery to a remote SMTP server.

Delete Incomplete Jobs – Deletes incomplete jobs (i.e. those that have not been approved). These jobs are not subject to archival.

DNS (Domain Name System) – The Domain Name System serves as the "phone book" for the Internet: it translates human-readable computer hostnames, e.g. en.wikipedia.org, into the IP addresses that networking equipment needs for delivering information. It also stores other information such as the list of mail exchange servers that accept email for a given domain.

DNS Monitor Frequency – The frequency in seconds that the DNS server should be tested to verify it is responding correctly.

DNS Zone– A DNS zone is any division of the global Domain Name System namespace. The DNS namespace is laid out in a tree structure from right to left, such that divisions of the namespace are performed by prepending a series of characters followed by period ('.'), to the upper namespace (e.g. 'com.' to 'infor.com.').

Domain Count – A tool that generates statistics about the domains contained in a job file.

Domain Fixup File – This file provides domain name substitutions for email address cleanup.

Domain Keys Identified Mail (DKIM) – An email authentication method that computes a digital signature which is added to the message header. The receiving mail server obtains the sender's public key from the DNS system to validate the signature.

Emailerclientid – The tenant value to be used for the campaign.

Emailerpassword – The password used to login to the EM server.

Emailerserver – The hostname of the EM server, used for web services connections.

Emailerusername – The user name used to login to the EM server.

EML - Email Markup Language. A very simple markup language that allows for substitutions to be included in a text stream. These tags begin and end with a backtick '`' character. For example if `TargetURL` was encountered then the actual target URL would be inserted in place of the tag.

Email Delivery Engine – The component that uses the Content Generator (CTG) to generate emails, and then delivers them to the destination SMTP server.

EmailMarketingDispatcher – The client program called by EM to transport campaign export files to the EM server and issue a set of remote method calls to create, build, test, and approve the email job.

Email Markup Language – A tag substitution language used for email generation within Infor Email Marketing (see EML above).

Email Communication Content – A campaign export file that contains the content master's for a given communication. This file will contain TEXT and HTML content.

Email Relay Server Addresses – A list of zero or more addresses that all email should be relayed through.

Encoded URL – A URL generated by the EM server that contains information about the originating job file and the recipient record. Encoded URLs are use to allow the incoming server to re-associate a URL with the originating job file record. Most URLs in an EM campaign will be encoded unless they are not tracked and not directed at the incoming services.

ETC file – Acronym for Email Communication Content file. A file containing the campaign email content.

External Tracked URL Period – The period of time that the server should continue to track URLs after the job has been archived.

Free Disk Space Requirement – The minimum amount of required disk space that must be available on the mailerdata volume (i.e. the disk where the mailerdata directory resides) for normal operation. If the disk space drops below this level then any active jobs will suspend operation.

Friendly Name – The friendly name that appears next to the email address in any outgoing email.

Full Synchronization Rate – The frequency in Synchronization Intervals that the Outgoing Service will do a full directory reconciliation with each of the Incoming services.

Home Page Url – In the incoming service preference pages this is the URL that the browser should be redirected to when the `HomeUrl` page is referenced.

HTML Detection – A method used to detect if an HTML recipient is capable of receiving and displaying HTML email.

HTML Detection Flag – An input that calls for the content generator to insert an HTML detection image in outbound emails. This comes from the header file field called sniff.

HTML Message ID Visible – Make the message-id visible in HTML messages. If the message-id is not visible, then the message-id that would normally appear in the body is enclosed in an HTML comment. In TEXT messages the Message-ID will be removed completely.

HTTP Handler – A general purpose MINA protocol handler that accepts http or https connections.

IDENT Handler – An Incoming Service handler that accepts ident connections.

Identity - The incoming services will support multiple identities for each tenant. This is basically a set of web pages that have been customized for a certain look and feel. Identities may be used to represent different languages, departments, products, etc.

Incoming Batch File Retention Period – The period of time in days that incoming batch files should be kept assuming that they are completely processed.

Incomplete Job Retention Period – The number of days that incomplete jobs should be kept. These jobs are not subject to archival.

Input List File – A campaign export file that contains any demographic and/or transactional data that will be used as substitutions within the Email Communication Content.

Job Data Archive Delay – The number of days after the job is complete that all files in the job directory should be archived. After archiving them most files in the job directory can be deleted.

Job File Record – A record within the job file that contains all information necessary to deliver an email to a single recipient.

Job File Scan Rate – The interval in seconds at which the Outgoing Service Scheduler should scan for new job files.

Job Info XML file – a file created by the Create Job API, containing all the instructions for running an email campaign such as Scheduled Start Date, Scheduled End Date, etc.

Job Longevity – The number of days that the campaign will continue to collect feedback after it has completed.

Job Number – A unique number assigned to a job file.

Job Processing – An application that accepts data from the Marketing server and uses it to construct job files. It is also used when extracting feedback data from Infor Email Marketing jobs.

Lightly Formatted HTML – HTML which merely translates an original TEXT message, is very brief and easily tracked with very little additional code. If a Lightly Formatted HTML message is sent to an email client that is not HTML capable, the message will still be readable (minus a small amount of HTML markup).

List Record Data – A data record (usually one line) from the input list file.

List Record Size – The size in bytes of the List Record Data

Log Clicks Flag – An input that calls for clicks (of tracked URLs) to be reported in feedback.

Log Processing – The part of Outgoing Service which processes the incoming batch files produced by the Incoming Server.

Log Sends Flag – An input that calls for the sent records to be reported in feedback.

Log Views Flag – An input that calls for ‘email views’ (times when the email is opened) to be reported in feedback. This comes from the header file field called openmaillogging.

Mailer – Email Delivery Engine.

Max Bytes Per Day – The maximum number of bytes that can be sent per day in megabytes. Zero is unlimited.

Max Messages Per Day – The maximum number of messages that can be sent per day. Zero is unlimited.

Max Total Sessions – The maximum number of session that can be connected at any point in time for all campaigns. Zero means unlimited.

Message ID – A unique identifier for an email message. The message ID is used to re-associate email responses with the originating Job File Record.

MIME – Multipurpose Internet Mail Extensions (MIME) is an Internet Standard that extends the format of email to support non-standard characters, non-text attachments, and multi-part message bodies.

MPA Enabled – - a Boolean value that indicates if MPA message should be considered.

MPA Flag – An input that calls for the content generator to consider sending an MPA (Multi-Part Alternative) message for this campaign.

Multi-Part Alternative (MPA) – A multi-part MIME message that includes both TEXT and HTML message parts. The email client will display whichever one is more appropriate.

MX Record query – Infor Email Marketing queries the Mail Exchange (MX) record, which identifies the server to which email is directed. The MX Record also contains a priority field so that mail can be directed to multiple servers in a prescribed order.

NCSA Common Log Format - A text format commonly used by web server (including IIS and Apache) to log information about HTTP requests.

NS Record query – Infor Email Marketing queries the Name Server (NS) Record, which identifies the authoritative DNS servers for a domain. A second name server is required for redundancy, and two NS records must be in the DNS zone file (one for the primary; one for the secondary). The secondary server queries the primary server for changes.

Outbox Job Retention Period – The number of days that an outbox job should be kept after it has completed delivery. These jobs are not subject to archival.

Outgoing Service – The services responsible for hosting Infor Email Marketing campaigns. These consist of the Email Delivery Engine, Incoming Log Processing, and Job Processing. This suite of services maintains the mailing job data as the source for feedback information. It includes the Job Processing services to accept campaigns from OM via an HTTPS interface, and hosts the Configuration Manager to handle the overall configuration of Infor Email Marketing, and the Admin Manager used to monitor the Infor Email Marketing system. Outgoing Service is responsible for synchronizing files from the outgoing service machine to any remote incoming service machines.

Panel Key – A code that indicates which communication an email recipient should receive. This is the same thing as communication code on the Marketing server.

Pointer (PTR) Record query – Infor Email Marketing queries the DNS Pointer (PTR) Record, which provides data for reverse DNS (finding which domain name matches a given IP address) which is used for logging the domain name and verification purposes. Also called Inverse DNS, the PTR record is an option.

Postmaster Forwarding Address – The email address that postmaster messages should be forwarded to. These are emails that are addressed to postmaster@<from_address_domain>. This assumes that every tenant will have a different domain.

Preview Flag – An input that distinguishes a test campaign from a real campaign. (True if this is a preview, false if it’s a real campaign.)

Preview Job Retention Period – The number of days the preview jobs should be kept. These jobs are not subject to archival.

Property – A named configuration value.

Purge Duplicates Flag – An input that calls for duplicates to be purged from the input list file; otherwise duplicates will be allowed. This comes from the header file field called purgeduplicates.

Record Definition – A file that describes the format of the list file records. A record definition is a UTF-8 text file that contains information about the format of a fixed width flat file. These files are created by Marketing to describe the email list file. The record definition API (recdef) reads and parses record definition files and then allows the application to lookup field information within it.

Recipient - This can be a confusing term because it refers to the individual or system that received an email message. In most cases for the incoming services this refers to one of the email address configured in the EMConfig file. These email address are sometimes also referred to as FROM addresses (thus the confusion). In some cases, "Recipient" may also refer to the end-user who received a campaign email message.

Recipient ID – An index which identifies an email recipient on the Infor Email Marketing Incoming Services (not to be confused with an outbound email recipient).

Retry Method – The scheduling method to be used for campaign retries. (INTERVAL or REGRESSIVE; INTERVAL is the default.)

Scheduled End Date/Time – Time when the campaign is scheduled to end (Time when no more messages will be delivered).

Scheduled Start Date/Time – Time when the campaign is scheduled to execute.

Sender Policy Framework (SPF) – An extension to the Simple Mail Transfer Protocol (SMTP). SPF allows software to validate addresses in the SMTP MAIL FROM (Return-Path). SPF allows the owner of an Internet domain to use special format of DNS TXT records to specify which machines are authorized to transmit email for that domain. For example, the owner of the example.org domain can designate which machines are authorized to send email whose sender email address ends with "@example.org". Receivers checking SPF can reject messages from unauthorized machines before receiving the body of the message.

Session-ID – A string that identifies the session in which a job is created.

S/MIME – Secure / Multipurpose Internet Mail Extensions, a standard for public key encryption and signing of email encapsulated in MIME.

SMTP Handler – An Incoming Service handler that accepts incoming email connections.

SMTP Port - The port number used when connecting to remote SMTP servers. In most environment this should have a value of 25.

SOA Record query – Infor Email Marketing queries the Start of Authority (SOA) Record, which is the first record in the DNS zone file. It contains the name of the primary DNS server, which must correspond to an NS record in the file, the administrator's email address and the length of time records can be cached before going back to the authoritative DNS server.

The SOA also includes data for the secondary DNS server such as the date of last update (the "Serial Number") and time intervals for checking the domain.

Source Code – A code from the source system that is used to categorize emails for reporting purposes.

State Count – A tool that provides general summary information about a job file. It generate summary reports on the state of records and also reports information by source code.

Synchronization Client – A set of synchronization client functionality on the Outgoing Server integrated within the Outgoing Service, Content Generation Engine, TestJob, and the Configuration Manager. The Outgoing Service is responsible for scanning the mailerdata directory for new files to upload, and for running periodic checks to test that all files are synchronized. TestJob will transmit new job data (RedirectUrls, and JobInfo) to the Incoming Servers. The Content Generator will check at the beginning of the first pass that all necessary data is present on the Incoming Server. The Configuration Manager will upload new configuration information to the Incoming Server via the Synchronization Server.

Synchronization Interval – The frequency in minutes that the Outgoing Service will synchronize changes to each of the Incoming services. Only recently updated files on the Outgoing Service are considered.

Synchronization Retry Count – In the event of a synchronization failure, this is the number of times that the Outgoing Service should retry before reporting an error.

Target URL – For a tracked URL this is the actual target or destination URL.

Temp File Retention Period – The number of days that temp files such as those in the mailerdata temp directory should be kept.

Tenant – A company or department within a company that uses Infor Email Marketing.

Tenant Settings – All settings that are unique to a particular Tenant.

Text Message ID Visible – Make the message-id visible in text messages. If the message-id is not visible, it is inserted into the MIME headers and not the message body. In this case it should be duplicated in a additional mime header called X-INFOR-Message-Id because it is common that the original message-id will be lost.

Test Mode – Outgoing service will operate in test mode. All job files that are created will be marked as test jobs, and all outbound email will be short-circuited to a test server.

TXT Record query – Infor Email Marketing queries the "TXT" Record, which provides additional information associated with a domain. In particular these records are sometimes used to return information about the version of the DNS server software. They are also used to provide information to the SPF email authentication system.

Top Level Domain (TLD)– The right most part of a domain name (i.e. ".com"). There are about 270 of these and they fall into two categories, country codes, and generic top level domains.

The TLD's for countries (about 250) can be found at the following web page: http://www.iana.org/root-whois/index.html. They range from ".ac - Ascension Island" to ".zw - Zimbabwe".

The generic TLD's (about 20) can be found at the following web page: http://www.iana.org/gtld/gtld.htm. These range from ".aero" to ".int"

Tracked URL – A URL that should be tracked by Infor Email Marketing. When an email recipient clicks on the URL it first goes to the Infor Email Marketingserver, the hit is recorded and then the browser is redirected to the target URL.

Communication Code – A code that identifies a specific communication in a segmented campaign list.

Unknown Values – A list of values that mean "UNKNOWN". If one of these values is found as part of a substitution field then it should be replaced with an appropriate default value. See DefaultIfEmpty EML tag for more information.

User Key – A key that identifies the recipient in the source system (Marketing DataMart).

Variant Selection – A method of selecting a localized content file based on language parameters specified by the web browser.

WWW Service – An Incoming Service handler that, in combination with the HTTP Handler, is used to process requests for changes to recipient preferences (and also handles tracked URLs).

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