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E-Mail Campaign Manager 1.3.3 for Sitecore CMS 6.5

Administrator's and Developer's Guide

A Quick Start Guide and Configuration Reference for Administrators and Developers

Table of Contents

Chapter 1

Introduction

This document is designed for Sitecore administrators and developers. It contains information about how to set up, configure and tune the module.

For end user instructions, read the *ECM Marketer's Guide*.

The document contains the following chapters:

- **Chapter 1 — Introduction.**
  The introduction and the fundamental concepts of the module.

- **Chapter 2 — Quick Start Guide.**
  The steps required for the quick setup of the E-Mail Campaign Manager. The quick setup is the minimal amount of configuration that would let you use the module.

- **Chapter 3 — Configuring and Using the E-Mail Campaign Manager.**
  Practical advice on configuring and using the module from an administrator's perspective. Be sure to read section *3.2, Performance*, as it describes some important techniques that let you optimize the module performance significantly.

- **Chapter 4 — ECM Configuration Reference.**
  The descriptions of the module's configuration settings.

- **Chapter 5 — Implementation Details.**
  This chapter describes how various internal processes work and contains information that will help you to extend or modify the module's functionality.

1.1 Fundamental Concepts

This section contains a list of definitions for the terms and concepts used throughout the E-mail Campaign Manager documentation.

1.1.1 Target Audience

A target audience is an item that allows Sitecore users to create and dispatch messages related to a specific topic.

Each target audience item is associated with a subscriber list. Sitecore represents subscribers as Sitecore users. Each target audience has an associated subscription role. When visitors subscribe using a form on the site to receive messages pertaining to the associated topic, Sitecore assigns the role associated with the target audience to the Sitecore user associated with the current visitor.

Each target audience item contains a set of subfolders for message drafts, messages being processed and messages that have already been sent, for instance in the following screenshot, Sitecore Insights is the target audience item:
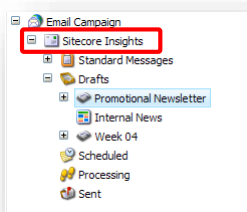
Target audiences are stored as children under a so-called Manager Root.

1.1.2 Manager Root

A manager root item stores one or more target audiences. A site generally has one manager root. For instance, in the following screenshot, Email Campaign is the manager root item:
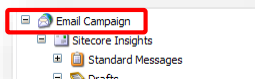
1.1.3 Subscriber

A subscriber is a Sitecore user with an associated e-mail address that receives messages from one or more target audiences.

1.1.4 Opt-in/Opt-out Roles

Each target audience item has an associated Opt-in Role and an Opt-out Role. By default, the module creates these roles when a user creates a target audience, but administrators can select alternative roles.

Members of the Opt-in role are subscribers to this target audience item.

Members of the Opt-out Role are *not* sent messages from this target audience item. The Opt-out Role membership overrides the Opt-in Role membership.

1.1.5 Sitecore App Center

When the module starts dispatching the messages, it checks with the Sitecore App Center (SAC) that you have enough message credits to send this batch of messages and gets the SMTP server settings to use when sending the messages.

The SAC provides the Email Campaign Manager with the information about messages that bounced.

If the *UseLocalMTA* setting is set to true, the module checks whether your license permits you to use your own MTA.

1.1.6 Message Engagement Plan

Engagement plans allow you to control some of the specific ways in which your website interacts and communicates with the visitors to your website.

The ECM uses the message engagement plan to manage the sending process and track the behavior of the recipients of the message.

For more information about Engagement Plan, see *Engagement Automation Cookbook*.

Chapter 2

Quick Start Guide

This chapter describes how to quickly set up the E-Mail Campaign Manager. The quick setup is the minimal amount of configuration that would let you use the module.

This chapter contains the following sections:

- Setting up the Module

- Creating a Target Audience Item

- Associating the Target Audience Item with Subscribers

- Adding a Subscription Form to a Page

2.1 Setting up the Module

This section describes the settings required for the module to function.

2.1.1 Configuring Base URL

After installing the module package, you must configure the *Base URL* setting by entering the website address of the ECM server in it. This URL is used in all the links in the email message.

To access the *Base URL* setting, in the E-mail Campaign Manager, select the manager root:
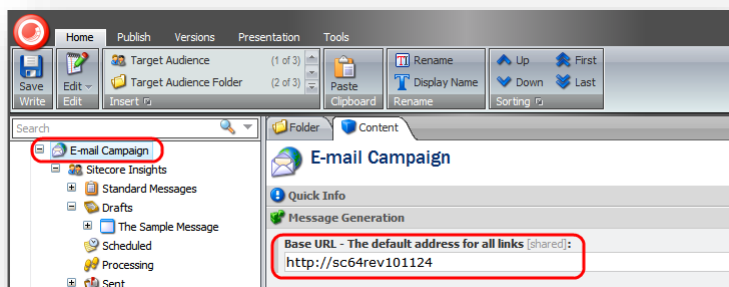
2.1.2 Using Sitecore App Center's Email Delivery Service as an MTA

The ECM module uses the external Message Transfer Agent (MTA) by default. MTA is software that transfers email messages from one computer to another using a client–server application architecture.

The module obtains all the necessary SMTP settings from the *Sitecore App Center*. For more information about configuring SAC, see the *Configuring Sitecore Application Center*.

You can test MTA connection using the **Test Connection** button, in the **Content Editor**, on the **Tools** tab. For more information about the tool, see the *Verifying a Connection between ECM and MTA* section.

2.1.3 Using a Custom MTA

If you have purchased the right to use a custom MTA, you should set the *UseLocalMTA* setting to true in the `Sitecore.EmailCampaign.Config` file:

```
<setting name="UseLocalMTA" value="true" />
```

Then you should configure all the required SMTP settings in the `Sitecore.EmailCampaign.Config` file in the `<sitecore>/<settings>` section.

2.2 Creating a Target Audience Item

A target audience is an item that allows Sitecore users to create and dispatch messages related to a specific topic. This section describes how to create a target audience item.

You can set different engagement plans for different target audiences. For more information about target audience settings, see the *Target Audience Settings* section.

Note
Before starting to work with the module, we recommend that you publish your Web site (you may use any publishing option, but we recommend incremental).

To create a target audience item:

1. Start the **E-Mail Campaign Manager**.

2. Select the manager root and in the **Folder** tab on the right, click the **Target Audience** option and the **New Target Audience** dialog box appears.
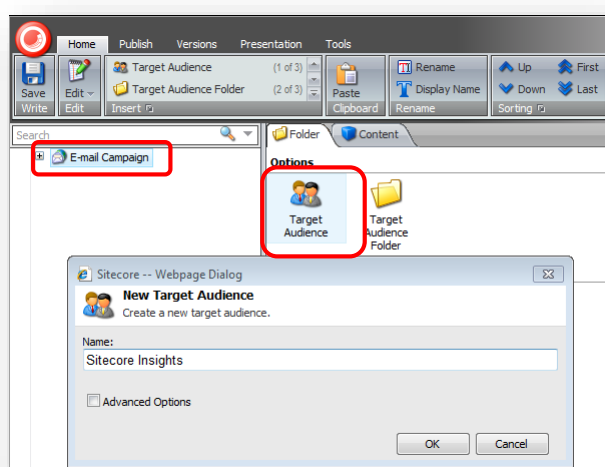
3. In the **New Target Audience** dialog box, enter the name of the target audience, for instance, *Sitecore Insights*. The **Advanced Options** section, when activated, lets you specify the *Opt-in* and *Opt-out* roles.

    If you do not specify the Opt-in role when you create the target audience item, Sitecore creates the new role automatically and puts it in the **Opt-in Role** field of the target audience.

4. Click **OK** and Sitecore creates the new target audience.
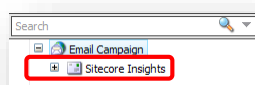
2.2.1 Basic Message Settings

When the target audience is created, you can specify some basic settings that are common for all the messages in this target audience, for instance, **From Name**, **From Address** and so on.

With the target audience selected, in the **Content** tab on the right, scroll down to the **Message Header** section and edit the appropriate settings.
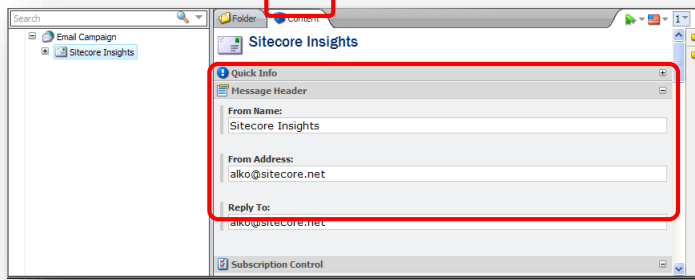
2.3 Associating the Target Audience Item with Subscribers

Use the **Opt-in Role** and **Opt-out Role** fields to associate the target audience with the subscribers.

Select the target audience item and in the **Content** tab on the right scroll down to the **Audience Configuration** section.
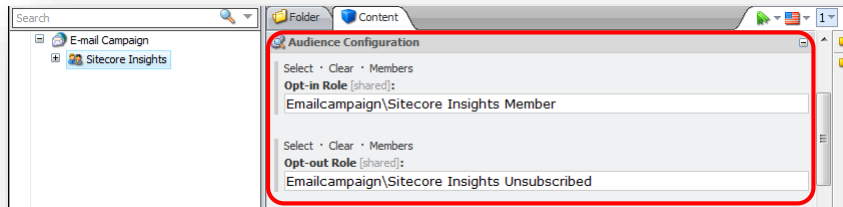
Users belonging to the role specified in the **Opt-in Role** field will receive messages from this target audience.

Users belonging to the role specified in the **Opt-out Role** field will not receive messages from this target audience even if they also belong to the **Opt-in Role** field.

2.4 Adding a Subscription Form to a Page

The ECM module contains the *Subscription Form* control that you can add to your pages. By default the control is stored at: `/sitecore/layout/Sublayouts/Email Campaign/Subscription Form`
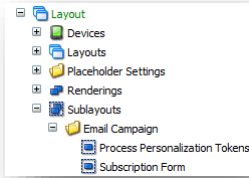
2.4.1 Subscription Form Control Properties

The *Subscription Form* control has the following module-specific properties:
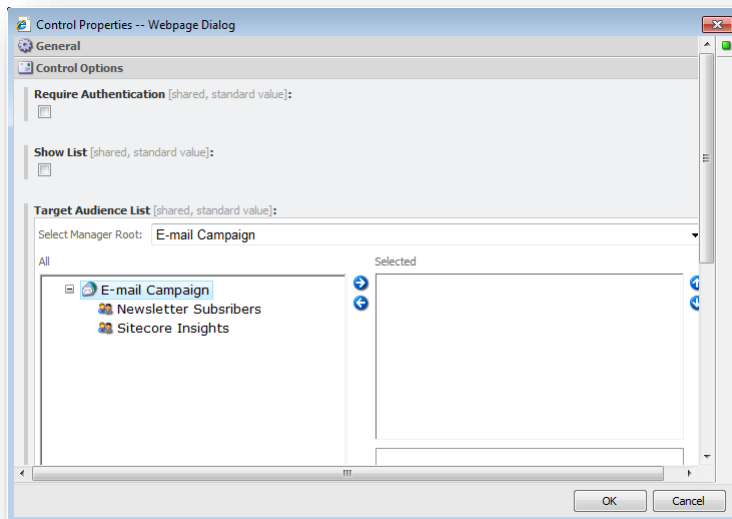
Require Authentication

When this check box is selected, only users who have logged in to the site can see the form control. Unauthenticated users see the message *Please login to change subscription settings*.

If you want to edit this text, open the following item:

`/sitecore/system/Modules/Email Campaign Manager/Common Text/Please Login`

Show List

When this check box is selected, the list of target audiences specified in the **Target Audience List** field is displayed on the web site.

When a user clicks **Subscribe** on the Web site, they are added to the mailing lists they selected and removed from the lists they didn't select.

When the **Show List** check box is not selected, the list of target audiences is not displayed on the Web site. When a user clicks **Subscribe** on the form, the user is subscribed to all the target audiences specified in the **Target Audience List** field of the control.

Target Audience List

Use this field to specify the target audiences for the current subscription form control.

The location of the manager roots (one or many) on your site is defined in the */sitecore/system/Modules/Email Campaign Manager/System/Root List* item. The module updates this item automatically.

Chapter 3

Configuring and Using the E-Mail Campaign

Manager

This chapter describes how to configure and use the module.

This chapter contains the following sections:

- Configuring the E-mail Campaign Manager

- Performance

- Using the E-Mail Campaign Manager

3.1 Configuring the E-mail Campaign Manager

This section contains practical advice on configuring the module.

3.1.1 Configuring Sitecore Application Center

To be able to send Email Campaign messages you must configure SAC. For the detailed instructions about how to configure SAC, see the <u>Getting Started with Sitecore App Center</u> document on the SDN.

3.1.2 Collecting Delivery Status Notifications

Errors can occur at multiple places during e-mail delivery. A sender may receive a bounce message from the sender's mail server or from a recipient's mail server. When a server accepts a message for delivery, it is also accepting the responsibility to deliver a DSN (Delivery Status Notification) in the event the delivery fails.

Depending on whether you use the Sitecore MTA or not, the module uses one of the two methods to collect the DSN messages.

Using the Sitecore MTA

If you use the Sitecore MTA, then the SAC collects the DSN messages and then passes them to the module.

There is a scheduled task called **Check Bounced Messages** at the following location:

`/sitecore/system/Tasks/Schedules/Email Campaign/Check Bounced Messages`
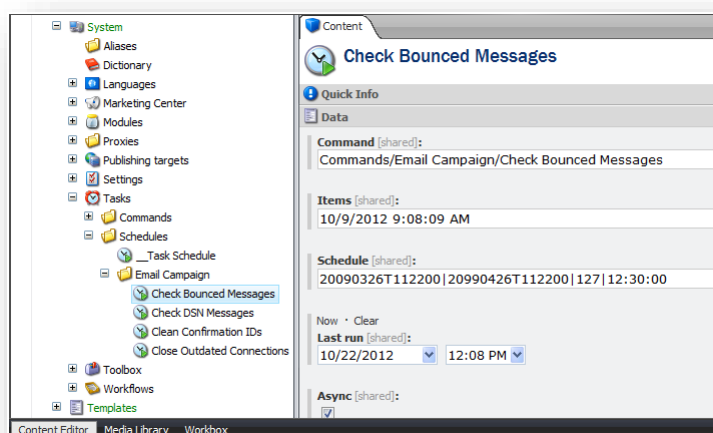
This scheduled task defines when the SAC checks the bounced messages and passes them to the ECM.

The task contains the following fields:

- **Command** – The Sitecore command to be executed.

- **Items** – The UTC date/time when the SAC collected DSN messages and passed them to the ECM. This time only reflects when the message collection occurred. For information about the period of time for which SAC collects the DSN messages, see the further description.

- **Schedule** – The time when this task runs. The time is set using UTC time. You can also set the period of time during which the task is active.

- **Last run** – The time when the task ran last.

When the time in the **Schedule** field comes, Sitecore executes the **Check Bounced Messages** task and checks the following condition:

Is the date in the **Items** field equal to today's date?

If the condition is false, the module does the following:

- Sends a request to the SAC to collect the DSN messages. The SAC returns the DSN messages for the following period:

  o *Start date/time:* as the start date/time, ECM uses the following values:
    Date – the date in the **Items** field.
    Time – *12:00 AM.*

  o *End date/time:* as the end date/time, ECM uses the following values:
    Date – the date when the task runs.
    Time – *12:00 AM.*

- Sets the **Items** field value to the UTC date/time when the task runs.

- Sets the **Last run** field value to the current date/time.

This means that if the **Check Bounced Messages** task runs daily, the module collects the DSN messages from the day before the current day.

If the condition is true, the module only sets the **Last run** field value to the current date/time.

The rationale behind this is that the collection of DSN messages may be a high load task and server administrators may not want it to run more than once a day.

Using a Custom MTA

If you use a custom MTA, the module uses the settings in a **Target Audience** or a **Manager Root** to collect the DSN messages.

The E-Mail Campaign Manager collects the DSN messages for analysis. To collect the DSN messages, the module connects to the mailbox specified in the **Return Address** field in the **Delivery Status Notifications** section of the **Target Audience** or the **Manager Root**.

The following setting defines how frequently the module checks the Return Address e-mail for DSN messages:

`/sitecore/system/Tasks/Schedules/Email Campaign/Check DSN Messages`
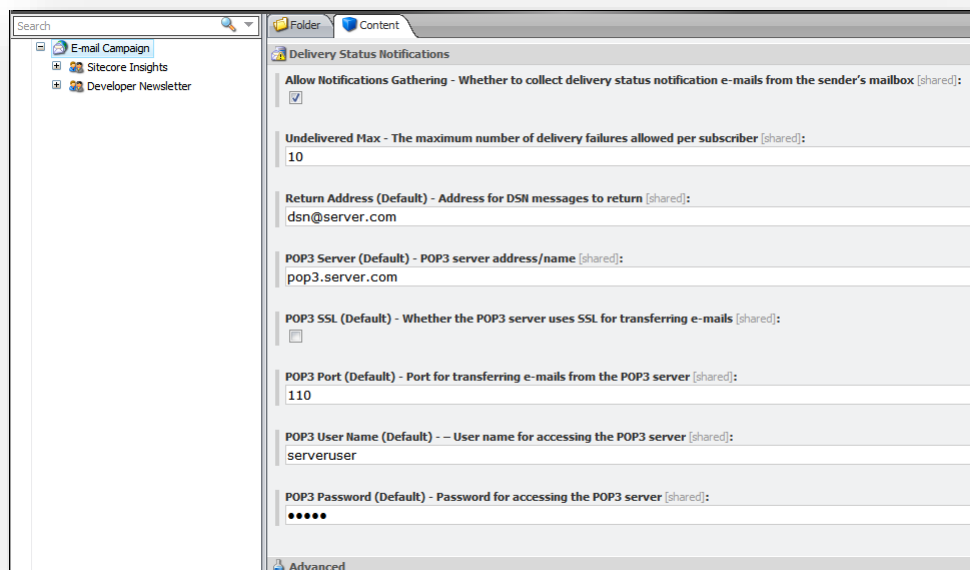
The module collects DSN messages once a day by default.

You can configure the **Delivery Status Notifications** globally on a **Manager Root** and locally on a **Target Audience**.

This section describes how to configure the module to gather the DSN messages.

To configure the module to gather the DSN messages:

---

1. On the **Manager Root**, on the **Content** tab, in the **Delivery Status Notifications** section, check the **Allow Notifications Gathering** checkbox and enter the POP3 server settings.

5. On the **Target Audience**, on the **Content** tab, in the **Delivery Status Notifications** section, check the **Notifications Gathering** check box.

If you leave the rest of the fields blank, their values are inherited from the **Delivery Status Notifications** section on the **Manager Root**.

For more information about the fields in the **Delivery Status Notifications** section, see section *4.4.5, Delivery Status Notifications*.

Now the module can connect to the sender's mailbox and gather the DSN messages.

3.1.3   Configuring Dedicated Servers

The E-mail Campaign Manager can use dedicated servers to speed up the message generation and sending process.

Every dedicated server contains a copy of the Sitecore CMS installation from the master server. This lets the dedicated server generate messages the same way as the master server. All servers share the same databases. The database server must support remote access to databases.

To configure the dedicated server:

1. Copy the Sitecore CMS installation to the dedicated server. You should copy the whole file system, but not the databases.

1. On the dedicated server, set the folder permissions required for Sitecore to run.

2. On the dedicated server, in the `ConnectionStrings.config` file, make sure the connections point to the same databases as the master server uses.

3. On the dedicated server, in the `Web.config` file, edit the absolute paths so that they point to correct locations. For example, the `dataFolder` setting.

4. On the dedicated server, remove the `<scheduling>` section from the `Sitecore.EmailCampaign.config` file.

5. On the dedicated server, start Sitecore and make sure that it works.

6. On the master server, in the `Sitecore.EmailCampaign.config` file, in the `<DedicatedServers>` section, enter the address of the dedicated server. For example:

```
<DedicatedServers>
   <address value="http://ecmdedicatedserver.net" />
</DedicatedServers>
```

Note
If you enter the IP address of the dedicated server in the address setting (for instance: `<address value="http://10.38.41.24" />`), then on the dedicated server Sitecore must run on the Default Web Site.

You have now configured the dedicated server.

You can configure several dedicated servers in this manner.

When you start the dispatch process on the master server, the same process starts on the dedicated servers. Each server accesses the list of subscribers in the Analytics database, takes one of the remaining subscribers, generates the message for them, and passes the message to the MTA configured for this server. The process continues as long as there are subscribers left in the list.

Tip
Use the *Sleep* setting to balance the load between the master server and dedicated servers. For more information about the *Sleep* setting, see ECM Tuning Guide on the SDN.

3.1.4   Configuring the Module on Multiple Sitecore Instances

This section describes how to configure the module to work on one of multiple Sitecore instances that share the *Master* and *Analytics* databases. You can configure other instances in a similar manner.

To configure the module to work on one of multiple Sitecore instances:

1. Select the Manager Root.

2. On the **Content** tab, in the **Message Generation** section, in the **Base URL** field, enter the address of the content delivery server (the website that visitors browse).
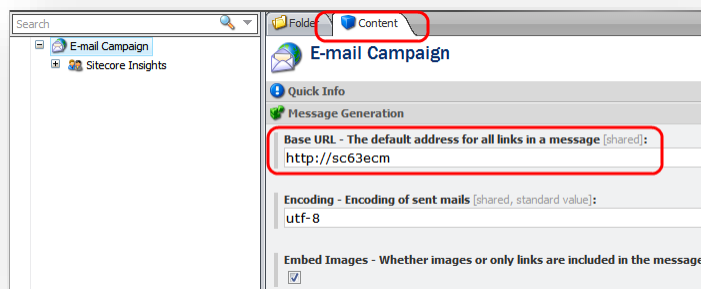
3.1.5 Verifying a Connection between ECM and MTA

If you use MTA provided by SAC or have configured your local (custom) MTA server, you can test the connection.

To test the connection:

1. Start the **E-mail Campaign Manager**.

2. On the **Tools** tab, in the **MTA** group, click **Test Connection**.
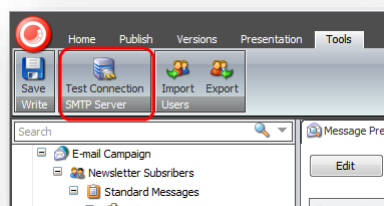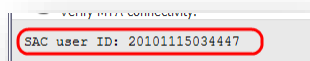
The module starts the **Test Email Connection** dialog box. Click **Show Details** to see the detailed information.
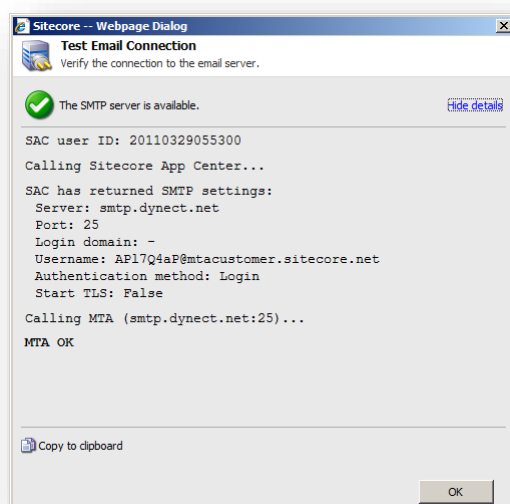
Let's take a look at the information that the dialog box contains.
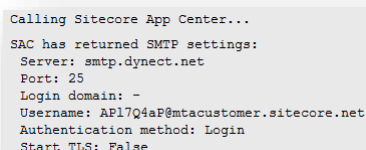
- **SAC user ID**
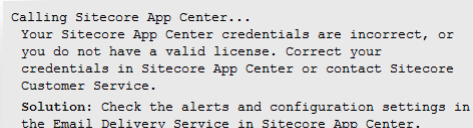
This line indicates your ID in the SAC service.

- **Calling SAC…**
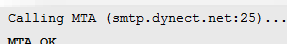
To obtain your MTA settings, the tool contacts SAC and lists the settings it obtains if the call is successful. If the call is not successful, the tool displays an error message and some hints that may help you to troubleshoot the problem:

- **Calling MTA…**

If the tool obtains the SMTP settings successfully, it uses them to call the MTA. If the call is successful, you see the **MTA OK** message.

If the call is not successful, the tool displays an error message and some hints that may help you to troubleshoot the problem. If you click the *Connection failed* link, the tool displays more details about the problem that it encountered.

3.2 Performance Tuning

The speed with which emails are sent and delivered depends on a complex set of factors and dependencies. For more information about how to optimize the performance of the ECM, see the *ECM Tuning Guide* on the SDN.

3.2.1 Using the Performance Measurement Tool

The **ECM Performance Measurement Tool** is designed to give the customer or consultant a view into the performance of an E-mail campaign based on current configuration settings.

For information about how to access and use this tool, see *ECM Tuning Guide* on the SDN.

Note
A user must belong to the *ECM Users* or *ECM Advanced Users* role in order to use the tool.

3.2.2 Using the Emulation Mode to Test Performance

The ECM module provides means of testing campaign throughput by emulating a MTA. MTA emulation allows you to mimic the round trip time required to send an E-mail from the Sitecore CMS to a MTA.

Emulation can be configured in two modes

1. Emulation for a Single Dispatch.

    You can select this mode for a specific message in the **Options** section on the **Content** tab.
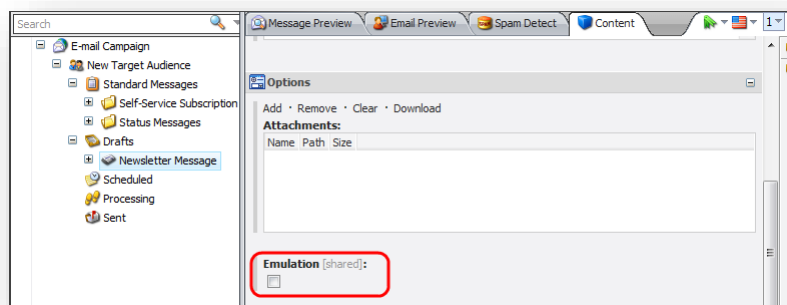
2. Emulation for the Server level Dispatch.

    You can configure this mode with the `MtaEmulation.Active` setting in the `Sitecore.EmailCampaign.config` file.

For more information about configuring and using the emulation mode, see *ECM Tuning Guide* on the SDN.

3.3 Using the E-Mail Campaign Manager

This section describes how to perform a number of the most common tasks in the E-Mail Campaign Manager.

3.3.1 Using Opt-in and Opt-out Roles to Subscribe and Unsubscribe Users

To subscribe to or unsubscribe users from a target audience:

1. Select the target audience.

2. In the right hand pane, in the **Content** tab, scroll down to the **Audience Configuration** section.
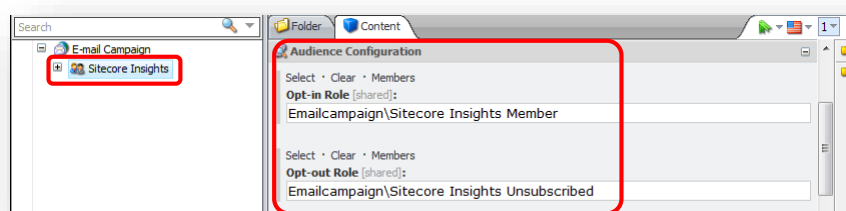
3. Subscribe users using the **Opt-In Role** field and unsubscribe them using the **Opt-Out Role** field.

Users belonging to the role specified in the **Opt-in Role** field will receive messages that are sent to this target audience.

Users belonging to the role specified in the **Opt-out Role** field will not receive messages that are sent to this target audience even if they also belong to the **Opt-in Role** field.

Use the **Members** button to select specific users and add them to the opt-in or opt-out list.

3.3.2 Send a Message When a Specific Event Occurs

You use the *Send E-mail* rule engine action to send a message when a specific event occurs.

For instance, this section describes how to implement the following behavior:

- You delete an item.

- Sitecore checks whether this item is based on a specific template or not.

- If it is, Sitecore sends a message to you.

To create the rule that implements this:

1. Navigate to the */sitecore/system/Settings/Rules/Item Deleted/Rules* folder.

2. In the **Folder** tab, click **Rule**.
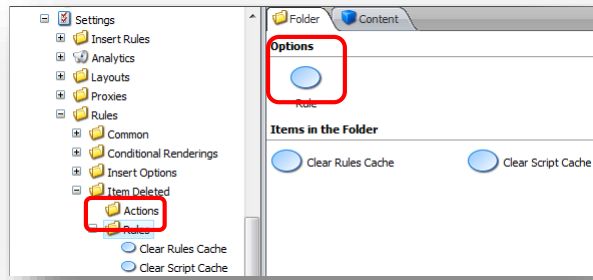
3. In the prompt dialog box, enter the name of the new rule and click **OK**.
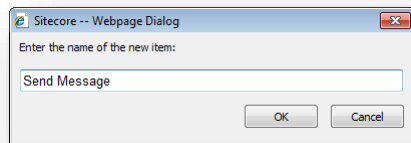
Sitecore creates the new rule.

4. Select the new rule. Enter the name of the rule and click **Edit Rule** in the **Rule** field.
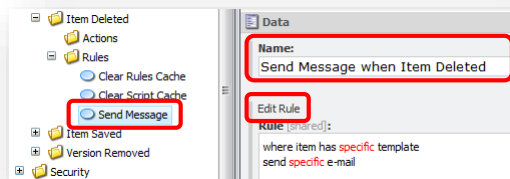
5. Select the *where item has specific template* condition and the *send specific e-mail* action.
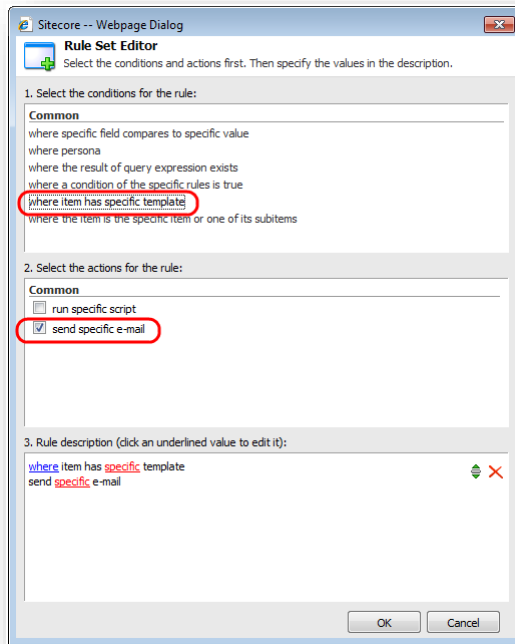
6. In the **Rule description** field, in the phrase *where item has specific template,* click the word *specific* and Sitecore opens the **Select Item** dialog box.
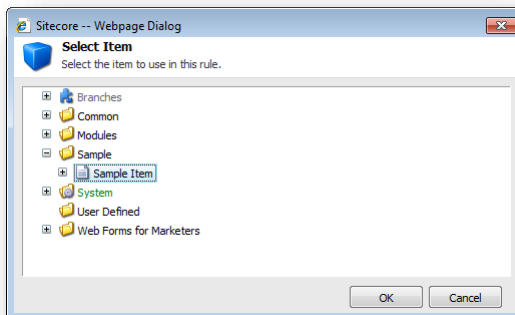
Select the template you would like to use as the rule condition and click **OK**.

7. In the **Rule description** field, in the phrase *send specific e-mail,* click the word *specific* and Sitecore opens the **Select Standard Message** dialog box.
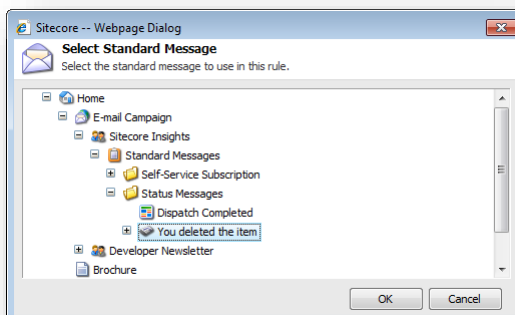
Select the message that you want to send. The message can be any item that is based on one of the templates located at `/sitecore/templates/Modules/Email Campaign/Messages`. We recommend that you select an item from the *Standard Messages* folder under a target audience item. Click **OK**.

8. Now your **Rule description** field should look like this:
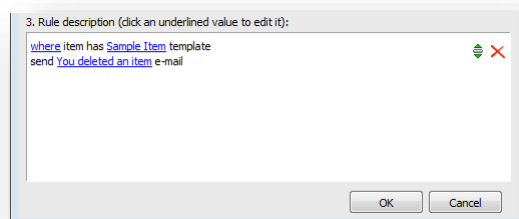
9. Click **OK**.

10. Save the rule.

You have now configured the rule. When you delete an item based on the specified template, Sitecore sends you the message.

3.3.3 Importing and Exporting Users

The ECM lets you import and export users that are subscribed to target audiences.

You can import and export users using the **Users** group located on the **Tools** tab of the E-mail Campaign Manager.

The Import and Export tool only supports CSV files.

How to Import Users

To import users:

1. Start E-mail Campaign Manager.
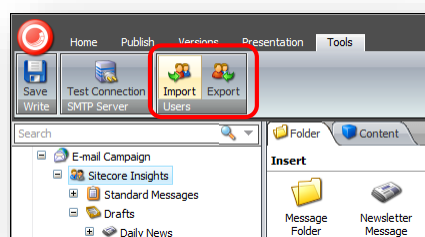
2. On the **Tools** tab, in the **Users** group, click **Import** and the **File to Import** dialog box appears.
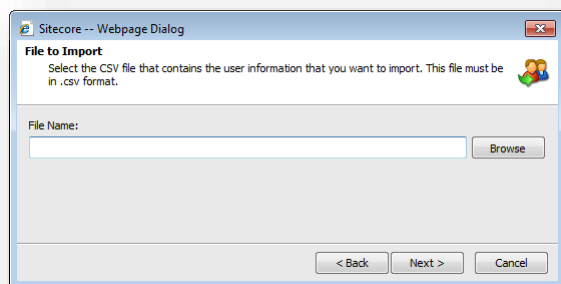
3. In the **File to Import** dialog box, click **Browse** and select the CSV file that you want to import.

4. Click **Next** and the **Fields** dialog box appears.
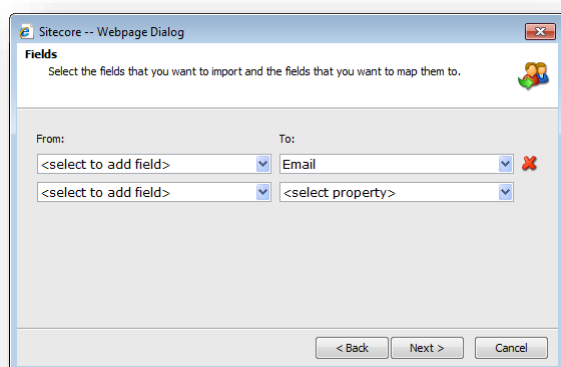
The **From** field contains the list of all the fields in the CSV file:
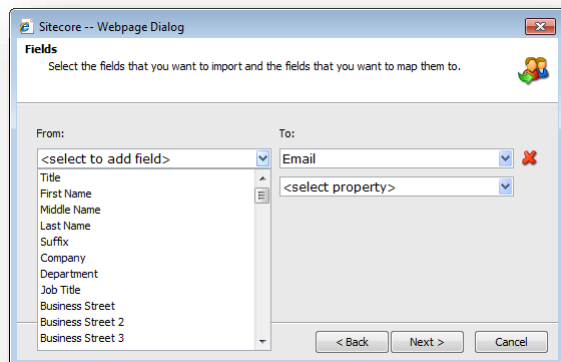
The **To** field contains the subscriber profile fields defined in the current installation of the ECM module:
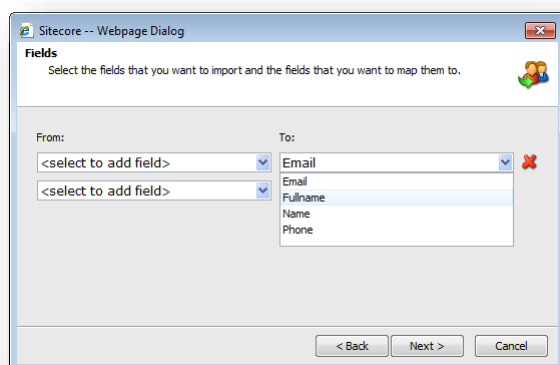
The **Email** field is mandatory, because Sitecore uses this field to name the new users.

5. In the **Fields** dialog box, select the fields that you want to import and the fields in the subscriber profile that you want to map them to, and then click **Next**.
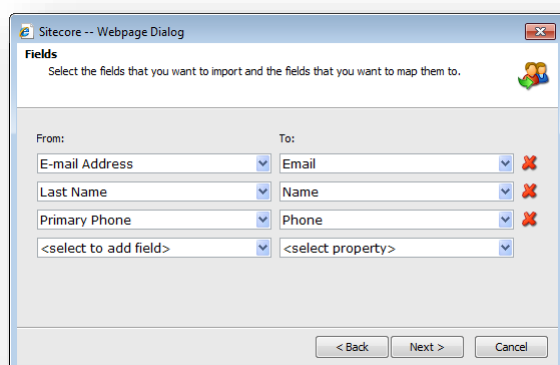
6. In the **Domain** dialog box, select the security domain that you want to add new users to.
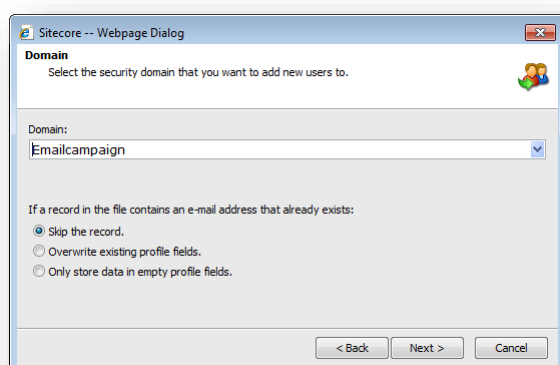
You can define what happens if a record in the file contains an e-mail address that already exists. The options are:

o Skip the record (skips the record even if it is in a different target audience or does not belong to any target audience).

o Overwrite existing profile fields.

o   Only store data in empty profile fields.

7.   Click **Next**.

8.   In the **Target Audiences** dialog box, select the target audiences that you want to subscribe the new users to and the target audiences that they should be opted out of.
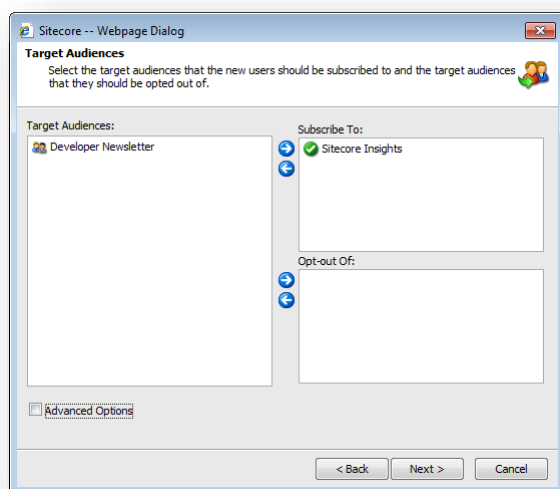
If you select the **Advanced Options** check box, you can specify the security roles that you want the new users to be assigned, and then click **Next**.

9.   Review the summary and click **Finish**.
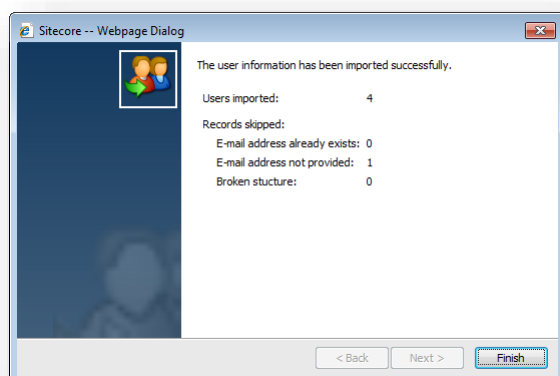
The summary dialog box contains the following information:

o   The number of users imported.

o   The number of records skipped.

How to Export Users

This section describes how to export users.

To export users:

1.   Start the E-mail Campaign Manager.

2.   On the **Tools** tab, in the **Users** group, click **Export**.

3. In the **User Information** dialog box, select the user information that you want to export, and then click **Next**.
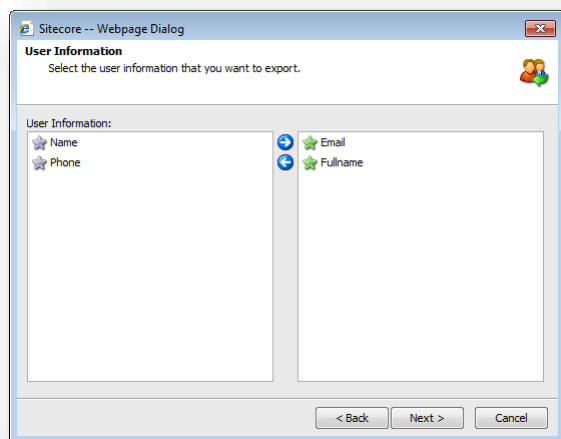
4. In the **Target Audience** dialog box, select the target audiences whose subscribers you want to export.
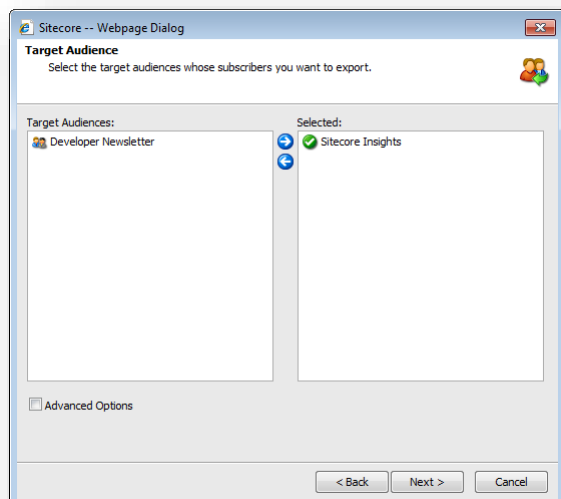
If you select the **Advanced Options** check box, you can specify the additional security roles whose users you want to export in addition to the users subscribed to the target audiences.

5. Click **Next**.

6. In the final dialog box, you can see the number of users exported and you can download the resulting CSV file.
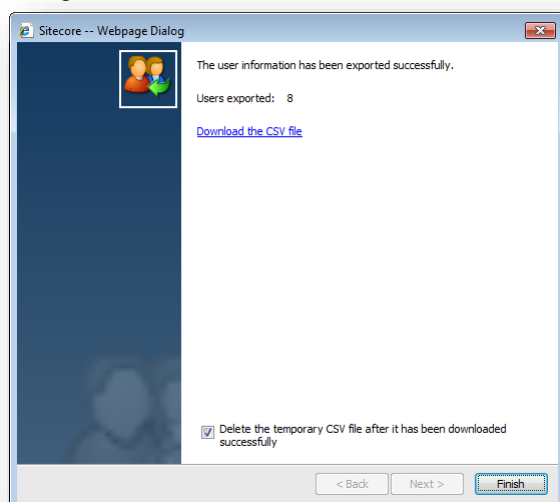
By default, the resulting CSV file will be deleted after it has been downloaded successfully. You can disable this behavior by clearing the **Delete the temporary CSV file** check box.

3.3.4   Adding an Item to the Insert Options of the Drafts Item

The insert options list in the *Drafts* folder is populated directly on the item and not on the standard values item of the *Drafts* template.

To add an item to the insert options list of the existing *Drafts* item, edit the insert options directly on the item.

When you create a new target audience, the module creates a list of insert options for that item. To add a custom e-mail template to that list of insert options you should edit the insert options of the *Drafts* item in the following branch:

```
/sitecore/templates/Branches/Modules/Email Campaign/Target Audience
Branch/$name/Drafts
```

To edit the insert options in the appropriate branch:

1. In the **Content Editor**, select the following item:

```
/sitecore/templates/Branches/Modules/Email Campaign/Target Audience
Branch/$name/Drafts
```
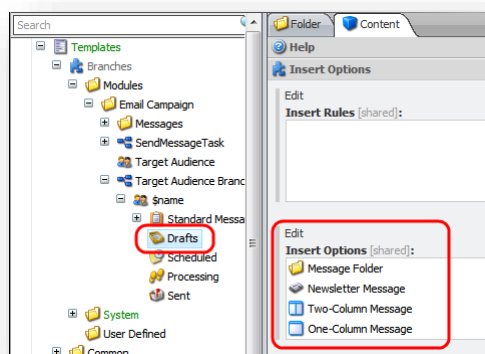
2. Unprotect the item to be able to edit it. To do so, on the **Content tab**, click **Unprotect Item**:
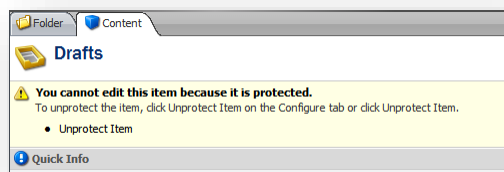
3. On the **Content** tab, in the **Insert Options** section, in the **Insert Options** field, click **Edit**.

4. In the **Select Items** dialog box, select the item you want to add to the insert options and click **OK**.
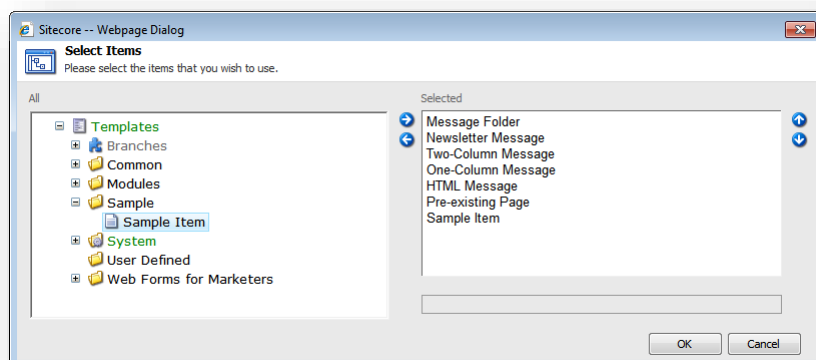
Now when you create a new target audience, the **Insert Options** dialog box of the *Drafts* item contains the item you added.

Chapter 4

ECM Configuration Reference

This chapter describes the module's configuration settings.

This chapter contains the following sections:

- Sitecore.EmailCampaign.config

- Global Settings

- Manager Root Settings

- Target Audience Settings

- Standard Messages

- Send E-mail Rule Engine Action

4.1 Sitecore.EmailCampaign.config

This section describes the main `Sitecore.EmailCampaign.config` settings, located in the `<sitecore>/<settings>` section.

Setting name	Sample value	Description
UseLocalMTA	false	Set to "true" if you want use the custom SMTP settings from the `Sitecore.EmailCampaign.config` file. You should purchase the right of using the "UseLocalMTA" setting first.
Debug	false	Specifies whether verbose logging in Sitecore log files is enabled. Use to troubleshoot ECM problems.
NumberThreads	4	The number of threads that you can use for sending messages. For information about tuning the performance using this setting, see *ECM Tuning Guide* on the SDN.
MaxGenerationThreads	8	Specifies how many sending threads can generate messages at the same time. By default, the MaxGenerationThreads setting has a default value of Environment.ProcessorCount * 2. For more information about this setting, see *ECM Tuning Guide, Chapter 3, Tuning Procedures.*
RecipientsRequestSize	500	This is the number of recipients that are queued from the analytics database in a single request. For more information about this setting, see *ECM Tuning Guide, Chapter 3, Tuning Procedures.*
Sleep	50	The amount of time to wait between sending messages (ms).
MaxConnectionUnavailable	9000	The period of time (in seconds) the module tries to restore an MTA connection before a dispatch is paused.
MaxSendingAttempts	5	The number of attempts to send a message (in case of need). These attempts are done when there is a connection with the MTA, but the sending process fails on the sending server side.
CheckReceiverRights	false	If the value of this setting is false, the module does not check whether the current subscriber has access to the item being rendered during the message generation. For best performance, make sure that this setting is false.
ShowExactSubscribersNumber	false	This setting specifies whether or not to show the exact number of subscribers in UI, for instance, in the message preview. Calculating the exact number of subscribers may be a time consuming operation if you have millions of users.
RolesInRoles	false	This setting defines whether the module accounts users that belong to roles that are nested in roles. This is related to the **Opt-in/Opt-out Role** fields.

Setting name	Sample value	Description
ConfirmationPeriod	10	The period (in days) after which Sitecore deletes a user who used a subscription control to subscribe to a mailing list, but did not confirm the subscription.
EmailValidation	Any valid RegExp	The regular expression used for e-mail validation
PhoneFieldName	phone	The field name in a Sitecore user profile. The value of this field is used as a contact phone number. This property was added to the Sitecore.EmailCampaign.config file because a corresponding field does not exist in the default user profile in Sitecore CMS. You should change the value of this setting if you already have the phone number field in your custom user profile.
ShellSiteName	shell	The name of the Shell website as it is specified in your web.config file.
IIS.User	serviceuser	The user name to log in with if anonymous access is disabled.
IIS.Password	12345	The password to log in with if anonymous access is disabled.
MtaEmulation.Active	false	Set to true to enable MTA emulation mode. For more information about this setting, see *ECM Tuning Guide, Section 3.3, Tuning.*
MtaEmulation.MinSendTime	200	This is the minimum amount of time, in milliseconds, to emulate the sending of a single E-mail. Use this in conjunction with MtaEmulation.MaxSendTime to mimic the behavior of Sitecore CMS to MTA round trip time.
MtaEmulation.MaxSendTime	400	This is the maximum amount of time, in milliseconds, to emulate the sending of a single E-mail.
MtaEmulation.FailProbability	0.01	This setting allows you to introduce the probability of connection failure into your emulation. For more information about this setting, see *ECM Tuning Guide, Section 3.3, Tuning.*
QueryStringKey.Campaign	ec_camp	This setting specifies the name of the query string parameter, which identifies an e-mail campaign.
QueryStringKey.AutomationState	ec_as	These settings are used internally by the module when building query strings for generating messages.
QueryStringKey.EcmId	ec_id	
QueryStringKey.Recipient	ec_recipient	
QueryStringKey.Subscription	ec_subscr	
SMTP.Server	Localhost	SMTP server address or IP
SMTP.Port	25	Port number of the SMTP server
SMTP.LoginDomain		Domain for logging into SMTP server

Setting name	Sample value	Description
SMTP.UserName	admin	User name for logging into SMTP server
SMTP.Password	12345	Password for accessing the SMTP server
SMTP.AuthMethod	LOGIN	SMTP Authentication method ("NONE", "LOGIN", "PLAIN", "CRAM-MD5", "NTLM")
SMTP.StartTLS	false	Start TLS option. When set to true, this makes the mailman to issue a STARTTLS command and switch over to a secure SSL/TLS connection prior to authenticating and sending e-mail.
SMTP.MaxConnections	100	The maximum number of concurrent SMTP connections allowed to open. For more information about this setting, see *ECM Tuning Guide, Section 3.3, Tuning.*
SMTP.ConnectionExpiration	180	The period of time (in seconds) the module keeps an SMTP connection open (since the last usage).
StandardMessages. SubscriptionConfirmation	\<relative path to the item\>	When a visitor subscribes to a mailing list, they receive this message from Sitecore. This message contains the subscription confirmation link.
StandardMessages. SubscriptionNotification	\<relative path to the item\>	When a user clicks on the confirmation link in the subscription confirmation message, Sitecore sends this message to them.
StandardMessages. UnsubscribeNotification	\<relative path to the item\>	When a subscriber unsubscribes from a mailing list, they receive this message from Sitecore.
StandardMessages. DispatchCompleted	\<relative path to the item\>	When the dispatch process is finished, Sitecore sends this message to the e-mail address specified in the **Dispatch Process Notifications** section.

4.2 Global Settings

This section describes the global module settings that are common to all the manager roots in a solution.

The item that contains the global module settings is located at */sitecore/system/Modules/Email Campaign Manager.*
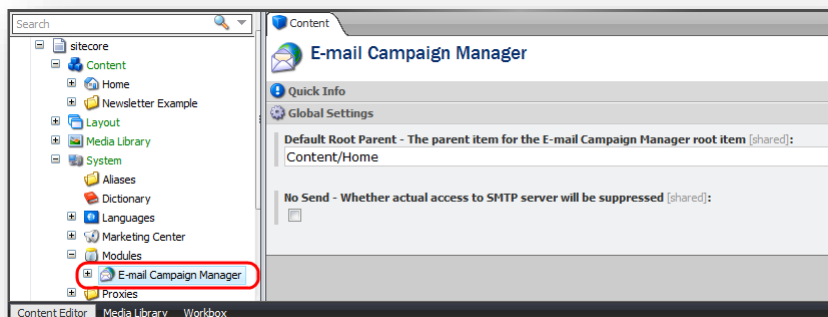
You can also access this item by selecting **Sitecore, All Applications, Email Campaign, Settings** on the Sitecore Desktop.

This item contains the following settings:

Setting name	Sample value	Description
Default Root Parent	<path to item>	This field defines the parent item, under which the manager root should be located.
No Send	false	When selected, the actual access to the SMTP server is suppressed and you receive the "Sending Disabled" message when you try to dispatch messages.

4.2.1 Common Text

This item contains the various labels and messages that are used throughout the module.
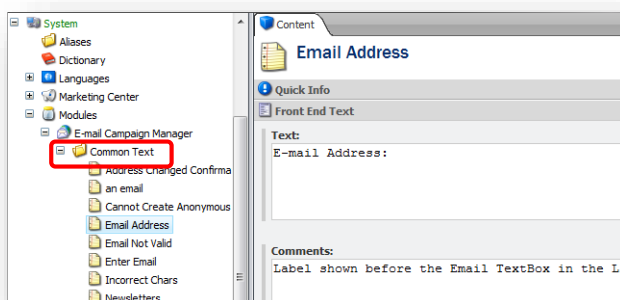
4.2.2 Tasks

This item contains the scheduled dispatches. If you decide to dispatch messages at a specific time, Sitecore creates the appropriate task under this item.

4.2.3 System

This item contains the system items that are used by the module.

Root List

This item contains the list of manager roots in the **Manager Roots** field. The module uses this list, among other things, to display the available subscription lists in a subscription form. This item is updated automatically.

Security Key

This item contains the private system key used during the message generation. The module generates this key automatically during the installation.

4.3 Manager Root Settings

This section describes the manager root settings. To see these settings, select the manager root item and then select the **Content** tab on the right.
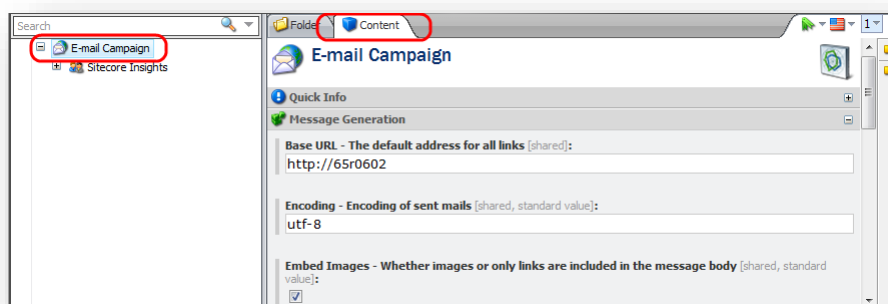
The manager root item contains the following sections:

- Message Generation
- Subscription Control
- Implementation Details

4.3.1 Message Generation

This section contains the following settings:

Setting name	Sample value	Description
Base URL	http://localhost/	The website address used for links in messages and for images, if they are hosted on the website.
Encoding	utf-8	The encoding used for the outgoing messages.
Embed Images	true	Whether images are embedded in the message or links to images are inserted.
Track Message Open	true	When selected, the module embeds a one-pixel image in the message to track whether a subscriber opens the message.

4.3.2 Subscription Control

In this section, you specify the pages that a site visitor is redirected to when they subscribe to a mailing list and when they change their subscription preferences.

This section contains the following settings:

Setting name	Sample value	Description
Already Unsubscribed	<path to item>	When a visitor who is already unsubscribed clicks on the unsubscribe link, the module displays this page.
E-mail Sent Confirmation Page	<path to item>	When a visitor submits the subscription form, Sitecore sends a confirmation e-mail and redirects the visitor to this page. By default, this field is empty which means that the visitor stays on the same page after submitting the form.

Setting name	Sample value	Description
Final Confirmation Page	<path to item>	This is the page the visitor is redirected to after changing their mailing list subscriptions (for instance, cancelling a subscription to a specific mailing list). By default, this field is empty which means that the visitor stays on the same page.

4.3.3   Implementation Details

In this section, you specify the security domain for the manager root, the opt-out role common to all target audiences under this root, and the default subscriber profile.

This section contains the following settings:

Setting name	Sample value	Description
Common Domain	Emailcampaign	The domain common to all the target audiences under this root.
Common Opt-out Role	Emailcampaign\ Common Opt Out	This is the opt-out role that is common to all the target audiences under this root. Users who are members of this role will not receive messages from any of the target audiences under this root.
Default Subscriber Profile	Profiles/Subscriber	The user profile that is used for all the subscribers of this manager root.
Undelivered Max	10	The maximum number of temporary delivery failures per subscriber. For example, recipient server response timeout is a temporary failure. For more information about this setting, see *section 5.6, Emails that Bounce and the Undelivered Max Setting*

4.4 Target Audience Settings

This section describes the target audience settings. To see these settings, select the target audience and select the **Content** tab on the right.
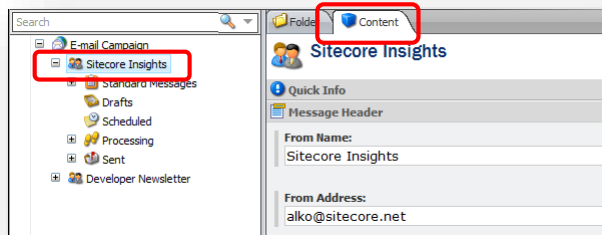
4.4.1 Message Header

In this section, you can specify the **From Name**, **From Address** and **Reply To** settings that are used by all the messages sent by this target audience.

4.4.2 Subscription Control

In this section, you can specify the title and the description of the site subscription form. If the **Title** field is blank, the target audience name is used in the target audience list displayed on the Web site. If the **Description** field is left blank, it is just omitted. For instance, these are the sample values entered in this section:
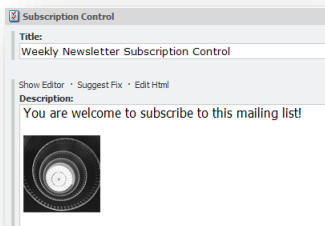
This is how they look on the Web site:
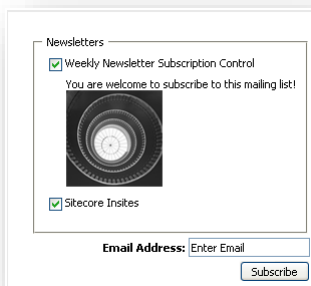
4.4.3 Audience Configuration

In this section, you specify the **Opt-in Role** and the **Opt-out Role** for the target audience. Use the **Members** button to select specific users and add them to the opt-in or opt-out list.

4.4.4 Dispatch Notifications

Dispatch notifications are sent when the dispatch is completed or aborted. The notification text is defined in the `DispatchCompleted` setting of the `Sitecore.EmailCampaign.config` file.

Setting name	Sample value	Description
Notification address	alex@anders.net	The address the module will send notifications to.
Notify when a message has been dispatched	true	Whether or not the notifications are sent.

4.4.5 Delivery Status Notifications

If the module uses a custom MTA to send messages, it uses this section to configure how the DSN messages are collected. If the module uses a Sitecore MTA, then it uses SAC to collect the DSN messages and this section is ignored.

This section contains the following settings:

Setting name	Sample value	Description
Notification Gathering	cleared	Whether or not to collect delivery status notifications from the e-mail box used by the module for sending messages. If this check box is cleared, the rest of the section is ignored. If this check box is selected, but other fields of this section are empty, these fields will be inherited from the manager root. If this check box is cleared, the module behaves as though all the messages are delivered successfully.
Return Address	dsn@site.net	The e-mail address for collecting the DSN messages. The MTA service sends DSN messages to this address. The module gets DSN messages from this address for analysis using POP3 protocol.
POP3 Server	pop.server.com	The POP3 server address/name.
POP3 SSL	Default	Whether or not the POP3 server uses SSL for transferring messages.
POP3 Port	110	The port for transferring messages from the POP3 server.
POP3 User Name	serveruser	The POP3 server user name.
POP3 Password	12345	The POP3 server user password.

4.4.6 Message Context

In this section, you specify the device and the language that the message should be rendered for. If the fields in this section are left blank, Sitecore uses the default device specified for the message and the default language specified in the user profile.

4.4.7 Analytics

This section contains two settings: **Campaigns Position** and **Standard Message Plan**.

The **Campaign Position** setting lets you select the campaign or campaign category for the target audience. All the emails for this target audience will relate to this campaign or campaign category. When viewing ECM reports, you can filter information by campaign category.

The **Standard Message Plan** lets you select custom *Message Engagement Plan* for the target audience.

4.5 Standard Messages

The Standard Messages item contains the Self-Service Subscription form messages and the *Dispatch Completed* status message.
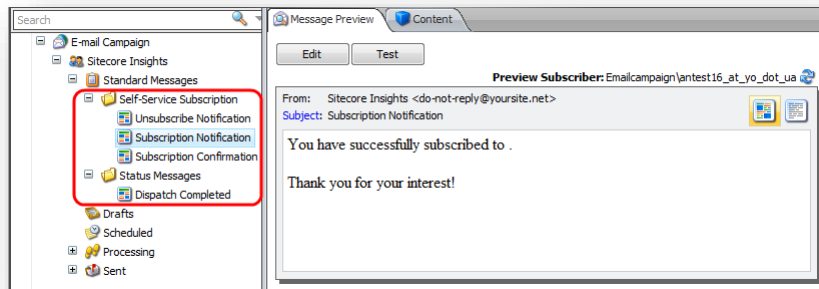
These messages are HTML messages. The module sends these messages automatically. The HTML messages do not support the Message Subject Test, but you can use other types of messages as standard messages and perform the Message Subject Test. You can view the Sitecore Analytics reports for these messages after they have been sent.

You can configure the paths to these messages in the `Sitecore.EmailCampaign.config` file.

4.6 Send E-mail Rule Engine Action

The ECM module installs the Send Email rule engine action at the following path:

`/system/Settings/Rules/Common/Actions/Send Email`

You can use this action to send a message to the current context user when a specific event occurs. The message can be any item that is based on one of the templates located at `/sitecore/templates/Modules/Email Campaign/Messages.`

Note
If the current context user has an empty E-mail field in their user profile, the action will not work.

4.7 Engagement Automation Actions

The ECM module provides two engagement automation actions: Send Email Campaign Message and Edit Email Audience. The Engagement plan performs these actions on the visitors who meet the conditions specified on the previous state of the plan. The items of both actions are stored in the following folder:

```
sitecore/system/settings/analytics/engagement automation/predefined
items/actions.
```

You can configure both actions directly in the engagement plan. For more information about configuring automation actions, see the *How to Use ECM Actions* section in the *ECM Marketers Guide*.

Chapter 5

Implementation Details

This chapter describes how various internal processes work and contains information that will help you to extend or modify the module.

This chapter contains the following sections:

- Dispatch General Overview

- Dispatch Process

- Using ECM in Multi-Site Environments

- Staged Environments

- Personalization and the Online Message Version

- Emails that Bounce and the Undelivered Max Setting

- The Message Engagement Plan

- ECM Security Roles

- Designing Message Layouts

- Tips and Tricks

5.1 Dispatch General Overview

This section describes the general principles of the dispatch process. For instance, what services and applications are involved in the process and how to configure the Firewall.

The dispatch process differs depending on which type of MTA you use – Sitecore's MTA through the Sitecore App Center or a custom MTA.

5.1.1 Using the Sitecore MTA

This section describes the general principles of the dispatch process in case you use the Sitecore MTA.

The following diagram contains details about the steps in the dispatch process and the required configuration:
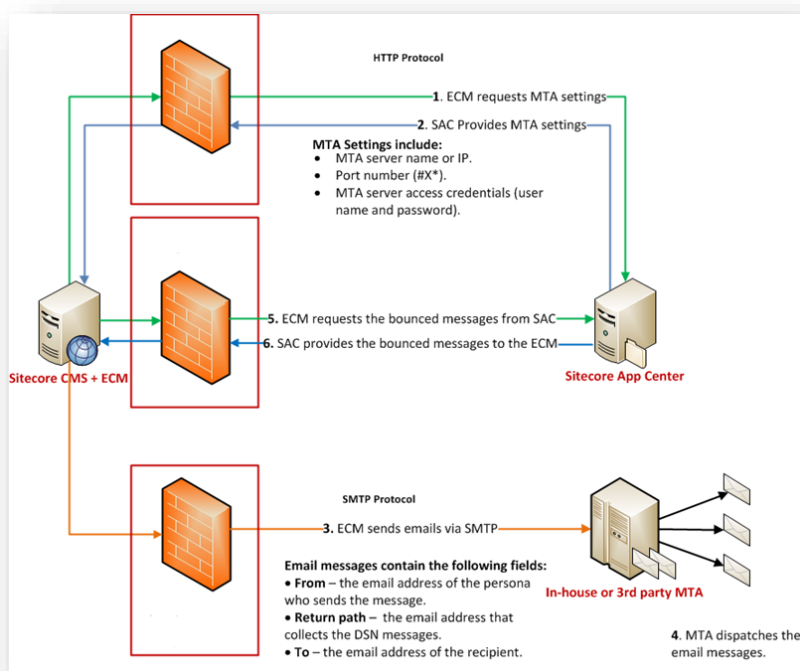
Note
Sitecore MTA requires 25, 80, 443 ports to be opened.

A typical environment contains the following components:

- The ECM module installed on a Sitecore CMS behind a firewall.

- The Sitecore App Center (SAC).

  When the module starts dispatching the messages, it checks with the Sitecore App Center that you have enough message credits to send this batch of messages and gets the SMTP server settings to use when sending the messages. The ECM caches these settings and uses them for all further dispatches to increase performance. The module requests the updated settings from SAC only in case when it encounters a problem with sending a message.

- The in-house or third party MTA.

The following list describes the events that take place during the dispatch process and the settings related to the steps.

Step 1. The ECM module connects to the SAC and requests the MTA settings.

Related setting: the connection string in the `ConnectionStrings.config` file. For more information, see section *2.1.2, Using Sitecore*.

For this connection, in the firewall, you must create the outbound rule with open port #80. The HTTP protocol is used.

The SAC charges your account to send this batch of messages and sends the MTA server settings.

Step 2. The SAC provides the MTA settings.

The MTA settings include:

- MTA server name or IP.

- Port number (#X).
  The ECM module uses this port to contact the MTA. When you purchase an MTA license, you also negotiate the port number (#X).

- MTA server access credentials (user name and password).

Step 3. The ECM module sends e-mail messages to the MTA.

The ECM module sends e-mail messages to the MTA using the settings obtained on the previous step.

For this connection, in firewall, you must create the outbound rule with open port #X. The SMTP protocol is used.

When you purchase an MTA license, you also negotiate the port number (#X) to use when contacting the MTA.

Email messages contain the following data:

- From – the email address of the person who sends the message.

- To – the email address of the recipient.

- Message body.

Step 4. The MTA sends the e-mail messages to the recipients.

Step 5. The ECM requests the information about the bounced messages from SAC.

The ECM requests the information about the bounced messages from SAC using a scheduled task. For more information about this scheduled task, see section *Using the Sitecore MTA* section.

For this connection, in the firewall, you must create the outbound rule with open port #80. The HTTP protocol is used.

Step 6. The SAC provides the information about the bounced messages to the ECM.

SAC provides the information about the bounced messages to the ECM.

For this connection, in the firewall, you must create the inbound rule with open port #80. The HTTP protocol is used.

5.1.2 Using a Custom MTA

This section describes the general principles of the dispatch process in case you use a custom MTA.

The following diagram contains details about the steps in the dispatch process and the required configuration:
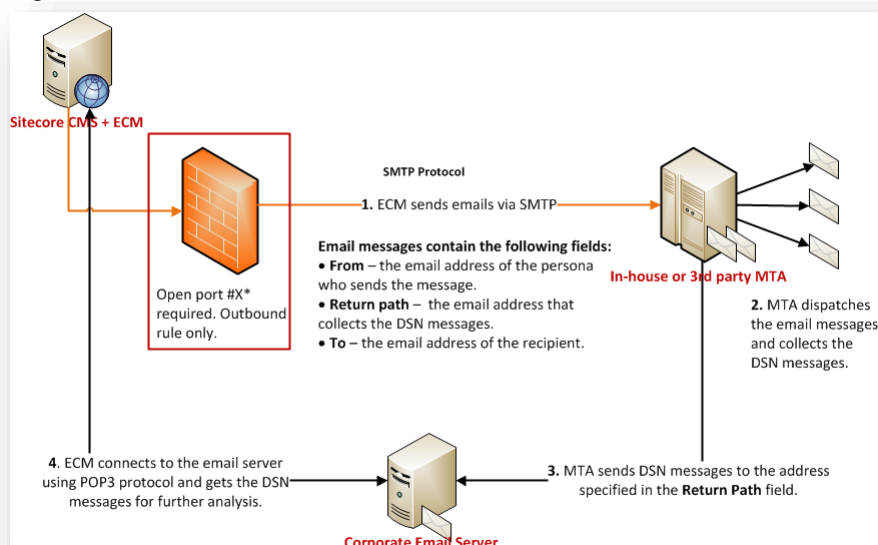
A typical environment contains the following components:

- The ECM module installed on a Sitecore CMS behind a firewall.

- The in-house SMTP server.

The following list describes the events that take place during the dispatch process and the settings related to the steps.

Step 1. The ECM module sends e-mail messages to the MTA server.

The ECM module sends e-mail messages to the MTA server using the settings in the `Sitecore.EmailCampaign.config` file.

For this connection, in firewall, you must create the outbound rule with open port #X. The SMTP protocol is used.

Step 2. The MTA sends the e-mail messages to the recipients.

Step 3. The MTA server sends the DSN messages to the corporate email address.

The SMTP server sends the DSN messages to the address specified in the Return Address field. Usually this address is hosted on a corporate e-mail server.

Step 4. The ECM module connects to the e-mail server and gets the DSN messages for further analysis.

The POP3 protocol is used for this connection. For more information about collecting the DSN messages, see section *Collecting Delivery Status Notifications*.

5.2 Dispatch Process

The dispatch process starts when one of the following events occurs. There may be other conditions that can start the dispatch process, but these are the most common ones.

- A user launches the message dispatching using the Dispatch Message wizard.

- The scheduled dispatch time arrives.

- A user clicks **Resume** on the **Message Preview** tab when the message is in the *Processing* folder.

- A user clicks **Send Now** on the **Message Preview** tab when the message is in the *Scheduled* folder.

- The *Send Message* action is triggered.

When the dispatch process is triggered, the following actions take place.

If you use the Sitecore MTA, the module checks with the Sitecore App Center that you have enough message credits to send this batch of messages and gets the SMTP server settings to use when sending the messages.

If the *UseLocalMTA* setting is set to true, the module checks whether your license permits you to use your own MTA.

After the module has checked with the Sitecore App Center, the `DispatchNewsletter` pipeline starts. The following section describes the processors of this pipeline.

5.2.1 DispatchNewsletter Pipeline

The `DispatchNewsletter` pipeline is defined in the `Sitecore.EmailCampaign.config` file. This section describes the processors in this pipeline and contains a conceptual description of how the message generation process works.

In this section, we assume that a Newsletter type message is being dispatched, since this message requires the utilization of most of the module's features.

MoveToProcessing

This processor moves the message to the *Processing* folder.

DeployAnalytics

This processor changes the workflow state of the analytics definitions that are related to the message (engagement plan, campaign, subject MV test) to **Deployed** and saves the definitions in the Analytics database.

Automating the Analytics Deployment on CD Servers

If the value of the `Analytics.DefaultDefinitionDatabase` setting is different from `master` (for example, on CD instances it may be set to `web`), make sure that the analytics definition items (campaign, engagement plan) are published immediately after the dispatch is started (to be precise – after the `DeployAnalytics` processor is executed). This will ensure that the analytics data tracking is accurate.

We suggest the following way to automate this:

1. Add an **Auto Publish** action (`/sitecore/system/Workflows/Sample Workflow/Approved/Auto Publish`) to the **Deployed** state of the Analytics workflow (`/sitecore/system/Workflows/Analytics Workflow/Deployed`).

2. In `Web.config`, in the `/configuration/sitecore/databases/` setting, add the definition of the workflow provider to the default definition database (on CD servers this is often the *web* database):

```
<database id="web" singleInstance="true" type="Sitecore.Data.Database,
Sitecore.Kernel">
...
<workflowProvider hint="defer" type="Sitecore.Workflows.Simple.WorkflowProvider,
Sitecore.Kernel">
<param desc="database">$(id)</param>
<param desc="history store" ref="workflowHistoryStores/main" param1="$(id)"/>
</workflowProvider>
...
```

QueueMessage

In this processor, the master server creates a campaign record and campaign event records for subscribers (one campaign event per subscriber) in the Analytics database.

Note
If this processor stops unexpectedly (for example, if the server reboots), every campaign event is created again.

LaunchDedicatedServers

The master server launches the *DispatchNewsletter* pipeline on the dedicated servers. The web service on the dedicated server ensures that the pipeline skips this step, the *MoveToProcessing* processor, and other appropriate steps that should be skipped.

The master server and the dedicated servers share the same Analytics database.

InitializeCyclicSubjectsStrategy

This processor initializes the internal variables of the *Cyclic Subjects* MV test strategy. This strategy is installed with the module.

SendMessage

In this processor, the master server and the dedicated servers generate and send messages.

In this processor, the following actions are performed:

The processor gets a contact from the list in the Analytics database.

Each server accesses the list of subscribers and takes one of the remaining subscribers to generate the message for. The process continues as long as there are subscribers left in the list.

For every subscriber, the processor:

- Assigns the appropriate campaign event to the message.

- Assigns the Sitecore user that corresponds to this subscriber to the message.

- Raises the *subscriber:assigned* event.

- Requests the page that corresponds to the message.

  o Sets the user as the context user for the requested page. Security restrictions are applied.

- Adds the "message opened" image.

- The processor starts the `SendEmail` pipeline and in that pipeline:

  o The page gets personalized. The "`&ec_as=recipient ID`" query strings are added to links in the message.

o The message is sent to the MTA defined in the `Sitecore.EmailCampaign.config` file.

The process continues as long as there are subscribers left in the list.

FinalizeCyclicSubjectsStrategy

This processor cleans up the internal variables of the *Cyclic Subjects* MV test strategy.

MoveToSent

This processor moves the message from the *Processing* folder to the *Sent* folder.

NotifyDispatchFinished

This processor sends the notification when the dispatch process is finished. For information about configuring the dispatch notifications, see section *4.4.4, Dispatch Notifications*.

5.2.2   SendEmail Pipeline

The `SendEmail` pipeline is defined in the `Sitecore.EmailCampaign.config` file. The `SendMessage` processor starts this pipeline for every e-mail message to be sent. This section describes the processors of this pipeline.

FillEmail

This processor personalizes the page and adds the "&ec_as=recipient ID" query strings to the links in the message.

SendEmail

This processor sends the e-mail message to the MTA defined in the `Sitecore.EmailCampaign.config` file.

5.3 Using ECM in Multi-Site Environments

Organizations that use the E-mail Campaign Manager in multi-site environments must define business logic to differentiate between sites when:

- A Sitecore user accesses the E-mail Campaign Manager.

- They use the E-mail Campaign Manager.

A manager root contains almost all the settings that control the end user experience when they work with the module. That's why a good place to implement your business logic is in the `LocateManagerRoot` pipeline that is defined in the `Sitecore.EmailCampaign.Config` file. In this pipeline, the Email Campaign Manager application selects a manager root.

5.3.1 How to Differentiate Manager Roots between Sites

In this example, we assume that an organization has the following business logic:

- There are several sites defined in a Sitecore solution and each site has its own manager root.

- A user who logs into the Sitecore Desktop has access only to one manager root.

By default, the module searches for the manager root under the item defined in the **Default Root Parent** setting:
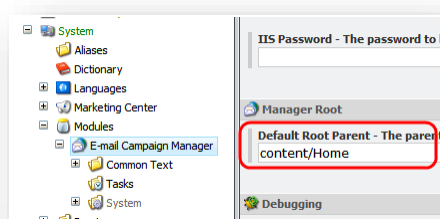
In a multi-site solution, the manager roots that relate to different sites may be located in different places in the content tree. To let the module find the appropriate manager root, we replace the *LocateRoot* processor in the *LocateManagerRoot* pipeline with our custom processor. For instance, this is the definition of the default pipeline in `Sitecore.EmailCampaign.Config`:

```
        <LocateManagerRoot>
          <processor type=
"Sitecore.Modules.EmailCampaign.Core.Pipelines.LocateManagerRoot.LocateRoot,
Sitecore.EmailCampaign" />
        </LocateManagerRoot>
```

To implement a custom processor that selects a manager root:

1. Create a Visual Studio web application project for the existing Sitecore solution.

   For more information about this, see the section *How to Create a Visual Studio Web Application Project* in the following document:
   http://sdn.sitecore.net/upload/sitecore6/64/presentation_component_cookbook-a4.pdf

2. In Visual Studio, add a reference to `Sitecore.EmailCampaign.dll`. For information about how to add a reference, see *section 5.11.3, Adding a Reference to a Sitecore Library in Visual Studio*.

3. In your project, create a code file. In the code file, enter the code from the **Code Sample** section further in this document.

4. Build the project and put the compiled DLL file in the `\bin\` folder of your Sitecore solution.

5. In the `Sitecore.EmailCampaign.Config` file, in the `<LocateManagerRoot>` pipeline, replace the default processor with your custom processor, for instance:

```
<LocateManagerRoot>
    <processor type="MyCustomRoot.LocateRoot, CustomRoot" />
</LocateManagerRoot>
```

Now your custom processor is configured.

Code Sample

```
using Sitecore.Data.Items;
using Sitecore.Modules.EmailCampaign;
using Sitecore.Modules.EmailCampaign.Core.Pipelines.LocateManagerRoot;
using System.Collections.Generic;

namespace MyCustomRoot
{
    public class LocateRoot
    {
        //The LocateManagerRoot pipeline starts the Process method by default, so we
define this method in our custom processor
        public void Process(LocateRootArgs args)
        {
            //Get all manager roots in the current Sitecore solution
            List<ManagerRoot> allRoots = Util.GetAllManagerRoots();

            if (allRoots != null)
            {
                //In the following line we assign the item that represents the
appropriate manager root to the args.Root variable
                args.Root = this.GetRoot(allRoots);
            }
        }

        //In this method, we get the root that the current user has access to (the
first one that comes across)
        protected Item GetRoot(List<ManagerRoot> roots)
        {
            //Loop through all roots in the solution
            foreach (ManagerRoot root in roots)
            {
                //Return an item that the current user can read
                if (root.InnerItem.Access.CanRead())
                {
                    return root.InnerItem;
                }
            }

            return null;
        }
    }
}
```

5.4 Staged Environments

5.4.1 Configuring the Client Service

To configure the module to work in a staged environment you should add the following connection string to the `ConnectionStrings.config` file:

```
      <add name="EmailCampaignClientService"
connectionString="url=http://<master_server>/sitecore%20modules/web/emailcampaign/ecmclientser
vice.asmx;timeout=60000" />
```

`<master_server>` stands for your master server address (For instance, www.site.net or 10.38.41.30).

5.4.2 Configuring Scheduling

ECM uses a number of different scheduling tasks for its work. For a scaled environment, we suggest you have these tasks executed only on one of the instances, which has a connection to master database and to internet to process bounces.

To turn off ECM scheduled tasks on other Sitecore instances, remove the following section from the `Sitecore.EmailCampaign.config` file:

```
      <scheduling>
          <agent type="Sitecore.Tasks.DatabaseAgent" method="Run" interval="00:00:59"
hint="ECM">
              <param desc="database">master</param>
              <param desc="schedule root">/sitecore/system/modules/e-mail campaign
manager/tasks</param>
              <LogActivity>true</LogActivity>
          </agent>
      </scheduling>
```

5.5 Personalization and the Online Message Version

In an e-mail campaign, you may want to have an online version of your newsletter and let people view it in a browser or send links to it to their friends.

For instance, take a look at the following sample newsletter. It contains tokens and the link that lets subscribers view the online version:

When a subscriber receives the message and clicks this link, they are redirected to the online copy of the newsletter.

The online copy:

- Is personalized.
- Does not contain the "Please click here to see…" header and the "Unsubscribe Instructions" footer.
- Is created automatically when the message is created.

The online copy looks like this:

This section describes how this feature works in the E-mail Campaign Manager and how to use it.

5.5.1 Process Personalization Tokens Sublayout

The *Process Personalization Tokens* sublayout substitutes tokens with appropriate values from subscriber profiles.

When attached to a message definition item, this sublayout overrides the `OnLoad` method and substitutes the tokens. For instance, this is how the **Device Editor** dialog box looks when you attach the sublayout:
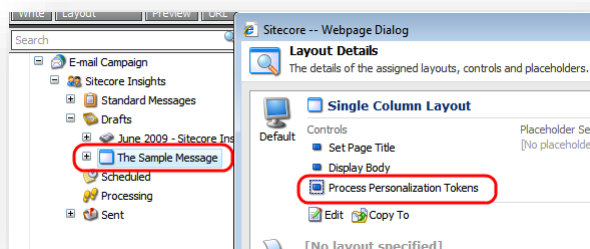
The sublayout uses the `ec_as` parameter to get the subscriber profile values for tokens.

The *Process Personalization Tokens* sublayout is attached to the following message templates by default:

- Newsletter Message.

- Two-Column Message.

- One-Column Message.

5.5.2   Header and Footer in the Newsletter Example

This section describes how a header and footer are removed from the online version in the example newsletter that is provided with the module.

Take a look at the sample newsletter that is provided with the E-mail Campaign Manager. By default, you can find the sample newsletter in the following folder:

`/sitecore/content/Newsletter Example/`

The example newsletter is created using the **Newsletter Message** template and any message created using that template supports the functionality described in this section.

Note
To use the sample newsletter, you must move it to the **Drafts** folder of your target audience.

In the newsletter, there is a footer that contains the *Unsubscribe* link:
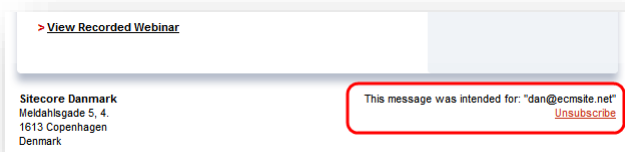
There is also a header that contains a link to the online version of the message, for example:
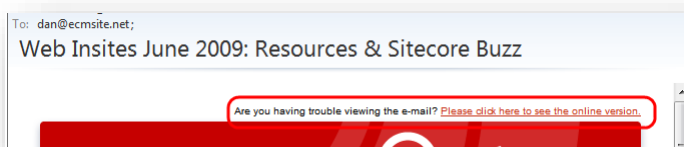
When you click the link to the online version, Sitecore displays it without the header and the footer:
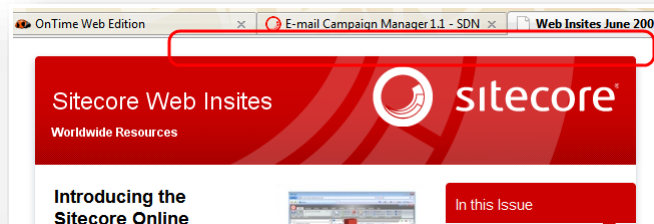
How This Example is Configured

To provide some context for this description, let's create a newsletter type message.

1. In the **E-mail Campaign Manager**, select a target audience.

2. Select the **Drafts** item and in the **Insert** group click **Newsletter Message**.
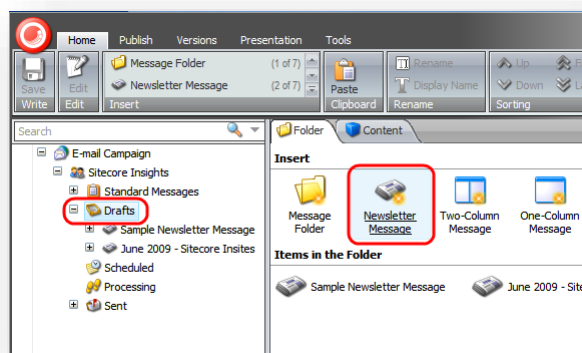
In the dialog box that appears, enter the name of the newsletter, for example, *Sample Newsletter Message*.

3. Select the newly created newsletter.

To display the header and footer in the email message and hide them in the online version, the newsletter type message implements the following architecture.

In a newsletter type message there is the message definition item (*Sample Newsletter Message*) and the *Newsletter Root* item:
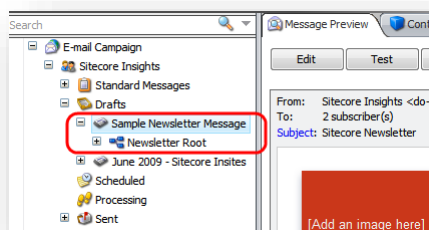
The ECM requests the *Newsletter Root* item to render an email. In the email, the "…see the online version" link points at the *Sample Newsletter Message* item.
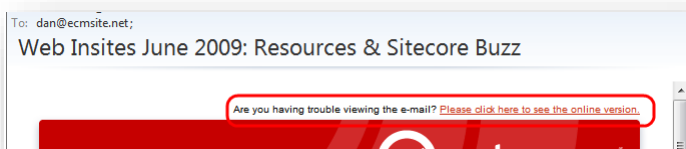
The *Sample Newsletter Message* item does not have the renderings that render the header and the footer; that's why you don't see them in the online version.

For instance, take a look at the presentation settings of the *Newsletter Root* item:

1. Select the *Newsletter Root* item.

2. On the **Presentation** tab, in the **Layout** group, click **Details**.
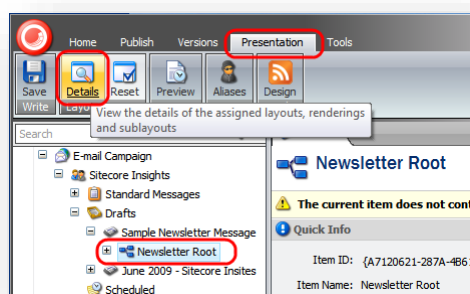
3. Take a look at the **Layout Details** dialog box. The *Newsletter Root* item has the *Header* and *Footer* renderings assigned.
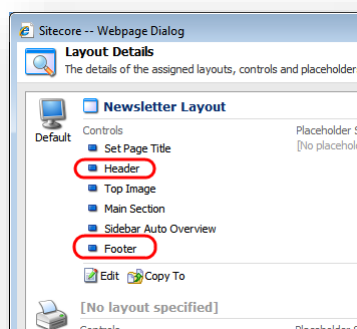
To summarize this section, the ECM uses different items to render an email message and an online version, and those two items have different presentation settings.

5.6 Emails that Bounce and the Undelivered Max Setting

This section describes how the ECM deals with emails that bounce.

A *bounce* email is a message that is returned to the sender because it cannot be delivered for some reason. There are two kinds of bounce email: soft bounce and hard bounce.

A *soft bounce* means that the email address is recognized by the recipient's mail server but the message is returned to the sender because the recipient's email box is full, the mail server is temporarily unavailable, or the recipient no longer has an e-mail account at that address. That is, a soft bounce is a temporary failure and there is a chance that the recipient will receive the message eventually.

A *hard bounce* means that the email is permanently bounced back to the sender because the address is invalid. A hard bounce is a permanent failure.

A subscriber's profile contains the **UndeliveredCount** property, which is incremented by one when a soft bounce is registered for this subscriber.

A manager root item contains the **Undelivered Max** setting, which defines the maximum number of soft bounces per subscriber, or the maximum value of the UndeliveredCount property.

When the **UndeliveredCount** value equals the **Undelivered Max** value, the module does not send messages to this subscriber. If a hard bounce is registered for a subscriber, their **UndeliveredCount** property is set equal to the **Undelivered Max**.

When a subscriber clicks a link in a message that was sent to them using the ECM, their **UndeliveredCount** property is set to null.

Note
The Email Delivery service offered by the Sitecore App Center moves an e-mail to the suppression list when the number of soft bounces for this e-mail reaches a predefined limit. Therefore, if the ECM is used with the Sitecore MTA, the **Undelivered Max** setting must be configured according to this value.

For more details, see the Email Delivery for Sitecore ECM document.

5.7 The Message Engagement Plan

The ECM includes a standard engagement plan stored under the
`/sitecore/system/modules/E-Mail Campaign Manager settings` item in an appropriate location.

When a user creates a new message, Sitecore creates a copy of the standard engagement plan (referred to as the "message plan") in an appropriate location under the
`/sitecore/system/Marketing Center/Engagement Plans/Email Campaign Manager` item (using the same conventions used for the Campaign definition item created).

The ECM uses this engagement plan to reflect the state of visitors during the dispatch process. Business users may extend the message plan to define automated behavior for the message.

When a message is dispatched, the engagement plan must be deployed to the Analytics database before the first message is queued for sending.

You can specify a default engagement plan for every target audience using the settings of the target audience item.

The following image shows the ECM message plan:
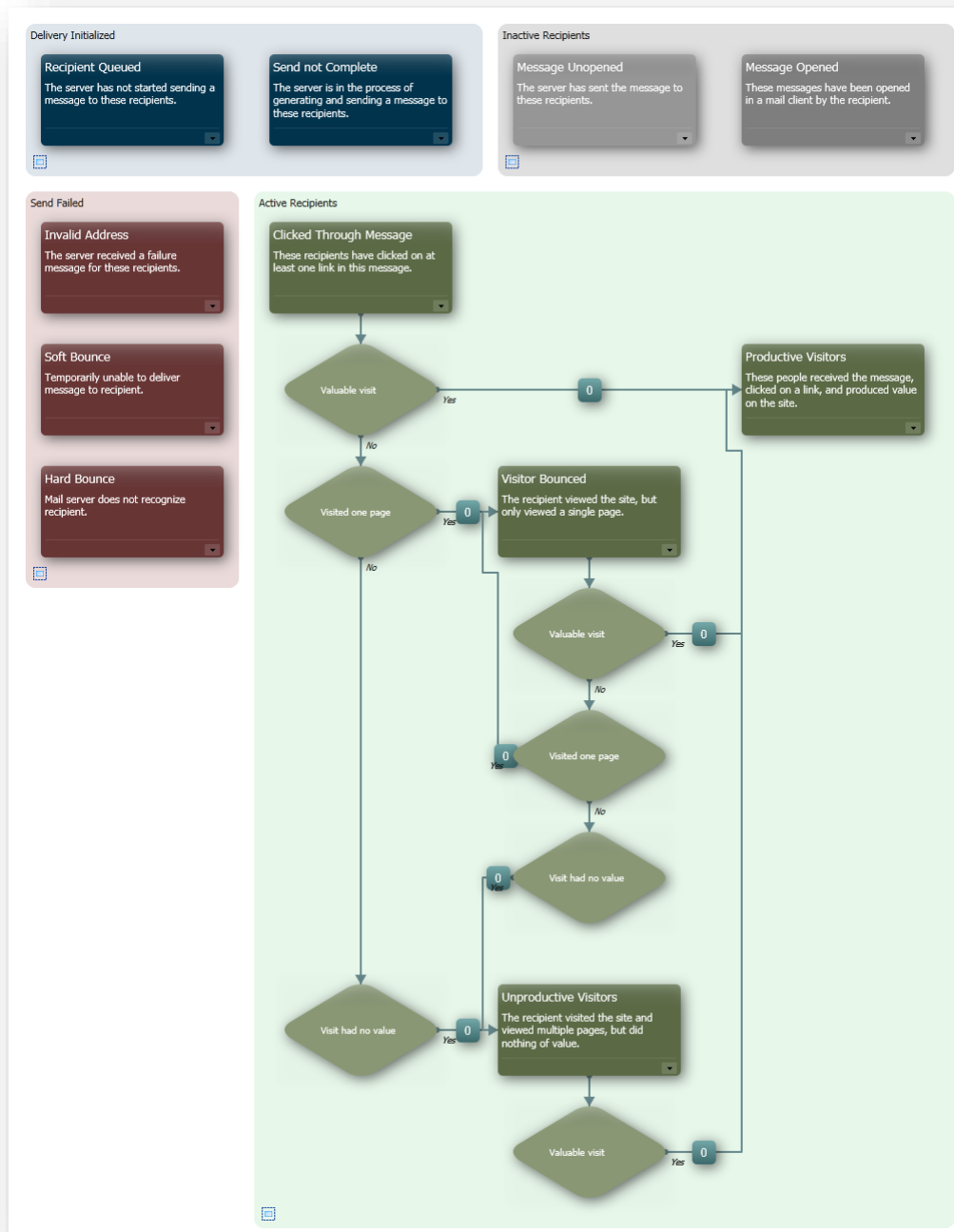
5.7.1   Message Engagement Plan Groups

The message plan contains the following groups:

- **Delivery Initialized**
  This group contains recipients that are queued for dispatch. If the dispatch process is complete and there are recipients in this group left, that means that the MTA failed to send messages to those recipients.

- **Send Failed**
  This group contains recipients whom the MTA could not deliver the message.

- **Inactive Recipients**
  This group contains recipients whom the MTA delivered the message.

- **Active Recipients**
  This group contains recipients who opened the message and performed some actions with it.

Let's take a closer look at each group.

Delivery Initialized

This group contains recipients that are queued for dispatch. It includes the following states:

- **Recipient Queued**
  This state contains recipients that are queued for dispatch, but the server has not started sending a message to these recipients yet. When the **Dispatch Messages** button is clicked, the module puts the recipients from the Opt-in role in this state. Then the module starts generating and sending messages to them.

- **Send not Complete**
  This state contains recipients that are waiting for the module to generate and send them a message. When the ECM generates a message for a recipient, it puts that recipient in the *Send not Complete* state. When the ECM delivers the message successfully to the recipient's inbox, the module moves that recipient to the *Message Unopened* State. A recipient may stay in the *Send not Complete* state for as short period as one second. If the module fails to deliver the message to the recipient's inbox, then that recipient stays in the *Send not Complete* state
  If the dispatch process is complete and there are recipients in the *Send not Complete* state, this means that the module failed to deliver the message to those recipients.

Note

The module handles the transitions between states in this group automatically; you must not modify states in this group

Send Failed

This group contains recipients whom the MTA could not deliver the message. It includes the following states.

- **Invalid Address**
  When the ECM queries the message, it checks whether the recipient's email is a valid email address. The module uses a regular expression for this purpose. If the address does not match the regular expression, the module moves the recipient to the *Invalid Address* state.

- **Soft Bounce**
  A bounce email is a message that is returned to the sender because it cannot be delivered for some reason. A soft bounce is a temporary failure and there is a chance that the recipient will receive the message eventually.

- **Hard Bounce**
  A hard bounce means that the email is permanently bounced back to the sender because the address is invalid. A hard bounce is a permanent failure.

If Sitecore Application Center is used, bounce information is received from SAC via web-service requests. If local MTA is used, bounce information is received from MTA via DSN messages.

For more information about messages that bounce, see section *5.6, Emails that Bounce and the Undelivered Max Setting.*

Inactive Recipients

This group contains recipients whom the module sent the message. Some of these recipients may have opened the message, but none of them performed any other actions (like clicking links) with the message yet.

If a recipient clicks links in the message, or just opens it, the module moves that recipient further according to the engagement plan.

If the module gets an error response from the recipient's email server, it moves the recipient to a state in the Send Failed group.

This group contains two states: **Message Unopened** and **Message Opened**.

Message Unopened

This state contains recipients whom the module sent the message and who did not perform any actions with it yet.

If the visitor opens the message, the module puts that visitor in the **Message Opened** state.

If the visitor clicks a link in the message, the module puts that visitor in the **Clicked Through Message** state. Otherwise, the visitor remains in the **Message Unopened** state.

Message Opened

The module puts recipients who opened the message but did not click links in it in this state.

If the visitor clicks a link in the message, the module puts that visitor in the **Clicked Through Message** state. Otherwise, the visitor remains in the **Message Opened** state.

Active Recipients

This group contains recipients who opened the message and performed some actions with it.

The states in this group are triggered by the Session End page event.

Further is the description of the states in this group.

Clicked Through Message

When a browser session of a visitor in this state ends, Sitecore evaluates the conditions associated with this state for that visitor.

The conditions associated with this state are:

- **Valuable Visit**

    If the visitor achieved any value points after clicking links in the message, this condition puts that visitor in the **Productive Visitors** state. Otherwise, the module checks the **Visited One Page** condition.

- **Visited One Page**

    If the visitor visited only one page, that visitor is moved to the **Visitor Bounced** state. Otherwise, the module checks the **Visit had no Value** condition.

- **Visit had no Value**

    If the visitor visited more than one page, but did not achieve any value points, that visitor is put in the **Unproductive Visitors** state.

Visitor Bounced

If the visitor visited only one page after clicking a link in the message, that visitor is moved to this state.

When a browser session of a visitor in this state ends, Sitecore evaluates the conditions associated with this state for that visitor.

The conditions associated with this state are:

- Valuable Visit

    If the visitor achieved any value points, this condition puts that visitor in the **Productive Visitors** state. Otherwise, the module checks the **Visited One Page** condition

- Visited One Page

    If the visitor visited only one page after clicking a link in the message, that visitor is moved to the **Visitor Bounced** state. Otherwise, the module checks the **Visit had no Value** condition.

- Visit had no Value

    If the visitor visited more than one page, but did not achieve any value points, that visitor is put in the **Unproductive Visitors** state.

Unproductive Visitors

If the recipient visited the site and viewed multiple pages, but did nothing of value, Sitecore moves that visitor to this state.

When a browser session of a visitor in this state ends, Sitecore evaluates the conditions associated with this state for that visitor.

The conditions associated with this state are:

- Valuable Visit

    If the visitor achieved any value points, this condition puts that visitor in the **Productive Visitors** state. Otherwise, the visitor remains in the **Unproductive Visitors** state.

Productive Visitors

If the recipient generated some value on the site, the module puts that recipient in this state.

This is the final state.

5.8 ECM Security Roles

The ECM installs two security roles:

- ECM Advanced Users.
- ECM Users.

The **ECM Advanced Users** role provides the following access rights:

Access rights	Items
Read/Write/Rename/Create/Delete	Manager Root item and all subitems.
Read/Write/Rename/Create/Delete	`/sitecore/content/NewsletterExample` item and all subitems
Read/Write	`/sitecore/system/Modules/E-mail Campaign Manager` item
Read	Email Campaign commands in the All Applications menu. The full ribbon of the Email Campaign Manager application. The E-mail Campaign Manager button on the Home strip in the Page Editor.

The **ECM Users** role provides the following access rights:

Access rights	Items
Read	Manager Root item and all subitems.
Read/Write/Rename/Create/Delete	The **Drafts** item under a target audience item.
Read	All items under a target audience item.
Read	**All Applications, E-mail Campaign, E-mail Campaign Manager** command. The full ribbon of the Email Campaign Manager application except for the **Import** and **Export Users** commands. The **E-mail Campaign Manager** button on the Home strip in the Page Editor.

5.9 Designing Message Layouts and Renderings

In order to be processed properly, all renderings used in a message layout should have the following value in the **Parameters Template** field of a rendering:

/sitecore/templates/Modules/Email Campaign/ID Source Based Parameters

For instance:
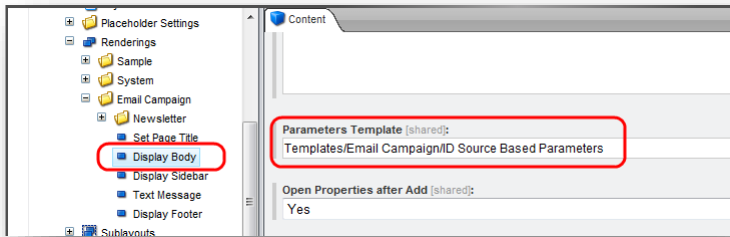
5.10 Handling Links in Messages

The ECM implements special pages and methods for processing links in messages.

When recipients click links in ECM messages, the module tracks them with special pages first and then passes the tracked data to the Sitecore Analytics engine in an efficient way, which ensures that the Analytics engine is not overloaded with large numbers of recipients.

When you insert links in messages, the ECM redirects them to the **RedirectUrlPage.aspx** page with the following parameters:

- **ec_url** – the actual link to which the subscriber is redirected to. The link may lead to your website, or to an external website. Sitecore will track the link click in any case.

- **ec_camp** – the key that identifies an e-mail campaign.

- **ec_as** – the key that identifies automation states.

- **ec_recipient** – the key that sets the context user for rendering a web page as a message body.

- **ec_subscr** – the key that is used to confirm subscriptions to mailing lists.

These parameters do not trigger Sitecore Analytics events directly. The ECM module processes the parameters and then passes the appropriate data to the Analytics engine.

Handling Open Email Events

The ECM embeds a transparent one-pixel image in messages. When recipients open the messages, a request is sent to the **RegisterEmailOpened.aspx** page through the image. The module tracks such requests and passes the tracked data to Sitecore Analytics.

5.11 Tips and Tricks

This section contains some tips and tricks for developers.

5.11.1 Detecting Requests from ECM

You can let the layout on your page know whether the ECM is requesting the message body or if this is a normal page request.

To do that, you should use the following boolean method in your layout:

```
Sitecore.Modules.EmailCampaign.Util.IsMessageBodyRequest()
```

If the method returns `true`, the ECM is requesting the message body, otherwise it is a normal page request.

5.11.2 Hiding the Dispatch Messages Button

In some cases, you may want to hide the **Dispatch Messages** button on the **Message Preview** tab, for example, when the dispatch happens automatically.
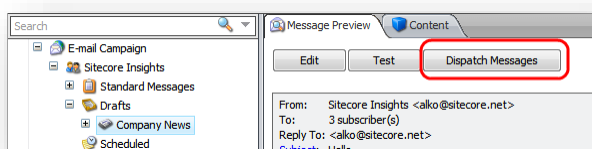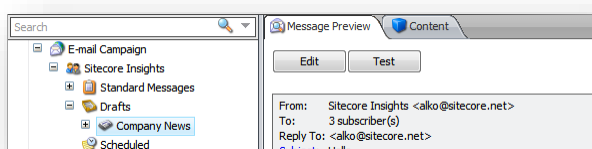

To hide the button:

In the file `\sitecore modules\shell\EmailCampaign\UI\Editors\ MessagePreview.xaml.xml`, add the "`display: none;`" inline CSS style to the `Send` button:

```
        <button id="Send" class="scButton previewButton" style="float:left; width:140px;
display: none;" ...>
```
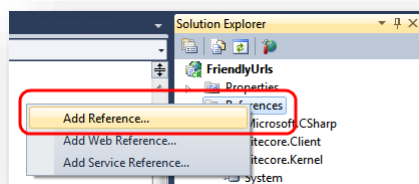
This hides the button:

5.11.3 Adding a Reference to a Sitecore Library in Visual Studio

To add a reference to a library In Visual Studio:

1. In the **Visual Studio Solution Explorer**, right-click **References**, and then click **Add Reference**.

2. In the **Add Reference** dialog box, select the **Browse** tab.

3. Navigate to the `\bin` folder within the Sitecore solution, for example `C:\inetpub\siotecore\MyWebSite\WebSite\bin` and select the required libraries.

5.11.4 IIS Access

If your site requires authentication on IIS level, you can specify the appropriate IIS user credentials in the following settings in the `Sitecore.EmailCampaign.config` file.

Setting name	Sample value	Description
IIS.User	serviceuser	The user name to log in with if anonymous access is disabled.
IIS.Password	12345	The password to log in with if anonymous access is disabled.

If anonymous access in IIS is enabled, you can leave these settings blank.