opentext™

OpenText™ Exstream™

Managing Marketing Messages

Design and Production Documentation

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OpenText™ Exstream
Managing Marketing Messages
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Open Text Corporation
275 Frank Tompa Drive, Waterloo, Ontario, Canada, N2L 0A1

Tel: +1-519-888-7111
Toll Free Canada/USA: 1-800-499-6544 International: +800-4996-5440
Fax: +1-519-888-0677

Support: https://support.opentext.com
For more information, visit https://www.opentext.com

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Chapter 1: Managing Messaging and Marketing Content in Exstream

Exstream offers advanced message design and management to let you build and integrate personalized marketing and informational messages into documents. Using Exstream, you can create customized message designs for communications such as legal notices, coupons, news articles, statements, or just about anything you can imagine. Messages are versatile in that you can use messages to control important customer information that must be distributed to all customers, or to control optional, nice-to-know customer information that fills the extra white space in a customer document. Since messages are designed as objects separate from the page, you use frames in the design to control where messages are imported into the design for the final customer output.

To include messages as a part of an application, you can add messages directly to a document, or you can add them to a campaign. Campaigns, available with the Campaign Management module, let you group messages into a campaign object in the Exstream Library for additional control over their distribution to customers. With campaigns, you can set advanced controls over customer targeting or prioritize groups of messages based on their importance in the final customer output.

Because Exstream offers many different distribution controls, through both messages and campaigns, Exstream also offers several ways to easily manage, test, and report on the marketing setup of messages.

The following sections provide information about the tools available in Exstream for you to use when designing marketing content for customer output and information about additional resources available for other Exstream tasks that relate to your setup.

1.1 Exstream Tools Available for Working With Marketing Content

Exstream offers the following tools to help manage the marketing content you design and deliver through Exstream:

Exstream tools for working with marketing content

Use this	To do this
Messages	Create compact designs that can be applied to the customer output, to build the contents of a page or just to fill available white space. For more information about using messages, see "Messages" on page 7

Exstream tools for working with marketing content, continued

Use this	To do this
Campaigns	Group together one or more associated messages that can be sent to qualifying customers, based on specified targeting and prioritization rules. Campaigns can include messages printed on the customer document or pre-printed messages that are added with an inserter at production time. To use campaigns, you must have licensed the Campaign Management module. For more information about using campaigns, see "Campaigns" on page 30.
Tracking	Evaluate the effectiveness of messages or campaigns that are distributed to customers. Tracking lets you use a normal production run to generate and record information about the distribution of messages and campaigns to customers. For example, with tracking you can learn which customers received a specific message or learn how many times a customer received any message from a specific campaign. You can also use tracking to record customer responses, and then use that information to determine what campaigns or messages a customer should receive in future releases. To use tracking, you must have licensed both the Campaign Management module and the Advanced Campaign Management module. For more information about using tracking, see "Tracking the Distribution of Messages and Campaigns" on page 49.

These tools can work together to help you customize the information you send to customers.

Chapter 2: Messages

Messages are individual customer communications, such as legal notices, coupons, news articles, statements, or just about anything you can imagine. Messages are designed as objects in the Exstream library, separate from the design page. These message objects contain the design and all the setup and targeting controls for the message.

Because messages are designed as objects that are separate from pages, you must set up placeholders, called frames, on the pages where the messages will be placed in the final customer output. You must also add the messages to a container object, such as a document or a campaign. These objects in the Exstream Library control how the messages are grouped and how the messages are applied to the customer output. Both documents and campaigns also offer additional controls over how messages are targeted and delivered to customers.

To set up messages, you must complete the following tasks:

1. "Creating a Message" on the next page
2. "Designing Message Content" on page 10
3. "Identifying the Dimensions of the Pre-printed Messages Used With Insert and Graphic/Insert Messages" on page 14 (for insert or graphic/insert messages only)
4. You can also complete the following tasks as needed:
   - "Making a Message a Clickable Link in Electronic Outputs" on page 15
   - "Associating a Message with Actions Performed by Post-Processing Equipment" on page 16
5. "Controlling How Messages are Placed in the Design" on page 16
6. "Targeting Messages to Specific Customers" on page 25

If you are generating PDF, PDF/A, or VDX output that will be read by screen readers or text-to-speech converters, you can specify how message objects are handled by those accessibility tools. You can also create bookmarks for text within messages, so customers viewing the file in a PDF viewer can navigate directly to area within a specific message.

For information about specifying the accessibility properties and bookmark text for an object, see *Designing Customer Communications* in the Exstream Design and Production documentation.

2.1 Creating a Message

Exstream offers the following types of messages, which vary in the customer content they can contain:

- **Text messages**—These messages contain only text. You do not need a template or a planned layout to use text messages. This versatility allows text messages to fill excess space on the page.
- **Graphic messages**—These messages can contain a mixture of text and graphics. Graphic messages require a set template or layout which defines the amount of space used by the message.
- **Insert messages**—These messages are used as placeholders for pre-printed messages that are inserted into the customer output using post-processing equipment.
- **Graphic/Insert messages**—These messages are used as placeholders for pre-printed messages that are inserted into the customer output using post-processing equipment. Unlike insert messages, graphic/insert messages also let you create and design a backup graphic message that can be placed into the customer output if the post-processing equipment runs out of pre-printed messages.

Before you create a message, you must have set up any message type or message template objects needed for the application.

For more information about setting up message types or message templates, see *System Administration* in the Exstream Design and Production documentation.

2.1.1 Creating a Text Message

1. In Design Manager, from the Library, right-click the **Messages** heading, and, from the shortcut menu, select **New Message**.

   The **New Message** dialog box opens.
2. In the **Name** box, enter a name. In the **Description** box, enter a description (optional).
3. Click **Next**.
4. From the **Type of message** drop-down list, select **Text**.
5. In the **Message type** box, click .

   The **Select Message Type** dialog box opens.
6. Select the message type you want to apply to the text message.
7. Click **OK**.

The **Select Message Type** dialog box closes.

8. Click **Finish**.

   The message is created and added to the Library, and it opens in the Property Panel for you to define.

2.1.2 Creating a Graphic Message

1. In Design Manager, from the Library, right-click the **Messages** heading, and, from the shortcut menu, select **New Message**.

   The **New Message** dialog box opens.

2. In the **Name** box, enter a name. In the **Description** box, enter a description (optional).
3. Click **Next**.
4. From the **Type of message** drop-down list, select **Graphic**.
5. In the **Template** box, click .

   The **Select Message Template** dialog box opens.

6. Select the message template you want to apply to the graphic message.
7. Click **OK**.

   The **Select Message Template** dialog box closes.

8. Click **Finish**.

   The message is created and added to the Library, and it opens in the Property Panel for you to define.

2.1.3 Creating an Insert Message

1. In Design Manager, from the Library, right-click the **Messages** heading, and, from the shortcut menu, select **New Message**.

   The **New Message** dialog box opens.

2. In the **Name** box, enter a name. In the **Description** box, enter a description (optional).
3. Click **Next**.
4. From the **Type of message** drop-down list, select **Insert**.
5. Click **Finish**.

The message is created and added to the Library, and it opens in the Property Panel for you to define.

2.1.4 Creating a Graphic/Insert Message

1. In Design Manager, from the Library, right-click the **Messages** heading, and, from the shortcut menu, select **New Message**.

   The **New Message** dialog box opens.

2. In the **Name** box, enter a name. In the **Description** box, enter a description (optional).
3. Click **Next**.
4. From the **Type of message** drop-down list, select **Graphic or Insert**.
5. In the **Template** box, click .

   The **Select Message Template** dialog box opens.

6. Select the message template you want to apply to the graphic/insert message.
7. Click **OK**.

   The **Select Message Template** dialog box closes.

8. Click **Finish**.

   The message is created and added to the Library, and it opens in the Property Panel for you to define.

2.2 Designing Message Content

Messages are similar to pages in that messages can contain your design. However, since each type of message in Exstream is intended for a different design purpose (for example, text versus graphic messages), each type of message has a different set of limitations on what design objects you can use to create the content for the message.

Depending on the type of message you are creating, you can do the following when you design the message content:

Designing message content

Type of message	Design features allowed
Text messages	Text messages can contain any amount of text. You can also add variables to allow the text to change dynamically based on customer information. For example, you can add a variable that is connected to the customer's name in your data so that when the message is produced as output, the message text contains the name of the customer you are addressing. Depending on your needs, you can create content for text messages using Design Manager, if you require only minimal text formatting, or in Designer, if you need more complex text formatting. For more information about creating text from Design Manager, see "Creating Text Content from Design Manager for Text Messages" below. For information about creating text from Designer, see *Designing Customer Communications* in the Exstream Design and Production documentation.
Graphic messages	Graphic messages can contain any combination of text and graphics. When you design graphic messages from Designer, you can use any design feature, except for indexes, tables of contents, and frames.
Insert messages	Insert message designs are used for reference purposes only, to help you identify the preprinted message associated with the insert message. The design you create for insert messages is never used to generate output. You can either create a design or import a scanned copy of the pre-printed message as a reminder. When you design insert messages from Designer, you can use any design feature, except for indexes, tables of contents, and frames.
Graphic/Insert message	Graphic/Insert message designs are used only if you run out of the preprinted messages during production. When the application runs out of pre-printed inserts, the message design is then used as a graphic message which can be included in the pages of the customer output for the remainder of the run. You can either create a design or import a scanned copy of the pre-printed message. When you design graphic/insert messages from Designer, you can use any design feature, except for indexes, tables of contents, and frames.

Tip: The design you create for a message appears as a thumbnail on the **Basic** tab of the message properties. This thumbnail can help you quickly remember what information a message contains.

For more information about the design features available in Exstream, see *Designing Customer Communications* in the Exstream Design and Production documentation.

2.2.1 Creating Text Content from Design Manager for Text Messages

Since text messages require only text in the design, you have the option to enter text for the message into Design Manager, rather than formally creating the text message content in Designer. When you enter text into Design Manager, you have the option to change the font,

font size, numbering, or bullets; however, any change you apply to the text in Design Manager is applied to the entirety of the text. For example, if you apply bullets to the text you enter in Design Manager, the entire entry is considered a single bullet point. If you need more varied control over the text message content, you should design the text message in Designer. Entering text through Design Manager is useful if the text message requires only the minimal formatting settings available.

Regardless of the program where the text was entered, if the text includes only the minimal formatting accepted by Design Manager, you can continue to edit the text from Design Manager. However, if you view the **Content** tab of the message properties and see that the content area is inactive and the **Text is formatted and must be edited with Designer** check box is selected, this means that the text includes formatting not supported from Design Manager and you must edit the text from Designer.

To design text content for a text message from Design Manager:

1. In Design Manager, from the Library, drag the message to the Property Panel.
2. Click the **Content** tab.
3. Click the content box on the right side of the Property Panel and enter the text. You can also insert text from an RTF file by clicking and selecting the text file you want to import.

   The text is placed in the content box.
4. Click and select a font and font size for the text.
5. From the drop-down list below the content box, set the text style you want to apply to the text:

To	Do this
Make the entire entry appear in a simple paragraph format	Select **Simple**.
Make the entire entry a single bulleted point	Select **Bullet**.
Make the entire entry a single numbered entry	Select **Number**.

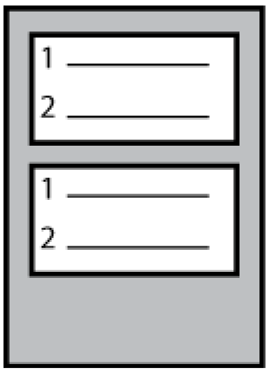
6. From the Standard toolbar, click .

2.2.2 Enforcing Consistent Numbering Across Multiple Messages

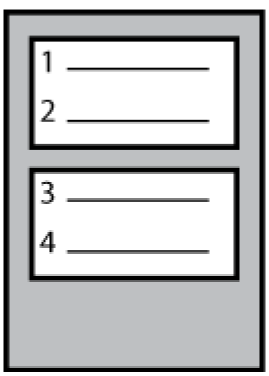
If your message content is numbered, you have the option to make the numbers continue progressively across multiple messages. By default, numbering is confined to a single message. However, if you want a message to continue numbering from where the previous message stopped, you can set the message to renumber the content when the message is placed into the frame.

For example, suppose you have two messages that each contain two numbered entries. By default, both the first and second message are numbered `1-2`. However, if you set the second message to renumber the text when it is placed into the frame, the first message is numbered `1-2`, and the second message continues numbering `3-4`.

Example without renumbering (default)



Example with renumbering



The numbering changes caused by this setting are not visible until the message is placed in the final customer output.

To set a message to continue numbering where the previously placed message left off:

1. In Design Manager, from the Library, drag the message to the Property Panel.
2. Click the **Basic** tab.
3. Select the **Renumber text when placed in frame** check box.
4. From the Standard toolbar, click .

2.2.3 Setting the Languages in Which a Message Can Be Delivered

Language layers allow you take a single object and create separate design layers which can be delivered to different customers according to their language preferences. These separate language layers give you the ability to create completely different language versions of the same object. You can apply language layers to text messages, graphic messages, and graphic/insert messages; however, language layers are used for graphic/insert messages only if the pre-printed messages run out and Exstream begins to use the message as a graphic message.

Languages can be applied to a message from the **Content** tab of the message properties. You can design the content of the language layers for the message while you are designing the message content in Designer.

For more information about applying language layers to your design, see *Designing Customer Communications* in the Exstream Design and Production documentation.

2.3 Identifying the Dimensions of the Pre-printed Messages Used With Insert and Graphic/Insert Messages

For insert and graphic/insert messages, you must define the size and weight dimensions of the pre-printed messages that are controlled by the insert and graphic/insert messages. The message dimensions you enter for insert and graphic/insert messages are used in the following ways by Exstream

- Insert and graphic/insert messages are associated with inserters and bins when you set up production equipment through an Exstream application. Since the bins that control the insert objects are assigned a Exstream designed paper type, the height and width entered for the message serve as a reference to help you associate the right message with the right inserter and bin.
- Insert and graphic/insert messages add weight to the total customer output. The total postage weight of customer output is calculated using the weight settings for design pages, page templates (which reference design pages), and insert or graphic/insert messages.

For more information about setting up inserters and the bin content used to insert pre-printed messages into the final customer output, or about controlling postage and postage breaks in the output, see *Creating Output* in the Exstream Design and Production documentation.

To set the size and weight of an insert or graphic/insert message:

1. In Design Manager, from the Library, drag the message to the Property Panel.
2. Click the **Basic** tab.
3. In the **Width** box, enter the width of the pre-printed message.
4. In the **Height** box, enter the height of the pre-printed message.
5. Identify the weight of the pre-printed message by doing one of the following:

If	Do this
The weight is a static value	a. From the **Weight selection method** drop-down list, select **Static weight value**. b. In the **Weight** box, enter the weight of the pre-printed message.
The weight can vary depending on customer data	a. From the **Weight selection method** drop-down list, select one of the **Variable weight value** options. The measurement you select should be based on the weight measurement used by the customer data. b. In the **Weight** box, click V and select the variable that contains the weight values you want to use. For more information about using variables, see *Using Data to Drive an Application* in the Exstream Design and Production documentation.

6. From the Standard toolbar, click .

2.4 Making a Message a Clickable Link in Electronic Outputs

If you are generating electronic output, such as PDF or HTML, you can make a message a clickable link in the customer output. If you make a message a clickable link, customers will be able to click anywhere in the content of the message and be taken to the URL you specified.

To link a message to a URL:

1. In Design Manager, from the Library, drag the message to the Property Panel.
2. Click the **Basic** tab.
3. Select the **Link to URL** check box, and, in the adjacent box, enter the URL to which you want the message to link.
4. From the Standard toolbar, click .

2.5 Associating a Message with Actions Performed by Post-Processing Equipment

Depending on your output setup, you might need to perform specific actions on the customer output from postprocessing equipment, such as label machines, folders, inserters, mail sorters, envelope and address printers, and so on. From Exstream, you can set an external message identifier on the message to tie the message to the post-processing equipment through the print stream. The external message identifier acts as a notice to the post-processing equipment. When the message and the external message identifier are encountered in the print stream, the action is performed by the post-processing equipment.

The entry you use as the external message identifier should be defined by your equipment or identified in your production setup. For information about what to enter as an external identifier, consult the system administrator in charge of post-processing equipment.

To add an external message identifier to a message:

1. In Design Manager, from the Library, drag the message to the Property Panel.
2. Click the **Basic** tab.
3. In the **External message identifier** box, enter the text to use as an external message identifier. You can enter up to 10 characters.
4. From the Standard toolbar, click .

> **Tip:** The message identifier you enter automatically populates the 'SYS_MsgIdentifier' system variable, for both document and campaign messages, at the time the messages are placed into frames during the engine run. This variable can be used to create a report on the messages sent to a customer.

2.6 Controlling How Messages are Placed in the Design

Messages must be added to a container object—either a document or a campaign—in the Exstream Library. Campaigns and documents control how the messages are grouped and how the messages are applied to the customer output. Both documents and campaigns also offer additional controls over how messages are targeted and delivered to customers. The order in which you add messages to the container object controls the order in which messages are placed on the page. However, keep in mind that this is the starting order, and messages can be removed based on the targeting and priority settings applied to messages and campaigns.

Message placement is also based on the setup of the design pages in your application. Since messages are designed as objects that are separate from pages, you must set up placeholders, called frames, on the pages where the messages are placed into the final customer output. Frames also offer additional controls that let you plan how messages are applied to the frames. For example, you can set up frames to accept only specific messages or you can set up frames to allow messages to split and flow across multiple frames or even across multiple pages.

To control how messages are placed in the design, you must complete the following tasks:

1. “Adding Messages to a Campaign” below

   or

   “Adding Messages to a Document” on the next page

2. “Adding Frames on the Design Page to Receive Incoming Messages” on page 19
3. “Controlling the Split and Flow of Text Messages” on page 24

2.6.1 Adding Messages to a Campaign

Adding messages to a campaign lets you group messages together for additional control over how messages are targeted to customers and how the messages are delivered. Usually, you would select messages that have similar focus or messages that need to be delivered to a similar audience, such as any message that is intended for a homeowner. When you add messages to a campaign, you also have the option to select a teaser message for the campaign. A teaser message is generally a short message that invites the customer to read on, to find out more information about the other messages in the campaign; however, there is no limit to size or amount of text you can include in a teaser message. You can select any message that has been created in Exstream as a teaser message.

This task assumes that you have already created a campaign and any messages you want to include in the campaign.

For more information about creating campaigns, see “Campaigns” on page 30.

To add messages to a campaign:

1. In Design Manager, from the Library, drag the campaign to the Property Panel.
2. Click the **Basic** tab.
3. If you have a specific message you want to use as a teaser message, click in the **Teaser message** box, and select a message.
4. In the **Messages in campaign** box, click .

   The **Select Message** dialog box opens.

5. In the **Look in** box, click and select the Exstream folder that contains the messages you want to add.

6. From the **Name** list, select the name of the message you want to add to the campaign.
7. Click **OK**.

   The **Select Message** dialog box closes.
8. Repeat step 4 through step 6, as needed, to add any additional messages to the campaign.
9. Click or as needed to move the message to another position in the list.
10. From the Standard toolbar, click .

2.6.2 Adding Messages to a Document

Adding messages to a document lets you include messages as a major part of the content. Usually, you would add messages that are required for all customers or messages that must be delivered to the customer.

This task assumes that you have already created a document and any messages you want to include in the document.

For more information about creating a document, see *Designing Customer Communications* in the Exstream Design and Production documentation.

To add messages to a document:

1. In Design Manager, from the Library, drag the document to the Property Panel.
2. Click the **Basic** tab.
3. In the **Content** box, click , and, from the shortcut menu, select **Add Message**.

   The **Select Page or Message** dialog box opens.
4. In the **Look in** box, click and select the Exstream folder that contains the messages you want to add.
5. From the **Name** list, select the name of the message you want to add to the campaign.
6. Click **OK**.

   The **Select Page or Message** dialog box closes.
7. Repeat step 3 through step 6, as needed, to add any additional messages to the document.
8. To place the message in the order you want, select a message in the list and click and as needed.
9. From the Standard toolbar, click .

2.6.3 Adding Frames on the Design Page to Receive Incoming Messages

Messages are placed into pages using frames. As you set up design pages for your application, you must add frames where you want the engine to add messages.

Depending on your design, you can use either of the following types of frames to accept messages:

- **Message frames**—Message frames accept only messages and message content. Generally you would use this type of frame for required messages that must be included in the customer output, or for messages that form the content of a document.
- **Content flow frames**—Content flow frames accept a variety of different objects. Generally you would use this type of frame to allow optional messages to fill any remaining white space.

Each of these frames can be set to limit the number of messages placed in the frame, or to restrict the types of messages that can be placed in the frame.

For more information about creating and designing frames, see *Designing Customer Communications* in the Exstream Design and Production documentation.

Using the Frame Size to Control How Frames Accept Messages

Not only can you limit where a message is placed based on the message object setting and on the frame settings, you can also control where a message is placed based on the size of the frame. For example, if a frame is set to accept any graphic message, but the size of the frame is smaller than the template size of the graphic message, the graphic message will look for the next frame where it can fit.

For more information about creating and designing frames, see *Designing Customer Communications* in the Exstream Design and Production documentation.

Controlling How Messages are Placed in a Message Frame

With message frames, you can specify how many messages are allowed in the frame and how the message flows from one message frame to the next. You can also set the frame to accept only specific types of messages, or to accept only messages that use a specific message type or message template. In a container-based design, however, messages and frames behave differently than in a page-based design. Specifically, if your container-based design uses multiple messages of the same type and template that are targeted for multiple frames, then the engine will populate the frame with the lowest fill order number and will ignore all other frames.

If you want to create a duplex message to use on both sides of a duplex design page, then the message template needs to be set to duplex. For more information about creating duplex messages, see *System Administration* in the Exstream Design and Production documentation.

For more information about using containers in your design, see *Designing Customer Communications* in the Exstream Design and Production documentation.

This task assumes you have already created and placed the frame into your design. You do not need to have created messages before setting up the frames; however, you must have created any message types or message templates you intend to use.

For more information about creating and placing frames in your design, see *Designing Customer Communications* in the Exstream Design and Production documentation.

To control how message frames accept messages:

1. Open the design page in Designer.
2. Double-click the frame to open the **Frame Properties** dialog box.
3. On the **Message Frame** tab, set any of the following limitations for the number of messages that can be accepted into the frame:

To	Do this
Allow only one message to be placed in the frame	In the **Maximum number of messages allowed in frame** list, select **1**.
Allow multiple messages to be placed in the frame as needed	a. In the **Maximum number of messages allowed in frame** list, select either **2-999** or **No Maximum**. If you selected **2-999**, specify the number of messages to allow in the adjacent box. The default value is **2**. b. In the **Messages flow across frames** list, select how you want the frame to treat the flow of messages into or out of the frame. • To prevent other messages from flowing into the frame and prevent messages placed in the frame from flowing out of the frame, select **None**. • To allow other message frames to flow into this frame and allow content from this frame to flow into the next frame, select **In or Out**. • To allow other message frames to flow into this frame but prevent content from this frame to flow into the next frame, select **In Only**. • To prevent other message frames from flowing into this frame but allow content from this frame to flow into the next frame, select **Out Only**. c. If you selected an option in the **Message flow across frames** list, you must select the **Can split and flow** check box on the **Dynamic Size and Placement** tab.

4. Set any of the following limitations for the types of messages that can be accepted into the

frame:

To	Do this
Allow any text message to be placed into the frame	a. Select the **Text messages** check box. b. In the **Allowed message type** list, select **Any**.
Allow only text messages of a specific message type to be placed into the frame	a. Select the **Text messages** check box. b. In the **Allowed message type** list, select the name of the message type you want to allow.
Allow any graphic message to be placed into the frame	Select the **Graphic messages** check box.
Allow only graphic messages with a specific message template to be placed into the frame	a. Select the **Graphic messages** check box. b. In the **Primary template** list, select the name of the message template that must be used by the message for it to be accepted in this frame. c. In the **Alternative contents** list, select what type of messages you want to be accepted into this frame if there are no messages available using the template you specified in the **Primary template** list. Select one of the following: • To not accept any messages other than those using the template you specified in the **Primary template** list, select **None, must match template**. • To accept any other message that uses the same message type, select **Same message types**. This can include text messages which use the message type, or graphic messages that use a different message template with the selected message type. • To accept any other message, regardless of message type, select **Anything**. d. If you want to allow smaller messages to fill any additional white space left over in the frame after the acceptable messages are included, select the **Allow smaller messages** check box.
Allow only campaign teaser messages into the frame	Select the **Allow only campaign teaser messages into this frame** check box.

5. Click **OK**.

Preventing Optional Messages from Filling Specific Areas of White Space

Sometimes it is important that optional messages not be placed before, after, or between other objects on the design page. You can prevent a frame from allowing a message to be placed into specific areas of white space in the frame. This placement control can be especially important if the frame is relative to the position of a growing object on the page, such as a table or text box. For example, in a financial statement, you might need to prevent optional marketing messages from being placed above a table that includes transaction details.

This task assumes that you have already created and placed the frame in Designer.

For more information about creating and placing frames into the design page, see *Designing Customer Communications* in the Exstream Design and Production documentation.

To prevent a frame from filling white space with optional messages:

1. In Designer, double-click the message frame.
2. In the **Frame Properties** dialog box, click the **Message Frame** tab.
3. Select the **Adjust top if overlapped** check box.
4. Click the **Dynamic Size and Placement** tab.
5. In the **Move relative to the object** list, select the position of the object which the frame should move relative to.

   For more information about setting the relative placement of an object, see *Designing Customer Communications* in the Exstream Design and Production documentation.
6. To prevent optional messages from being placed in specific locations based on the position of the relative object, do any of the following as needed:

If	Do this
The frame is allowed to split and flow and you need to prevent the engine from placing optional messages in the available white space between the current frame and the next frame when the content splits	a. Be sure that the **Can split and flow** check box is selected. b. In the **Do not fill whitespace with optional messages** area, select the **Between splits** check box.
The frame moves relative to the object above the frame and you need to prevent the engine from placing optional messages in the available white space above the selected object	a. Be sure that the **Move relative to the object** list is set to **Above**. b. In the **Do not fill whitespace with optional messages** area, select the **Above** check box.
The frame moves relative to the object above the frame and you need to prevent the engine from placing optional messages in the available white space below the selected object	a. Be sure that the **Move relative to the object** list is set to **Above**. b. In the **Do not fill whitespace with optional messages** area, select the **Below** check box. **Note:** The interactive (Live) capabilities of Exstream do not support campaigns and messages, so the only available frame type is a content frame. If you are designing an interactive document, the only option that has a visible impact is **Below**.

7. Click **OK**.

These options apply to only a design page with a single flow area. If you want to place objects side-by-side on the design page and still apply these options, you can place the objects in a table and set the option you want in the **Table Properties** dialog box.

For more information about setting table properties to control relative placement of objects, see *Designing Customer Communications* in the Exstream Design and Production documentation.

Controlling How Messages are Placed in a Content Flow Frame

By default, content flow frames do not accept messages. If you want messages to be placed in a content flow frame, you must specify that the frame is allowed to contain messages. After the frame is allowed to accept messages, you can also set the frame to accept only specific types of messages, or to accept only messages that use a specific message type or message template.

This task assumes you have already created and placed the frame into your design. You do not need to have created messages before setting up the frames; however, you must have created any message types or message templates you intend to use.

For more information about creating and placing frames in your design, see *Designing Customer Communications* in the Exstream Design and Production documentation.

To control how content flow frames accept messages:

1. Open the design page in Designer.
2. Double-click the frame.
3. In the **Frame Properties** dialog box, select the **Messages can be placed into unused area at the bottom of frame** check box.
4. Set any of the following limitations for the types of messages that can be accepted into the frame:

To	Do this
Allow any text message to be placed into the frame	a. Select the **Text messages** check box. b. In the **Allowed message type** list, select **Any**.
Allow only text messages of a specific message type to be placed into the frame	a. Select the **Text messages** check box. b. In the **Allowed message type** list, select the name of the message type you want to allow.
Allow any graphic message to be placed into the frame	Select the **Graphic messages** check box.

To	Do this
Allow only graphic messages with a specific message template to be placed into the frame	a. Select the **Graphic messages** check box. b. In the **Primary template** list, select the name of the message template that must be used by the message for it to be accepted in this frame. c. In the **Alternative contents** list, select the type of messages you want to be accepted into this frame if there are no messages available using the template you specify in the **Primary template** list. Select one of the following: • To accept no messages other than those using the template you specify in the **Primary template** list, select **None, must match template**. • To accept any other message that uses the same message type, select **Same message types**. This can include text messages that use the message type, or graphic messages that use a different message template with the selected message type. • To accept any other message regardless of message type, select **Anything**. d. If you want to allow smaller messages to fill any additional white space left over in the frame after the acceptable messages are included, select the **Allow smaller messages** check box.

5. Click **OK**.

2.6.4 Controlling the Split and Flow of Text Messages

Text messages, unlike other messages, can be set to split and flow across multiple frames or multiple pages. All other types of messages are not allowed to split because the message template, which controls the space taken by the message, cannot split. Since text messages are not restricted to a template or any other set amount of space, text messages can be allowed to split, based on the split and flow settings you apply to the text message. When the message content splits, you also have the ability to prevent unwanted widows (short snippets of text at the bottom of a frame) or orphans (short snippets of text at the top of a page) in the individual textual paragraphs within the message.

Keep in mind that frame settings can also affect how text messages split or flow across the document.

For more information about flow settings on a frame that can affect the split and flow of a message, see “Adding Frames on the Design Page to Receive Incoming Messages” on page 19.

To control the split and flow of a text message:

1. In Design Manager, from the Library, drag the text message to the Property Panel.
2. Click the **Basic** tab.

3. To control how messages split when the content of a message can't be contained entirely within a single frame, do one of the following:

To	Do this
Force a text message to stay together within a single frame	Clear the **Can split across frames** check box. If the text message cannot be placed entirely into a frame, the text message will be placed in the next available frame where it can fit.
Allow a text message to split across multiple frames if additional space is needed to fit the text message	Select the **Can split across frames** check box. If the text message cannot be placed entirely into a frame, the text is allowed to split. This allows the text to be placed across multiple frames, if needed, in order to fit the entire message in the output.

4. To prevent the text paragraphs within a splitting message from creating widows and orphans, select the **Widow/ orphan control** check box, and in the adjacent box enter the number of lines of text that must be able to appear both before and after the split in order for the text paragraph to be allowed to split. If a textual paragraph cannot place the specified number of lines before and after the split, the entire text paragraph is moved to the next available frame.

5. From the Standard toolbar, click .

For more information about setting frames for use with messages, see “Adding Frames on the Design Page to Receive Incoming Messages” on page 19.

2.7 Targeting Messages to Specific Customers

To control which messages are included for specific customers, you generally start by creating all possible messages. When messages are grouped together in a container object (such as a document or campaign), the targeting controls you set on the container let you pre-qualify customers for a group of messages before allowing them to qualify for the individual messages within the container.

For example, if a campaign is targeted to only homeowners, then only customers who are homeowners are qualified to receive any of the campaign messages. The messages are then considered individually, based on their own targeting settings. For example, a message by itself might target customers who have children in college. When the targeting controls are combined, the message can be received only by homeowners who have children in college.

To target groups of messages to customers, you can complete any of the following tasks:

- "Specifying How Document Messages are Selected for Inclusion in Customer Output" below
- "Specifying How Campaign Messages are Selected for Inclusion in Customer Output" on the next page

If a message is selected for inclusion at the container level, you then have the ability to target individual messages to customers using rules. By targeting the individual message to customers, you can set specific controls for which customers should receive individual messages.

To target individual messages to customers, you can complete any of the following tasks:

- "Sending a Message to All Customers" on page 28
- "Sending a Message to Customers Based on Rule Logic" on page 28
- "Controlling How a Message is Included for Customers in Different Countries/Regions" on page 29

2.7.1 Specifying How Document Messages are Selected for Inclusion in Customer Output

If you use document messages, you can specify how the document selects messages for inclusion from all of the attached document messages.

To specify how document messages are selected for inclusion in customer output, do one of the following:

To	Do this
Use the individual rules applied to the messages to control inclusion	1. In Design Manager, from the Library, drag the document to the Property Panel. 2. Click the **Targeting** tab. 3. In the **Message inclusion method** area, from the **Method** drop-down list, select **Specified, check rule**. 4. From the Standard toolbar, click .

To	Do this
Use a variable that contains a list of the messages that should be included for each customer to control inclusion, regardless of the rules set on individual messages	1. In Design Manager, from the Library, drag the document to the Property Panel. 2. Click the **Targeting** tab. 3. In the **Message inclusion method** area, from the **Method** drop-down list, select **Variable driven, ignore rule**. 4. In the **Message inclusion method** area, in the **Variable containing list of messages** box, click and select the string array variable that contains the names of the document messages that need to be selected. 5. From the Standard toolbar, click .
Use first a variable that contains a list of the messages that should be included for each customer; and then, using only those messages listed in the variable, use the rules applied to each individual message to control inclusion	1. In Design Manager, from the Library, drag the document to the Property Panel. 2. Click the **Targeting** tab. 3. In the **Message inclusion method** area, from the **Method** drop-down list, select **Variable driven, check rule**. 4. In the **Message inclusion method** area, in the **Variable containing list of messages** box, click and select the string array variable that contains the names of the document messages that need to be selected. 5. From the Standard toolbar, click .

Keep in mind that even if a customer qualifies at the container level, the customer must also meet any targeting requirements for the individual messages before anything is included in the customer content.

For more information on creating rules and rule logic, see *Using Logic to Drive an Application* in the Exstream Design and Production documentation.

For more information on creating variables and variable controls, see *Using Data to Drive an Application* in the Exstream Design and Production documentation.

2.7.2 Specifying How Campaign Messages are Selected for Inclusion in Customer Output

Since campaigns act only as a container to group messages together, all the settings on a campaign help to specify how the campaign messages are selected for inclusion in customer output.

You can complete any of the following tasks to target campaign messages to specific customers:

- Control how the campaign is included for customers in different countries/regions.
- Target the campaign to specific customers.

- Set priorities on campaigns.
- Set the active dates in which the campaign can be sent to customers.
- Control how the campaign is included in the customer output.

Keep in mind that even if a customer qualifies at the container level, the customer must also meet any targeting requirements for the messages within the container before anything is included in the customer content.

For more information about setting up a campaign, see "Campaigns" on page 30.

2.7.3 Sending a Message to All Customers

By default, messages are sent to all customers, as long as no targeting settings have been applied to the **Targeting** tab of the message properties. If a rule has previously been set on a message, you must remove the rule logic in order for the message to be delivered to all customers.

To remove a previously set rule from a message:

1. In Design Manager, from the Library, drag the message to the Property Panel.
2. Click the **Targeting** tab.
3. Click the **Rule** box.

   The **Rule** dialog box opens.
4. Toggle to the code view of the **Rule** dialog box.
5. Select and delete all the logic in the code box.
6. Click **OK**.

   The **Rule** dialog box closes and the rule is removed from the message.

For more information using rules, see *Using Logic to Drive an Application* in the Exstream Design and Production documentation.

2.7.4 Sending a Message to Customers Based on Rule Logic

Rules allow you tie messages to customer data or to advanced calculations to determine whether a message is included in the generated customer output.

To send a message to specific customers based on rule logic:

1. In Design Manager, from the Library, drag the message to the Property Panel.
2. Click the **Targeting** tab.
3. Click in the **Rule** box and create the rule logic.

   For more information about creating rule logic, see *Using Logic to Drive an Application* in the Exstream Design and Production documentation.

2.7.5 Controlling How a Message is Included for Customers in Different Countries/Regions

If you have licensed the Compliance Support module, you can use the **Regulatory** tab of the message properties to control how content is distributed to customers based on their location and the production dates you are using. The **Regulatory** tab lets you select jurisdictions and effectivity dates, which instruct the engine to select specific versions of the object based on geographical locations (such as a customer's country/region) or virtual locations (such as a customer's office or home). Jurisdictions target specific information for specific customers, while reducing processing time and the number of messages and rules in an application. You can use this method regardless of any other targeting controls you have set on the message.

For more information about setting up jurisdictions, see *System Administration* in the Exstream Design and Production documentation.

For more information about using effectivity and jurisdictions, see *Designing Customer Communications* in the Exstream Design and Production documentation.

Chapter 3: Campaigns

Campaigns are not intended to contain any actual content that is delivered to customers, but are used as containers which let you group together multiple messages with a similar purpose. By grouping messages together in a campaign, you gain additional controls over messages that let you do the following:

- Target groups of messages to customers.
- Set priorities on campaigns to make sure that customers receive information with the right level of importance in the final customer output.
- Track how messages are distributed to customers.

To use campaigns, you must have licensed the Campaign Management module.

To set up a campaign, you must complete the following tasks:

1. "Creating a Campaign" below
2. "Adding Messages to a Campaign" on page 32
3. "Targeting a Campaign to Specific Customers" on page 33
4. "Setting Priorities on Campaigns" on page 36
5. "Running a Campaign Test to See What Campaigns and Messages a Customer Will Receive" on page 41
6. "Setting the Active Dates When a Campaign Can Be Sent to Customers" on page 42
7. "Controlling How Documents Accommodate Campaigns" on page 43
8. "Adding a Campaign to an Application" on page 47

3.1 Creating a Campaign

1. From Design Manager, in the Library, right-click the **Campaigns** heading and select **New Campaign**.

   The **New Campaign** dialog box opens.

2. In the **Name** box, enter a name. In the **Description** box, enter a description (optional).
3. In the **Applications** area, select the applications to which you want to add the campaign. Campaigns can be added to applications at another time, so it is not required for you to complete this step at this time.

4. Select whether you want to immediately begin to create the messages controlled by this campaign. Do one of the following:

To	Do this
Create the first message for the campaign and immediately open it in Designer (A message type or message template must exist in order for you to complete this task.)	a. From the **Create first message** drop-down list, select **Yes, and start Designer now**. b. Click **Next**. c. From the **Type of message** drop-down list, select the type of message you want to create for the campaign. d. If you are creating a text message, click in the **Message type** box, and select the message type you want to apply to the message. e. If you are creating a graphic message or a graphic/insert message, click in the **Template** box, and select the message template you want to apply to the message. f. Click **Finish**. The message you created opens in Designer for you to define.
Create the first message for the campaign but design it later (A message type or message template must exist in order for you to complete this task.)	a. From the **Create first message** drop-down list, select **Yes, but do not design the message now**. b. Click **Next**. c. From the **Type of message** drop-down list, select the type of message you want to create for the campaign. d. If you are creating a text message, click in the **Message type** box, and select the message type you want to apply to the message. e. If you are creating a graphic message or a graphic/insert message, click in the **Template** box, and select the message template you want to apply to the message. f. Click **Finish**. The campaign opens in the Property Panel for you to define.
Create the messages later or add only existing messages to the campaign	a. From the **Create first message** drop-down list, select **No, add messages later**. b. Click **Next**. The campaign opens in the Property Panel for you to define.

5. From the Standard toolbar, click .

3.2 Adding Messages to a Campaign

After a campaign has been created, you can add messages to it. Usually, you would select messages that have a similar focus, or messages that need to be delivered to a similar audience, such as any message that is intended for customers with children. You also have the option to select a teaser message for the campaign. A teaser message is a short message that invites the customer to read on, to find out more information about the other messages in the campaign.

To add messages to a campaign:

1. In Design Manager, from the Library, drag the campaign to the Property Panel.
2. Click the **Basic** tab.
3. If you have a specific message you want to use as a teaser message, click in the **Teaser message** box, and select a message.
4. In the **Messages in campaign** box, click .

   The **Select Message** dialog box opens.
5. In the **Look in** box, click and select the Exstream folder that contains the messages you want to add.
6. From the **Name** list, select the name of the message you want to add to the campaign.
7. Click **OK**.

   The **Select Message** dialog box closes.
8. Repeat step 4 through step 7 to add any additional messages to the campaign.
9. To place the message in the order you want, select a message in the list and click and as needed.
10. From the Standard toolbar, click .

For more information about adding campaigns and messages to your application, see "Adding a Campaign to an Application" on page 47.

3.3 Targeting a Campaign to Specific Customers

When messages are grouped together in a campaign, the targeting controls you set on a campaign let you prequalify customers for a group of messages before allowing them to qualify for the individual messages within the campaign. Keep in mind that even if a customer qualifies for a campaign, the customer must also meet any targeting requirements for the individual messages within the campaign before anything is included in the customer content.

For example, if the campaign was targeted to only homeowners, then only customers who are homeowners are qualified to receive any of the campaign messages. The messages are then considered individually, based on their own targeting settings. For example, a message by itself might target customers who have children in college. When the targeting controls are combined, the message can be received only by homeowners who have children in college.

To target campaigns to specific customers, complete the following tasks as needed:

- “Sending a Campaign to All Customers” below
- “Sending a Campaign to Customers Based on Rule Logic” on the next page
- “Sending a Campaign to a Specific List of Customers” on page 35

If you are tracking the distribution of a campaign, you can also send a campaign to customers based on another campaign that they have previously received.

For more information about targeting customers based on previously-sent campaigns, see “Using Tracking Information to Drive Future Campaign Releases” on page 73.

3.3.1 Sending a Campaign to All Customers

By default, campaigns are sent to all customers, as long as no targeting settings have been applied to the **Targeting** tab of the campaign properties. If a rule has previously been set on a campaign, you must remove the rule logic in order for the campaign to be delivered to all customers.

To remove a previously set rule from a campaign:

1. In Design Manager, from the Library, drag the campaign to the Property Panel.
2. Click the **Targeting** tab.
3. Click the **Rule** box.

   The **Rule** dialog box opens.
4. Toggle to the code view of the **Rule** dialog box.

5. Select and delete all the logic in the code box.
6. Click **OK**.

   The **Rule** dialog box closes and the rule is removed from the campaign.

For more information about using rules, see *Using Logic to Drive an Application* in the Exstream Design and Production documentation.

3.3.2 Sending a Campaign to Customers Based on Rule Logic

Rules allow you to tie campaigns to customer data or to use advanced calculations to determine whether a campaign is included in the customer output. When you set a rule on a campaign, you must also set the time at which the rule is applied during the final engine run. For example, you can run the rule when a specific data section is encountered as the engine runs.

1. In Design Manager, from the Library, drag the campaign to the Property Panel.
2. Click the **Targeting** tab.
3. Click in the **Rule** box and create the rule logic.

   For more information about creating rule logic, see *Using Logic to Drive an Application* in the Exstream Design and Production documentation.
4. In the **When to run** list, make a selection to control when the rule is applied to the campaign.

   > **Note:** If the **When to run** option is not visible, make sure the **Rule execution timing** check box is selected on the **Content** tab of the **System Configuration** dialog box.

To	Do this
Run the rule once, after all customer data is available	Select **After all customer data**.
Run the rule once, after only the initial customer data is available	Select **After initial customer data**.
Run the rule each time a specified data section is encountered, until the engine has read all data sections, or has included the campaign one time for each customer.	a. Select **Each section, until qualified**. b. In the adjacent box, enter the name of the data section you want to use to initiate the rule.

To	Do this
Run the rule each time a specified data section is encountered, until the engine has read all data sections. Include the campaign each time the rule applies. If the customer qualifies multiple times, the campaign can be included multiple times.	a. Select **Each section, sum qualified**. b. In the adjacent box, enter the name of the data section you want to use to initiate the rule.

For more information about engine timing, see *Preparing Applications for Production* in the Exstream Design and Production documentation.

3.3.3 Sending a Campaign to a Specific List of Customers

If you want to send campaigns to a specific list of customers, you can add a customer list to the campaign to control which customers receive the campaign. For example, suppose you receive customer requests for information on a specific service you offer. You can place the names of the customers who have requested more information into a reference file. When the reference file is attached to the campaign, the engine targets the campaign to the customers listed in the file.

Keep in mind that any rules or jurisdictional controls you have applied to the campaign or to the messages within the campaign also affect what content is included in the final customer output. For example, if a customer is on the list, but doesn't fit the targeting rule for the message, the message will not be delivered to the customer.

To send campaigns to a specific list of customers:

1. Create and define the reference file containing the list of customers to whom you want to send this campaign.

   For more information about creating and defining data files, see *Using Data to Drive an Application* in the Exstream Design and Production documentation.

2. In Design Manager, from the Library, drag the campaign to the Property Panel.
3. Click the **Targeting** tab.
4. Select the **Send to customers listed in reference file** check box.
5. In the adjacent box, click  and select the reference file you created in step 1.
6. From the Standard toolbar, click .

3.4 Setting Priorities on Campaigns

Since customers can qualify for more campaigns or messages than can fit in the customer output, it is important to set priorities designating which campaigns are more important than others to deliver to a customer. Campaigns with a lower priority can be removed from the customer output if there is not enough space.

To set the priority level for campaigns, you can set three priority keys within the application. These keys are meant to define how campaigns are sorted into the needed priority order. The goal of each successive priority key you set is to break any ties in the priority levels resulting from the sort by the previous priority key. If campaigns are still tied for the same priority level at the end of all three sorts, then the order in which the campaign is listed in the application is used to break the final ties and assign separate priority levels to the tied campaigns.

Filler campaigns are campaigns that are allowed to be removed from the customer output if there is not enough space in the application for it to fit. A campaign is considered a filler campaign if the campaign is set to **Do not create page for this campaign** from the **Campaign-driven pages** drop-down list on the **Targeting** tab. These filler campaigns are always selected last and moved to the end of the priority list, regardless of the priority settings you apply at the application level.

For more information about allowing a document to add pages to accommodate campaigns, see "Allowing Documents to Add Pages to Accommodate Campaigns" on page 45.

Keep in mind that priority order is not equal to the order in which campaigns appear in the final customer output. Order in the customer output is dependent on multiple settings on frames, messages, and campaigns. Campaigns that meet the campaign ordering criteria in the application are also subject to qualification based on targeting rules and available space.

To set the priorities for the campaigns in an application:

1. In Design Manager, from the Library, drag the application to the Property Panel.
2. Click the **Marketing** tab.
3. From the **First campaign priority key** drop-down list, select the type of priority control that will be used first to set the priority of campaigns in this application.

To	Do this
Use the priority that is set on the **Priority** tab for each campaign included in the application	a. Select **Priority**. b. For each campaign, complete one of the following tasks to set the priority of the campaign: • "Setting a Default Priority for a Campaign" on the next page • "Setting a Priority Rule on a Campaign" on page 39
Select campaigns based on the order in which they are listed in the application	Select **Order in application**. If you select this option, you cannot set any additional priority keys, because after this sort, no two campaigns will have the same priority level.
Allow Design Manager to randomly select the campaigns to include in the application	Select **Random**. If you select this option, you cannot set any additional priority keys, because after this sort, no two campaigns will have the same priority level.
Select campaigns based on the date the campaigns were created	Select **Newest**.
Use the postage priority set by the **Campaign-driven pages** drop-down list on the **Targeting** tab for each campaign included in the application	a. Select **Postage Priority**. b. For each campaign, select an option from the **Campaign-driven pages** drop-down list on the **Targeting** tab of the campaign properties to define the postage priority level of the campaign. The following are the options and the priority level they represent, if the sort order is ascending: • 1— **Always (campaign must be sent)** • 2— **Up to maximum marketing pages** • 3— **If no additional pages** • 4— **Do not create page for this campaign** • 5— **Content only** • 6— **Exclude if teaser not placed** • 7— **Exclude if extra postage** For more information about campaign-driven pages and postage priority, see "Allowing Documents to Add Pages to Accommodate Campaigns" on page 45.

To	Do this
Select campaigns based on a custom variable you create	a. Set up a custom campaign priority. For more information about setting a custom campaign priority, see "Setting a Custom Campaign Priority" on the next page. b. Select **Custom field 1**, **Custom field 2**, or **Custom field 3**, depending on which custom campaign priority entry you want to use.
Calculate the height of all the qualifying messages in available campaigns, and if the combined height is too tall for the available white space, then messages in lower priority campaigns are removed one at a time until the remaining messages fit in the available white space	Select **Remove by priority**. If you select this option, you cannot set any additional priority keys, because after this sort, no two campaigns will have the same priority level.

4. Select the order in which you want the priority key to be sorted:

To	Do this
Sort in ascending order	Select the **Ascending** check box.
Sort in descending order	Clear the **Ascending** check box.

5. If needed, repeat step 3 through step 4 to set additional priority sorting criteria for the **Second campaign priority key** and **Third campaign priority key**.

6. From the Standard toolbar, click .

3.4.1 Setting a Default Priority for a Campaign

Setting a default priority on a campaign gives the campaign the same priority level for all customers.

To set a default priority:

1. In Design Manager, from the Library, drag a campaign to the Property Panel.
2. Click the **Priority** tab.
3. From the **Method for specifying priority of this campaign compared to other campaigns** drop-down list, select **Priority is the same for all customers**.
4. In the **Priority** box, enter a priority number of the campaign. The highest priority is 1.
5. From the Standard toolbar, click .

3.4.2 Setting a Priority Rule on a Campaign

Setting a priority rule on a campaign allows the priority level of the campaign to change, based on a combination of customer data and logic. This method is useful if the campaign needs to have a different priority for each customer. For example, suppose you have a campaign that is targeted to customers with children. You might want the campaign to have a different priority depending on how many children the customer has.

To set a priority rule on a campaign:

1. In Design Manager, from the Library, drag a campaign to the Property Panel.
2. Click the **Priority** tab.
3. From the **Method for specifying priority of this campaign compared to other campaigns** drop-down list, select **Priority is set by a rule for each customer**.
4. Click in the **Priority** rule box and create the logic for the priority rule.

   For more information about creating a priority rule, see *Using Logic to Drive an Application* in the Exstream Design and Production documentation.
5. From the Standard toolbar, click .

3.4.3 Setting a Custom Campaign Priority

If you want to customize the values you use to set priorities for campaigns, you can set up the custom priority controls from the Exstream**System Settings** heading. This allows you to create a variable that contains the customized information you want to use to control the priority level of a campaign. The Exstream **System Settings** heading might be restricted based on your administrative rights. If you need to edit these settings and cannot reach them in the software, contact your system administrator.

To set up a custom campaign priority:

1. In Design Manager, from the Library, go to **Environment > System**.
2. Drag the **System Settings** heading to the Property Panel.
3. Click the **Marketing** tab.
4. From the **Type** drop-down list, select the data type for the priority values you enter.
5. In the **Name** box, enter a name for the variable.
6. In the **Default Value** box, enter a default value for this variable when a new campaign is created. The value you enter must be in the data type you select from the **Type** drop-down list.

7. From the Standard toolbar, click .

3.4.4 How Campaign Priorities Sort Campaigns

The following table shows how campaign priorities are used to sort campaigns in a sample application. This sort is defining the priority of five campaigns: `A`, `B`, `C`, `D`, and `E`. The order of all sorts is ascending.

Example of how campaign priority ordering works

Sort	Sort description	Priority order of campaigns after the sort
First	The first sort is based on a **Custom Priority**, which is set to the company cost of the campaign. • Campaigns A, B and E are tied for first position (2¢ per item). • Campaigns C and D are tied for second position (1.5¢ per item).	A B E (three-way tie) C D (tie)
Second	The second sort is based on the **Priority**, which is set by priority rules on each campaign. • Campaigns A and E are listed as priority 1. This breaks the three-way tie between A, E and B; however, A and E remain tied and must be considered in a third sort to break the tie. • Campaigns B and D are listed as priority 2. Since B was of a higher priority than D in the previous key, B is still listed at a higher priority than D. • Campaign C is listed as priority 4. This breaks the tie between C and D since D is a higher priority.	A E (tie) B D C
Third	The third sort is based on the **Order in application**. • E comes before A in the application list of campaigns. This breaks the tie between A and E. Since no other campaigns were tied for a priority, no other campaigns are moved for this sort. • The final priority order is now established for the campaigns.	E A B D C

3.5 Running a Campaign Test to See What Campaigns and Messages a Customer Will Receive

Since you can set multiple inclusion controls, such as targeting and priority settings, on messages and campaigns, you can run a test to be sure that the inclusion settings on all objects are working together to deliver the right messages and campaigns to the right customers. You can test each campaign and review what messages will be sent to customers based on the current settings in Exstream. This test not only helps you verify that targeting settings work as expected for both messages and campaigns, but also lets you see how priority settings affect whether a customer receives the campaign.

To test a campaign:

1. In Design Manager, from the Library, click the campaign you want to test.
2. On the Standard toolbar, click .

   The **Campaign Test** dialog box opens.
3. In the **Application** box, click and select the application containing the campaign you want to test.
4. If you want to limit the number of customers that are tested, do the following:
   a. Select the **Limit sets** check box.
   b. In the first adjacent box, enter the number of the first customer to include in the test.
   c. In the **to** box, enter the number of the last customer to include in the test.
   d. In the **by** box, enter the number of customers to skip between customers selected for the test. For example, if you enter a range of customers from `1` to `100`, and you only wanted to include only every tenth customer in the test, you would enter `10` in the **by** box.
5. Click **Go** to run the report.

   A list of customers who will receive the campaign appears in the **Customers** area.
6. In the **Customers** area, double-click a customer.

   In the **Detailed content list for customers** area, a list of the messages the customer receives from the selected campaign appears.
7. To review additional customers, repeat step 6, as needed.

8. To test the campaign in other applications, repeat step 3 through step 7, as needed.
9. Click **Cancel** to leave the **Campaign Test** dialog box.

3.6 Setting the Active Dates When a Campaign Can Be Sent to Customers

Sometimes campaigns contain time-sensitive messages that must be delivered or not be delivered within a specific range of time. To control when campaigns are available for distribution to customers, you can set the active dates in which the campaign can be delivered. Unlike effectivity dates, which dictate the active dates for only a specific jurisdiction, active dates control the complete span of time in which the campaign can be delivered under any circumstances.

For more information about setting jurisdictions and effectivity dates, see *Designing Customer Communications* in the Exstream Design and Production documentation.

To set active dates for a campaign:

1. In Design Manager, from the Library, drag the campaign to the Property Panel.
2. Click the **Dates** tab.
3. From the **Active dates** drop-down list, select one of the following options to set the active dates you want to apply to the campaign:

To	Do this
Deliver the campaign at any date without restrictions	Select **Use always, no restrictions**.
Deliver the campaign only within specific date periods	a. Select **Use during periods below**. b. Click a **Date Range** box to enter a date range. The **Period** dialog box opens. c. Clear the **No date range** check box. d. In the **From** boxes, enter the year, month, and day of the beginning date for the date range. e. In the **To** boxes, enter the year, month, and day of the ending date for the date range. f. Click **OK**. The **Period** dialog box closes and the date range is applied to the **Active dates** tab.

To	Do this
Deliver the campaign at any date except within specific date periods	a. Select **Use except during periods below**. b. Click a **Date Range** box to enter a date range. The **Period** dialog box opens. c. Clear the **No date range** check box. d. In the **From** boxes, enter the year, month, and day of the beginning date for the date range. e. In the **To** boxes, enter the year, month, and day of the ending date for the date range. f. Click **OK**. The **Period** dialog box closes and the date range is applied to the **Active dates** tab.

4. From the Standard toolbar, click .

3.7 Controlling How Documents Accommodate Campaigns

When you add campaigns to an application, the following document configurations can affect the release of campaigns:

- Sometimes a customer can receive multiple documents within a single release. When a customer receives multiple documents, you must specify how you want campaigns to be included within those documents. For example, you might want a campaign to be available for inclusion in both documents or you might want to restrict the campaign to be included in only one document.
- Sometimes customers qualify for more campaigns and messages than there is space to place them in the document. Since documents are only designed with a set amount of pages, you must specify how you want a document to accommodate campaigns when there aren't enough design pages to fit every campaign or message in the customer output.

Keep in mind that final campaign inclusion is also based on any targeting or priority settings on the campaign and any targeting settings on the message.

For more information about setting targeting controls on a campaign, see “Targeting a Campaign to Specific Customers” on page 33.

For more information about setting priority controls on a campaign, see “Setting Priorities on Campaigns” on page 36.

3.7.1 Controlling How a Campaign is Included When Customers Receive Multiple Documents

Often customers can receive more than one document in their customer output. You can control how and if campaigns are included for each of these documents. For example, you might have a campaign that contains coupons that you do not want a customer to receive more than once or you might have a campaign for a new customer service that you want to include in any document the customer receives.

To control how campaigns target customers who receive multiple documents:

1. In Design Manager, from the Library, drag the campaign to the Property Panel.
2. Click the **Targeting** tab.
3. Do one of the following to set how campaigns are included across the multiple documents the customer receives:

To	Do this
Include this campaign only once (If the campaign is included in one document, the campaign cannot be considered for inclusion in any of the remaining documents in the application.)	From the **When customer receives multiple documents** drop-down list, select **Include this campaign once**.
Repeat this campaign in each document (If the customer qualifies for the campaign and receives two messages from the campaign, those two messages will appear in each of the documents the customer receives.)	From the **When customer receives multiple documents** drop-down list, select **Repeat campaign in each document**.
Repeat this campaign in qualified section documents (This option can be used only if you use section-driven documents.)	a. From the **When customer receives multiple documents** drop-down list, select **Repeat in qualified section documents**. When the campaign is qualified, it is applied to the current active section-driven document. b. If the campaign is targeted to customers using a rule, the rule timing on the campaign must either be **Each section, until qualified** or **Each section, sum qualified**. The named data section that drives the inclusion of the campaign can be different from the named data section that drives the inclusion of the document; however, the data driving the document must appear in the data file before the data section driving the campaign. If the data is not included in this order, the campaign will not appear in the customer output. For more information about using data sections to drive the inclusion of objects in the application, see *Using Data to Drive an Application* in the Exstream Design and Production documentation.

4. From the Standard toolbar, click .

3.7.2 Allowing Documents to Add Pages to Accommodate Campaigns

Marketing pages are additional pages you can allow the engine to automatically add to a document to accommodate campaigns and messages that must be delivered to the customer. These pages can be automatically added to the customer output, depending on the settings on the application, to provide space for additional messages that cannot fit within the existing pages of the design. You can control how many or how frequently the application is permitted to add marketing pages by setting limitations on both the application and on the campaign.

Adding Pages to Accommodate a Campaign

To allow documents to add pages to accommodate the campaigns within an application:

1. In Design Manager, from the Library, drag the application to the Property Panel.
2. Click the **Marketing** tab.
3. Do any of the following to control how and when the document is allowed to add pages to fit the campaign:

To	Do this
Limit the number of extra pages the engine can add to an application for campaigns and messages	Select the **Limit number of marketing pages sent to a customer** check box, and, in the adjacent box, enter the number of pages to use as a limit. This is a count of the marketing pages only.
Set a limit for the total number of pages an application can contain	Select the **Do not add marketing pages if total pages exceeds limit** check box, and, in the adjacent box, enter the number of pages to use as a limit. This is a count of the total pages in the application. Even if the limit for marketing pages is not met, if the application's total page count meets this number, then the engine will stop adding marketing pages.
Set a postage limit to control the number of marketing pages added to an application	a. Select the **Do not add marketing pages if total weight exceeds limit** check box. b. In the adjacent box, enter the weight to use as a limit. c. In the list below the adjacent box, select the weight measurement used. Keep in mind that the total weight of an application comes from the combined weights of page objects, insert messages, and graphic/insert messages in the customer output. If you use page templates, the page template references a page object where the weight is set. For more information about pages and page templates, see *Designing Customer Communications* in the Exstream Design and Production documentation.

To	Do this
Allow required campaigns or messages that must be included in the customer output to force the application to add additional marketing pages in order to fit the content, regardless of any other marketing page restrictions	Select the **Allow required campaigns to force marketing pages** check box.

4. From the Standard toolbar, click .

Controlling How Pages are Added for a Campaign

For each campaign, use one of the following methods to control whether a specific campaign can force a document to add pages to accommodate the campaign.

1. In Design Manager, from the Library, drag the campaign to the Property Panel.
2. Click the **Targeting** tab.

3. In the **Campaign-driven pages** list, select one of the following:

To	Do this
Prevent a campaign from forcing the document to add pages to the document	Select **Do not create page for this campaign**.
Allow a campaign to force the document to add pages to fit the campaign, only if doing so does not add any additional postage	Select **If no additional postage**. **Tip:** Postage is determined by the accumulated weight of each page, plus any insert or graphic/insert messages included in the customer output.
Allow a campaign to force the document to add pages to fit the campaign, only if doing so does not exceed the marketing page limit set on the application object	Select **Up to maximum marketing pages**.
Allow a campaign to force the document to add pages to fit the campaign, regardless of any other limitations. Use this setting if this campaign must be included in the customer output	Select **Always (campaign must be sent)**.
Allow a campaign to force the document to add pages to fit the campaign, only if the campaign was intended to be placed only in content flow frames	Select **Content only**. **Note:** Do not use this setting if the campaigns can be placed in either whitespace frames or content flow frames.
Prevent the remaining campaign content from being included if the document cannot fit the teaser message for the campaign	Select **Exclude all if teaser not placed**.
Prevent the remaining campaign content from being included if additional pages would be necessary and adding them would cause the document to require additional postage	Select **Exclude all if additional postage needed**. **Tip:** Postage is determined by the accumulated weight of each page, plus any insert or graphic/insert messages included in the customer output.

4. From the Standard toolbar, click .

3.8 Adding a Campaign to an Application

When you build an application in the Design Manager Library, you must add the campaign to an application object.

To add a campaign to an application:

1. In Design Manager, from the Library, go to the **Application** heading and the **Campaigns** heading.
2. Under the **Campaign** heading, select the campaign you want to add to the application.
3. Click and drag the campaign over to the application to which you want to add the campaign.
4. Drop the campaign over the name of the application.
5. From the Standard toolbar, click .

For more information about building an application, see *Designing Customer Communications* in the Exstream Design and Production documentation.

Chapter 4: Tracking the Distribution of Messages and Campaigns

Tracking the messages and campaigns distributed to customers can help you make a stronger connection between the marketing materials you release and the customers you are targeting. When you track messages and campaigns, you can review the effectiveness of your campaigns, verify that customers received the intended information, and follow up on campaigns the customer has already received.

Applying tracking settings to messages and campaigns lets you do the following:

- Use a tracking database for storing all campaign activity.
- Create a delimited data file to load your CRM system's information.
- Control the number of times a campaign is sent, or the time period between mailings.
- Link campaigns to allow follow-up campaigns to be sent based on what was previously sent or a response.

To track campaigns, you must have licensed both the Campaign Management module and the Advanced Campaign Management module.

To track the distribution of campaigns or messages, you must complete the following tasks:

1. “Setting Up a Tracking Database” below
2. “Identifying the Type of Information to Track” on page 51
3. “Setting Up Variables to Identify Customers and Customer Information” on page 52
4. “Generating Tracking Information in an Engine Run” on page 53
5. “Generating a Marketing Results Report to Review Tracking Results” on page 69
6. “Using the Engine to Update the Information in a Tracking Database” on page 71
7. “Updating Customer Response Information in the Tracking Database” on page 73
8. “Using Tracking Information to Drive Future Campaign Releases” on page 73

4.1 Setting Up a Tracking Database

A tracking database stores the tracking information generated by an engine run. You can also use a tracking database to store any customer response information you might need for future runs. You must set up a tracking database so that it can be accessed by the Exstream engine at run time.

For more information about creating or updating a database for use with Exstream, see *System Administration* in the Exstream Design and Production documentation.

To set up the tracking database:

1. In Design Manager, from the Menu bar, select **Tools > Options**.

   The **Options** dialog box opens.

2. In the **Tracking database** box, click and select the database where you want to store and reuse tracking information. If you select an SBCS tracking database, you receive a warning message. Before you can finish setting up the tracking database, you must convert the SBCS tracking database to a DBCS tracking database.

3. Click **OK**.

   The **Select Tracking Database** dialog box opens.

4. From the **Select the type of database** area, select the database to which you want to connect. If the database name to which you want to connect is not listed, then you must add a DSN using the Windows ODBC Data Source Administrator.

5. If you are connecting to an Oracle, SQL Server, or DB2 database that contains multiple schemas, select a schema from the **Database Schema** drop-down list, or enter the schema name. Design Manager stores the 30 most recent database schemas.

6. Select the database login method. If you are unsure about which option to select, contact your system administrator.

To	Do this
Use the default user name and password to connect to the database	From the **Database authentication method** drop-down list, select **Default Exstream user and password**. For more information about the Exstream default user name and password, see *System Administration* in the Exstream Design and Production documentation.
Use the security built into the Windows network to connect to the database	From the **Database authentication method** drop-down list, select **Windows authentication**. The database server uses your Windows ID to authorize you.
Use a separate user name and password to connect to the database	a. From the **Database authentication method** drop-down list, select **Specify user and password**. The **User** and **Password** boxes become active. b. In the **User** box, enter a user name. c. In the **Password** box, enter a password.

7. If you want to save database password credentials, select the **Remember passwords** check box.

By default, the **Remember passwords** check box is not selected. If you save database password credentials and then clear the check box, Design Manager clears all previously saved passwords.

8. Click **OK**.

4.2 Identifying the Type of Information to Track

For each message and campaign, you can individually control the level of tracking information you want to review. This process lets you generate tracking information for only the messages and campaigns where you need the information. You can choose to set tracking on individual objects or on all messages and campaigns.

To identify the type of information to track:

1. For each message or campaign for which you need tracking information, do any of the following to define the type of information to track:

To track this information	Do this
A summary of information about a campaign, but not information about the customers who receive the campaign	a. In Design Manager, from the Library, drag a campaign to the Property Panel. b. Click the **Distribution** tab. c. In the **Customer tracking** list, select **Summary**.
A summary of information about a campaign and each of the customers who receive the campaign	a. In Design Manager, from the Library, drag a campaign to the Property Panel. b. Click the **Distribution** tab. c. In the **Customer tracking** list, select **By customer**.
A summary of information about a message, but not information about the customers who receive the message	a. In Design Manager, from the Library, drag a message to the Property Panel. b. Click the **Targeting** tab. c. In the **Customer tracking** list, select **Summary**.
A summary of information about message and each of the customers who receive the message	a. In Design Manager, from the Library, drag a message to the Property Panel. b. Click the **Targeting** tab. c. In the **Customer tracking** list, select **By customer**.

2. If you want to track only within a specific date range, do the following:

a. In the **Tracking period** box, click **Date Range**.

   The **Period** dialog box opens.

b. Clear the **No date range** check box.

c. In the **From** boxes, enter the year, month, and day of the beginning date for the date range.

d. In the **To** boxes, enter the year, month, and day of the ending date for the date range.

e. Click **OK**.

   The **Period** dialog box closes and the date range is applied to the **Tracking period** box.

3. From the Standard toolbar, click .

4.3 Setting Up Variables to Identify Customers and Customer Information

To create reports and track information in a campaign, you must select customer identification variables. These variables should be connected to the customer information you want to track.

To set up the variables needed to identify customer information for tracking:

1. In Design Manager, from the Library, drag the application to the Property Panel.
2. Click the **Basic** tab.
3. In the **Customer identification variables** area, enter the following:

To	Do this
Control and identify: • Customers in report files • Customer bookmarks for PDF output • Customer indicators for previews generated in the Exstream Viewer	In the **Customer ID for reporting** box, click and select a variable.
Control and identify customers in tracking files or databases	From the **Customer ID for tracking selection** box, click and select a variable.

4. From the Standard toolbar, click .

4.4 Generating Tracking Information in an Engine Run

Tracking information is generated during any engine run. Before you complete an engine run to generate tracking information, make sure that you have completed any settings on the messages or campaigns that would affect the information you are expecting to be returned during tracking.

If you have a tracking database that contains Unicode characters and you use both the SBCS and DBCS versions of the engine to read from that database, it is best to use two separate tracking databases because the SBCS version of the engine is not able to interpret Unicode data.

You can either generate tracking information in the form of a file, which can more easily be integrated with an external system, or generate the information directly into the tracking database. After you generate tracking information in the selected format, you can review and use the tracking information as needed.

For more information about setting up messages and campaigns to return the desired tracking information, see “Identifying the Type of Information to Track” on page 51.

To generate tracking information in an engine run:

1. In Design Manager, on the Standard toolbar, click .

   The **Run the Engine** dialog box opens.

2. Be sure the **Mode** check box is selected and the adjacent drop-down list is set to **Production**.

3. If you want to track information about campaigns/messages released to customers, select the **Track results** check box.

4. If you want to store the information needed to track campaign distribution, do one of the following:

<table>
<tr><th>To</th><th>Do this</th></tr>
<tr><td>Store the results in a text file

(This is recommended if you intend to later transfer tracking information to an external third party program, such as a CRM, or to a separate database.)

Tip: This option is also useful when testing, since the engine can generate plain text faster than database information.</td><td>a. From the Track results drop-down list, select File.
b. Select the Track file check box.
c. In the Track file drop-down list, enter the location of the file you want to use. The default name and location is:

<code>C:\Program Files\OpenText\Exstream\Exstream <version>\ExstreamTrack.dat</code>

For more information about how information is generated in a tracking file, see “How to Read a Tracking File” on the next page.</td></tr>
<tr><td>Store the results in the Exstream tracking database</td><td>From the Track results drop-down list, select Database.

For more information about how information is generated in a tracking database, see “How to Read a Tracking Database” on page 62.</td></tr>
</table>

5. If you are targeting campaigns based on previous campaigns, select the **Tracking Input** check box, and, from the adjacent drop-down list, select the location from which you want to extract information about previously-sent campaigns.

To	Do this
Read information from a tracking database and incorporate the previously sent campaign information into the current run	Select **Database**.
Ignore the tracking database, and remove any campaigns or messages that are set to generate tracking information from the customer output generated by this engine run (This method is useful if you want to hold on to the campaigns and messages you need to track until a run that utilizes tracking.)	Select **None, disable campaigns**.
Ignore the tracking database, but allow any campaigns or messages that are set to generate tracking information to be included in the customer output generated by this engine run (This method is useful if you do not require any tracking feedback for the run and you still want to distribute all campaigns and messages regardless of tracking settings in a non-tracking run.)	Select **None, enable campaigns**.
Ignore the tracking database and issue an error	Select **None, error**.

4.4.1 Engine Switches for Tracking

If you are working from the command line or if you use a control file during production, you can use the following engine switches to control tracking:

- `-TRACKIN=DB | ENABLE | DISABLE | ERROR`
- `-TRACKOUT=NONE | FILE | DB | FILE_DELAYED_LOAD`
- `-TRACKFILE=filename` (when `TRACKFILE=FILE` is supplied)
- `-TRACKDSN=DSN` (when `-TRACKIN=DB` or `-TRACKOUT=DB` is supplied)
- `-TRACKUID=userid`(when `-TRACKDSN` is supplied)
- `-TRACKPWD=password` (when `-TRACKDSN` is supplied)
- `-TRACKSCHEMA=schema name` (when `-TRACKDSN` is supplied)
- `-TRACKSTATUSINTERVAL=number of records to process before a status appears`
- `-TRACKCOMMITTINTERVAL=number of records for the engine to process before the records are committed`

  (default value is `1000`)
- `-TRACK_OVERRIDE_VERSION_CHECK`
- `-RUN=TRACKFILELOADTODBONLY`

For more information about using engine switches, see *Preparing Applications for Production* in the Exstream Design and Production documentation.

Tracking File Encoding for SBCS and DBCS Applications

When you create a tracking file to load in the engine, the engine automatically sets the encoding based on whether the tracking file is SBCS or DBCS. In an SBCS tracking file, the engine sets the encoding for the tracking file to ASCII for all platforms except for z/OS. On z/OS, the encoding setting for an SBCS tracking file is EBCDIC. In a DBCS tracking file, the engine sets the encoding for the tracking file to UTF-16 for all platforms.

4.4.2 How to Read a Tracking File

Unless otherwise specified, the tracking file is created by the engine in the following location:

`C:\Program Files\OpenText\Exstream\Exstream <version>`

This file contains information for the current run only.

For more information about how to specify the name and location of a tracking file, see "Generating Tracking Information in an Engine Run" on page 53.

The first number in the delimited line represents the object to which the delimited information applies.

Objects to which the delimited information applies

Record type	Information category
1	Application
2	Campaign with a numeric Customer ID for tracking
3	Campaign with non-numeric Customer ID for tracking
5	Campaign summary
6	Customer summary
7	Campaign message with a numeric value for the Customer ID for tracking option
8	Campaign message with a non-numeric Customer ID for tracking
9	Campaign message summary

The following sections explain how to read the delimited information within each record type.

Record Type 1: Tracking by Application

When you track an application, you see a line similar to the following in your tracking file:

`1,1,100,0,20050413:115410,0,0,300,20050413,0,999999999,1,1`

Record type 1 delimited item information

Delimited item	Description
1	The record type object. The remaining information in the delimited line is about this object. For applications, the value is `1`.
2	The application object identifier. OI numbers are automatically assigned by OpenText as the objects are created. You can find an object's OI and name in its database table. Do not alter the table.
3	The version number of the application. This applies if you use versioning and approval. The version number includes two implied decimal places. For example, version `1.02` appears as `102` in the database. If you do not use versioning or approval, the default object version number is `0`.
4	A Boolean value that represents whether the engine run was for production. You will see one of the following Boolean values: • `1`—On • `0`—Off
5	The date the tracking file was created, including the time, if specified

Record type 1 delimited item information, continued

Delimited item	Description
6	The type of run completed by the engine. You will see one of the following values: • 0—COMPOSE • 1—INSERTER • 2—SELECT • 3—DATA • 4—CONTENTS • 5—RESOURCES

Record type 1 delimited item information, continued

Delimited item	Description
7	The type of output definition language. You will see one of the following values: • 1—AFP • 2—PostScript • 3—Metacode • 4—PDF • 5—PCL • 6—IJPDS • 7—VPS • 8—RTF • 9—HTML • 10—DXF • 11—PPML • 12—TIFF • 13—3211 Line Data • 14—VIPP • 15—PowerPoint • 16—VDX • 17—MIBF • 18—XML Content • 19—Live Docs • 20—PDF-A • 21—EDGAR HTML • 22—Screen (TOP) • 23—XML (multi-channel) • 24—Word (2007/2010) • 26—HTML (email) • 27—ZPL • 28—Empower • 29—PDF/VT • 401—Report files
8	The resolution of the output
9	The date for which the application was packaged
10	The first customer processed. If no customer is specified, the value is `0`.
11	The last customer processed. The maximum ending customer number is `999,999,999`.

Record type 1 delimited item information, continued

Delimited item	Description
12	The number of customers skipped between each customer processed. If you do not specify a value, it is `1`. This means that all customers are processed.

Record Types 2 and 3: Tracking by Campaign

Depending on the format of the customer key, you can receive either type 2 or type 3 record types for each campaign in the application. If your customer key is numeric, your tracking file generates type 2 records, rather than type 3. If your customer key is non-numeric, your tracking file generates type 3 records, not type 2.

For each campaign, you see a line similar to the following in your tracking file:

```
3,Ellen Myers,7,100,1
```

Record type 2 and 3 delimited item information

Delimited item	Description
1	The record type object. The remaining information in the delimited line is about this object. If you are tracking campaigns, you receive one of the following values: • `2`—Campaign with a numeric Customer ID for tracking • `3`—Campaign with a non-numeric Customer ID for tracking
2	The Customer ID for tracking. This information comes from the customer identification variable.
3	The campaign object identifier. OI numbers are automatically assigned by Exstream as the objects are created. You can find an object's OI and name in its database table. Do not alter the table.
4	The campaign version number. This applies if you use versioning and approval. The version number includes two implied decimal places. For example, version `1.02` appears as `102` in the database. If you do not use versioning or approval, the default object version number is `0`.
5	A Boolean value that represents whether the campaign was used. You receive one of the following values: • `1`—Used • `0`—Not used

Record Type 5: Tracking by Campaign Summary

When you track customers who receive a campaign by summary, you see a line similar to the following in your tracking file:

```
5,1,100,13,13,13,Foreign ATM Card Transactions
```

The table below describes the information provided by each delimited item, in order.

Record type 5 delimited item information

Delimited item	Description
1	The record type object. The remaining information in the delimited line is about this object. For campaign summaries, the value is `5`.
2	The campaign object identifier. OI numbers are automatically assigned by Exstream as the objects are created. You can find an object's OI and name in its database table. Do not alter the table.
3	The campaign version number. This applies if you use versioning and approval. The version number includes two implied decimal places. For example, version `1.02` appears as `102` in the database. If you do not use versioning or approval, the default object version number is `0`.
4	The number of times this campaign qualified during the run **Note:** A message may qualify multiple times for each statement/customer. Therefore, the number of campaign messages that qualified can be higher than the number of times the message was placed into customer output.
5	The number of times this campaign was placed in output during the run
6	The number of customers to which this campaign was sent. If the same campaign is sent multiple times to a customer, the count increments by only one for that customer.
7	The name of the campaign

Record Type 6: Tracking by Customer Summary

When you track customers by summary, you see a line similar to the following in your tracking file:

```
6,13
```

The table below describes the information provided by each delimited item, in order.

Record type 6 delimited item information

Delimited item	Description
1	The record type object. The remaining information in the delimited line is about this object. For customer summaries, the value is `6`.
2	The number of customers who received the campaign

Record Types 7 and 8: Tracking by Campaign Message

Depending on the format of the customer key, you can receive either a Type 7 or Type 8 record type. If your customer key is numeric, your tracking file generates Type 7 records, rather than

Type 8. If your customer key is non-numeric, your tracking file generates Type 8 records, not Type 7. Keep in mind that there is no difference between the way messages in content frames and messages in whitespace frames are tracked.

When you track a message, you see a line similar to the following in your tracking file:

```
8,Thomas Reagan,2,100,1
```

The table below describes the information provided by each delimited item, in order.

Record type 7 and 8 delimited item information

Delimited item	Description
1	The record type object. The remaining information in the delimited line is about this object. If you are tracking campaign messages, you receive one of the following values: • `7`—Campaign message with a numeric value for the Customer ID for tracking option • `8`—Campaign message with a non-numeric value for the Customer ID for tracking
2	The Customer ID for tracking. This information comes from the customer identification variable.
3	The campaign message object identifier. OI numbers are automatically assigned by Exstream as the objects are created. You can find an object's OI and name in its database table. Do not alter the table.
4	The campaign message version number. This applies if you use versioning and approval. The version number includes two implied decimal places. For example, version `1.02` appears as `102`in the database. If you do not use versioning or approval, the default object version number is `0`.
5	A Boolean value that represents whether the message was used. You receive one of the following values: • `1`—Used • `2`—Not used

Record Type 9: Tracking by Campaign Message Summary

When you track campaign messages by summary, you see a line similar to the following in your tracking file:

```
9,2,100,13,13,13,Commitment
```

The table below describes the information provided by each delimited item, in order.

Record type 9 delimited item information

Delimited item	Description
1	The record type object. The remaining information in the delimited line is about this object. For campaign message summaries, the value is `5`.
2	The campaign object identifier. OI numbers are automatically assigned by Exstream as the objects are created. You can find an object's OI and name in its database table. Do not alter the table.
3	The campaign message version number. This applies if you use versioning and approval. The version number includes two implied decimal places. For example, version `1.02` appears as `102` in the database. If you do not use versioning or approval, the default object version number is `0`.
4	The number of times this campaign message qualified during the run **Note:** A message may qualify multiple times for each statement/customer. Therefore, the number of campaign messages that qualified can be higher than the number of times the message was placed in output.
5	The number of times this campaign message was placed in output during the run
6	The number of customers to which this campaign message was sent. If the same campaign is sent multiple times to a customer, the count increments by only one for that customer.
7	The name of the campaign message

4.4.3 How to Read a Tracking Database

To effectively use a tracking database, you need to know the types of information it stores. It is recommended that you do not alter the database, unless otherwise instructed. The following tables provide information about the tables within the tracking database and the type of information stored within each column of each table.

CAMPAIGN_SUM

CAMPAIGN_SUM keeps records for each campaign in each run. This table is not normalized. The data is an aggregate of the data in CUST_CAMP_I and CUST_CAMP_S.

The primary key is a combination of RUNID and CAMPAIGNID.

CAMPAIGN_SUM table columns

Column	Description
RUNID	The ID number of the engine run. Multiples of the same number show information for separate campaigns within the run.

CAMPAIGN_SUM table columns, continued

Column	Description
CAMPAIGNID	The ID number of each campaign in the design database **Tip:** If you need to find the name of the campaign that matches the ID in the CAMPAIGNID, you can use the CAMPTRACK table.
VERSION	The campaign version number. This applies if you use versioning and approval. The version number includes two implied decimal places. For example, version `1.02` appears as `102` in the database. If you do not use versioning or approval, the default object version number is `0`.
QUALIFIED	The number of times this campaign message qualified during the run **Note:** A campaign may qualify multiple times for each statement/customer. Therefore, the number of times a campaign qualified can be higher than the number of times the campaign was sent.
SENT	The number of campaigns sent
RESPONSES	The number of customers who have responded to the campaign
SENT_NEW	The number of customers who were sent the campaign for the first time on the run
CUSTOMERSSENT	The number of customer who were sent this campaign on the run

CAMPTRACK

CAMPTRACK contains only the identifying number, OI, and name for all campaigns that have been used in a run and tracked in the tracking database.

CAMPTRACK table columns

Column	Description
OI	The object identifier, the campaign number assigned by Exstream
NAME	The name you gave the campaign

CUST_CAMP_I and CUST_CAMP_S

CUST_CAMP_I and CUST_CAMP_S contain information for each customer for each campaign they were sent. Depending on the Customer ID for tracking, look at one of the following tables in the database:

- If the customer ID for tracking is numeric, CUST_CAMP_I is used.
- If the customer ID for tracking is non-numeric, CUST_CAMP_S is used.

The primary key for both is a combination of CUSTID and CAMPAIGNID.

CUST_CAMP_I and CUST_CAMP_S table columns

Column	Description
CUSTID	The customer identifier as specified by Customer ID for tracking
CAMPAIGNID	The ID number of each campaign in the design database **Tip:** If you need to find the name of the campaign that matches the ID in the CAMPAIGNID, you can use the CAMPTRACK table.
TOTAL	The total number of times the customer was sent the campaign
RUNID 1 through RUNID 10	The RUNID of the last 10 times the customer was sent this campaign, starting with the most recent. When a new run is made for a customer, all the RUNID values are shifted one field.
RESPONSES	The number of responses to the campaign
NOCONTACT	A Boolean value that represents whether the customer has requested not to be contacted. You can enter one of the following Boolean values: • `1`—Customer has requested no contact. • `0`—Customer is okay. The default is `0`.

CUST_MSG_I and CUST_MSG_S

CUST_MSG_I and CUST_MSG_S are used when you enable tracking on the message in Designer.

For more information about message tracking, see “Identifying the Type of Information to Track” on page 51.

CUST_MSG_I and CUST_MSG_S contain information for each message sent to each customer. CUST_MSG_I is used if the Customer ID for tracking is numeric. CUST_MSG_S is used if the Customer ID for tracking is nonnumeric.

The primary key is a combination of CUSTID and MESSAGEID.

CUST_MSG_I and CUST_MSG_S table columns

Column	Description
CUSTID	Customer identifier as specified by **Customer ID for tracking** on the **Basic** tab of the application properties.
MESSAGEID	The ID number of each message in the design database **Tip:** You can use the MSGTRACK table to find the name of the campaign that matches the MESSAGEID.

CUST_MSG_I and CUST_MSG_S table columns, continued

Column	Description
TOTAL	The total number of times the customer was sent this message
RUNID 1–10	The RUNIDs of the last 10 times the customer was sent this message, starting with the most recent When a new run is made for a customer, all the RUNIDs are shifted one field.
RESPONSES	The number of responses
NOCONTACT	Set if the customer has requested never to be contacted. Since the default is `0`, enter a `1` if the customer has requested no contact.

MSG_SUM

MSG_SUM keeps records for each message in each run.

The primary key is a combination of RUNID and MESSAGEID.

MSG_SUM table columns

Column	Description
RUNID	ID number of the engine run. Multiples of the same number show information for separate campaigns within the run.
MESSAGEID	The ID number of each message in the design database **Tip:** You can use the MSGTRACK table to find the name of the campaign that matches the MESSAGEID.
VERSION	Version number of the message. This applies if you use versioning and approval. The version number includes two implied decimal places. For example, version `1.02` appears as `102` in the database. If you do not use versioning or approval, the default object version number is `0`.
QUALIFIED	Number of customers who qualified for this message on this run
SENT	Number of messages sent
RESPONSES	Number of customers who have responded to the message
SENT_NEW	Number of customers who were sent the message for the first time on the run
CUSTOMERSSENT	Number of customer who were sent the message on the run

MSGTRACK

MSGTRACK contains only the identifying number, `OI`, and `Name` for all messages that have been used in a run and tracked in the tracking database.

MSGTRACK table columns

Column	Description
OI	The object identifier, the campaign message number assigned by Exstream
NAME	The name you gave the message

NFO

NFO contains the most recent RUNID. It is updated by the engine when it needs a new RUNID.

RUNTBL

RUNTBL contains general information about each run.

RUNTBL table columns

Column	Description
RUNID	The number of times an application has been run
APPLICATIONID	The ID number of each application in the design database
APP_VERSION	The application version number. This applies if you use versioning and approval. The version number includes two implied decimal places. For example, version `1.02` appears as `102` in the database. If you do not use versioning or approval, the default object version number is `0`.
PRODUCTION	A Boolean value that represents whether the engine run was for production. You will see one of the following Boolean values: • `1`—Production was on • `0`—Production was off
DATESTAMP	The current date of the run

RUNTBL table columns, continued

Column	Description
RUN_TYPE	The type of run completed by the engine. You will see one of the following values: • 0—COMPOSE • 1—INSERTER • 2—SELECT • 3—DATA • 4—CONTENTS • 5—RESOURCES

RUNTBL table columns, continued

Column	Description
PDL_TYPE	The type of output definition language. You will see one of the following values: • 1—AFP • 2—PostScript • 3—Metacode • 4—PDF • 5—PCL • 6—IJPDS • 7—VPS • 8—RTF • 9—HTML • 10—DXF • 11—PPML • 12—TIFF • 13—3211 Line Data • 14—VIPP • 15—PowerPoint • 16—VDX • 17—MIBF • 18—XML Content • 19—Live Docs • 20—PDF-A • 21—EDGAR HTML • 22—Screen (TOP) • 23—XML (multi-channel) • 24—Word (2007/2010) • 26—HTML (email) • 27—ZPL • 28—Empower • 29—PDF/VT • 401—Report files
RESOLUTION	The output resolution
EFF_DATE	The effective date of the run
CUST_START	The customer ID for the first customer processed
CUST_END	The customer ID for the last customer processed

RUNTBL table columns, continued

Column	Description
SYS_ID	The system ID
PROCESSED	The number of customers processed

TVERSION

This table contains version information for the tracking database. CVERSION is the database version for the tracking database, and BUNICODE indicates whether the tracking database can be used with SBCS or DBCS versions of the engine. Design Manager can work with both SBCS and DBCS tracking databases, but the SBCS engine requires an SBCS tracking database, and the DBCS engine requires a DBCS tracking database.

4.5 Generating a Marketing Results Report to Review Tracking Results

After you have gone into production, you can use your tracking results to analyze the distribution of your campaigns and messages. You can view the number of times the application was run and how many copies of any campaign were included. You can also view the number of customers who have responded.

When you click **Go**, you are provided with statistics about the campaign(s) or message(s) you selected over the period you selected. You can see how many of your customers qualified and how many received the information.

The marketing results report returns the final delivery and distribution counts for campaigns and messages based on the tracking information generated at engine runtime. The marketing results report is thus different from the campaign test, which tests the predicted distribution of campaigns and messages based on current settings in Exstream.

For more information about running a campaign test, see "Running a Campaign Test to See What Campaigns and Messages a Customer Will Receive" on page 41.

To generate a marketing results report, do any of the following:

To	Do this
Run the report on a specific campaign	1. In Design Manager, from the Menu bar, select **Tools > Marketing Results Report > Selected Campaign**. The **Campaign Analysis** dialog box opens. 2. In the **Campaign** box, click and select a campaign. 3. In the **Application** box, click and select the application containing the campaign you want to test. 4. From the **Reporting** drop-down list, select the level of reporting information you want returned by the report. 5. If you want to test the campaign only within a specific date range, click in the **Date range** box and add the needed dates. 6. Click **Go**. The report is generated and the report information appears in the **Summary** area.
Run the report on all campaigns	1. In Design Manager, from the Menu bar, select **Tools > Marketing Results Report > All Campaigns**. 2. In the **Application** box, click and select the application containing the campaign you want to test. 3. From the **Reporting** drop-down list, select the level of reporting information you want returned by the report. 4. If you want to test the campaign only within a specific date range, click in the **Date range** box and add the needed dates. 5. Click **Go**. The report is generated and the report information appears in the **Summary** area.
Run the report on a specific message	1. In Design Manager, from the Menu bar, select **Tools > Marketing Results Report > Selected Message**. The **Message Analysis** dialog box opens. 2. In the **Message** box, click and select a message. 3. In the **Application** box, click and select the application containing the message you want to test. 4. From the **Reporting** drop-down list, select the level of reporting information you want returned by the report. 5. If you want to test the campaign only within a specific date range, click in the **Date range** box and add the needed dates. 6. Click **Go**. The report is generated and the report information appears in the **Summary** area.

To	Do this
Run the report on all messages	1. In Design Manager, from the Menu bar, select **Tools > Marketing Results Report > All Messages**. 2. In the **Application** box, click and select the application containing the messages you want to test. 3. From the **Reporting** drop-down list, select the level of reporting information you want returned by the report. 4. If you want to test the campaign only within a specific date range, click in the **Date range** box and add the needed dates. 5. Click **Go**. The report is generated and the report information appears in the **Summary** area.

4.6 Using the Engine to Update the Information in a Tracking Database

You can use the engine to update information in a tracking database by using a series of engine switches and commands. After the engine writes a tracking file, the engine transfers the updated information to a tracking file, then to a tracking database. Using this method with the engine is a quick way to write large amounts of data to the database.

You can use any operating system to which your tracking database has connectivity, including the following:

- Windows
- UNIX
- z/OS

4.6.1 Using Engine Switches to Update Tracking Information

Because the engine performs the actions necessary to update tracking information in a database, you must use a series of engine switches to define how you want the engine to perform the update. You can use the command prompt in Windows or UNIX to either list these engine switches directly, or to reference a control file in which you store the engine switches and their subsequent arguments. You can also use these engine switches to update tracking information on z/OS.

1. Open a command prompt.
2. Enter the name of the control file that contains your tracking engine switches, or list each engine switch and its argument on a separate line.
3. Use the following engine switches as needed:

Engine Switches needed for updating tracking information on Windows and UNIX

Engine Switch	Description
`-TRACKFILE=(name of text output file, or name of XML output file)` On z/OS, use `–TRACKFILENAME=`	Identify the name of the text file or XML file from which you want to extract information. This switch is required. The default is `tracking.dat`. For z/OS, the default is `DD:TRACKDAT`.
`-TRACKDSN=(Tracking database DSN name)`	Identify the name of the database to which you want to write the information from the file. This switch is required. The default is `EXTRACK`.
`-TRACKUID=(Username for database)`	Identify the user name needed to access the database, if needed. The default is a null value.
`-TRACKPWD=(User password for database)`	Identify the password needed to access the database, if needed. The default is a null value.
`-TRACKSCHEMA=(name of the engine tracking database schema or owner)`	Identify the schema needed to access the database, if needed. The default is a null value.
`–TRACKSTATUSINTERVAL=(number of records before status appears)`	Identify the number of records you want the engine to process before a status appears. The default is `0`.
`-TRACKCOMMITINTERVAL=(number of records between each commit)` **Tip:** To improve the performance of the engine, try using a larger `TRACKCOMMITINTERVAL` for less frequent transaction commits. However, trying to do too much in one transaction might exceed the capacity of your database server.	Identify the number of records you want the engine to process before the records are committed. The default is `1000`.

For more information about using engine switches, see *Preparing Applications for Production* in the Exstream Design and Production documentation.

4.7 Updating Customer Response Information in the Tracking Database

In addition to basing campaign distribution on previously-sent campaigns, you can also base campaign distribution on whether customers have responded to a previously-sent campaign. For example, suppose that you send out a survey to customers. You can track whether a customer has mailed in a response by updating information in the tracking database.

You will likely need to use a third-party program to transfer customer information to the tracking database. The open API lets Exstream interface with a third-party program database, such as a CRM database, as long as the program's database is from a supported platform.

Service representatives can write response information to text files, or, if customer response information is read using input devices such as barcode scanners, you can transfer the customer information to a text file and transfer the customer information to the tracking database. In order for tracking information to be used by the engine for future campaign releases, all customer response information must be available from the tracking database.

For more information about using the Database Administrator utility and supported database platforms, see *System Administration* in the Exstream Design and Production documentation.

For more information about which tables to use when manually tracking responses, see "How to Read a Tracking Database" on page 62.

4.8 Using Tracking Information to Drive Future Campaign Releases

After you have generated tracking information, and, optionally, after you have incorporated customer feedback information into the tracking database, you can then use the information in the tracking database to control how you send other campaigns to customers in the future. You can respond to customers based on whether a customer responds to, ignores, or simply receives a previous campaign, by sending a campaign containing related information or response information in your next release. For example, suppose that you track whether customers respond to mail in coupons you include regularly in your application. You could track customer responses through the tracking module and, depending on whether those customers replied, send a thank-you notice in response to those customers who responded.

To send a campaign to customer based on a previously-sent campaign:

1. In Design Manager, from the Library, drag the campaign to the Property Panel.
2. Click the **Targeting** tab.

3. In the **Send to customer based on previous campaign** list, select one of the following:

To	Do this
Send the current campaign based on another campaign that was previously sent to the customer, regardless of the customer response	Select **If customer previously sent**.
Send the current campaign based on another campaign that was previously sent to the customer, to which the customer responded	Select **If customer responded to**.
Send the current campaign based on another campaign that was previously sent to the customer, to which the customer did not respond	Select **If customer did not respond to**.

4. In the **Previous campaign** box, click  and select the previously-sent campaign.
5. In the **Action** box, select one of the following actions you want to perform if the customer received the previous campaign.

To	Do this
Send the current campaign as soon as possible after the customer has received the previous campaign	Select **Send immediately**.
Send the current campaign only after the previous campaign has been sent to the customer a certain number of times	a. Select **Send after previous sent number of times**. b. In the adjacent box, enter the number of times the previous campaign should be sent to the customer before the current campaign is sent.
Send the current campaign only after a certain number of days since the previous campaign was sent	a. Select **Send number of days after previous sent**. b. In the adjacent box, enter the number of days to wait after the customer receives the previous campaign before sending the current campaign.

6. Click the **Distribution** tab.
7. To use tracking information to control how frequently this campaign is distributed to customers, complete any of the following tasks as needed:

To	Do this
Limit the number of times an individual customer can receive this campaign	a. Select the **Limit total copies of this campaign sent to a customer** check box. b. In the adjacent box, enter the number of copies. c. If you want to specify how frequently a customer can receive a campaign within the set tracking period, in the **Minimum days between each time this is set to the same customer** box, enter the number of days to wait before this campaign can be sent again. **Note:** This is available only when tracking by customer.
Limit the collective total of times this campaign can be sent to all customers	a. Select the **Limit total copies of this campaign sent to all customers** check box. b. In the adjacent box, enter the number of copies. **Tip:** This option can be useful if the campaign includes offers with limited quantities (such as coupons or pre-printed insert messages).
Limit the number of times this campaign can be included during a single Engine run	a. Select the **Limit total copies of this campaign sent to all customers** check box. b. In the adjacent box, enter the number of copies.
Prevent a customer from receiving the campaign after they have sent a response	Select the **Do not send to customers after response** check box. **Note:** This is available only when tracking by customer.

8. From the Menu bar, select **File > Save**.

Chapter 5: Packaging Messages and Campaigns

Packaging an application and running the engine are the final steps to producing output. During the packaging process, you identify which objects are included in the package file, define other production controls (such as targeting settings), and generate production reports. This chapter provides information to help set up the packages files to incorporate marketing changes into a production run.

5.1 Packaging to Include Marketing Changes

The first time you release an application, or if changes have been made at the application level, you must create a full package file. However, if an application has been packaged previously, and if no changes have been made at the application level, you have the option to create several different types of sub-package files to update individual elements within the application, such documents or campaigns.

For example, suppose you are making changes to a campaign that will be released in a pre-existing application where nothing else has changed since the last time it was released to customers. You can create a sub-package file of the campaign, and include the sub-package file with the pre-existing application package file for the next production cycle. When the sub-package file is read into the application information, the new information for the campaign replaces the existing information for that campaign in the application package file, and the campaign is then updated in the customer output.

Depending on your needs, you can create the following package and sub-package files through Exstream:

Package and sub-package files to use for marketing changes

For these types of changes	Do this
• The application is being packaged for the first time • Changes have been made to the application object, such as changes to priorities or changes to how the application handles marketing pages • New campaigns have been added to the application	Create a full application package file.

Package and sub-package files to use for marketing changes, continued

For these types of changes	Do this
• New messages have been added to the document • Changes have been made to document messages • Changes have been made to the frames that accept messages	Create a document sub-package file. Depending on the extent of the changes, you can do one of the following: • If changes affect multiple documents in the application, create a complete document sub-package file. • If changes affect a single document in the application, create a document sub-package file for only that document.
• New messages have been added to existing campaigns • Changes have been made to existing messages within campaigns • Changes have been made to existing campaigns	Create a campaign sub-package file. Depending on the extent of the changes, you can do one of the following: • If changes affect multiple campaigns in the application, create a complete campaign sub-package file. • If changes affect a single campaign in the application, create a campaign sub-package file for a single campaign.

There is no practical limit to the number of sub-package files that you can use. Sub-package files are read into the engine in order they are created. Existing objects are replaced with objects from the sub-package file and new objects are added to the end of any lists.

For more information about creating a package file or sub-package file, see *Preparing Applications for Production* in the Exstream Design and Production documentation.