Email Messages

Overview

While email messages can be designed using HTML, they lack many features of webpages such as Javascript and CSS. Therefore, to create a responsive email, since CSS cannot be used to style a range of divs and other elements such as in webpages, the email message has to be designed with old school tables.

Tables

Tables allow for the organisation and design of data displayed in an email using columns and rows. The size and style of the columns and rows can be defined using inline styles of padding, cell spacing, height, width, etc.

Tables are created using tags:

* <table> - starts table
* <tr> - new table row
* <td> - new table cell (column in row)

For example:

<table>

<tr>

<td> row 1, column 1 </td>

<td> row 1, column 2 </td>

</tr>

<tr>

<td> row 2, column 1 </td>

<td> row 2, column 2 </td>

</tr>

</table>

Images

There are two different ways to add images to emails:

* Enclosing
* Embedding

**Enclosing** adds the image file as an attachment to the email and it does not affect the email structure. The main issue with enclosing is the maximum email size may limit the number of images which can be attached. Typical max email sizes are 25mb.

**Embedding** adds images into the email message structure and therefore will require formatting. The main issue with embedded images in emails, is many email clients (such as outlook) are setup not to display images by default, meaning there is not guarantee images will be displayed to all clients. When embedding images there are three different ways to attach the image to the message:

* CID / MIME Object
* Inline
* Linked

MIME (Multipurpose Internet Mail Extensions) is a standard designed to allow different file types to be transmitted over the SMTP protocol, allowing several content types (HTML, text) to be sent in a single message.

**CID** (Content ID) can be used to reference an image already attached to the email. It is a common way of adding images to emails, however it does have the downside of increase email message size and can cause issues with web-based clients. To add using CID, simply add the cid ref in the image tag:

<img src="cid:image-cid" alt="img" />

**Inline embedding** is where the image data is converted into a base64 string and embedded directly into the email message. It can be great for small images and those whos filetype is not supported by email services, such as .svg logos. However, it is fully blocked by outlook and most online web services, so it is not recommended. To add an inline image, base64 encode the image and add in an img tag:

<img src="data:image/png;base64, <base64string> " alt="img" />

**Linked** images are a common way of displaying images in emails, while hosting them on an external server, such as the website CDN. Images are embedded by their URL refrerence in an img tag. Ensure the URI is absolute, not relative to the email domain, else many email clients will download the image correctly.

<img src="<image-url> " alt="img" />

While it is convient to link images in emails there are several aspects to be aware of:

* The email image is dependant on the image host
* Possible negative affect on spam rate
* Can still be default blocked by email clients such as outlook

Additional notes on images in emails:

* images should have their meta data removed before hosting or attaching
* image formats should keep to .png or lossless to keep images crisp
* while animated GIFs can be used, outlook will only display the first image
* alt text should always be added to images, since if the image is not rendered the text will still be displayed

Email Testing

To check images will be rendered correctly across email services, there are several different services which can bulk send emails for preview:

<https://mailtrap.io/pricing>