



The Ultimate Guide to AMP



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The Ultimate Guide to AMP

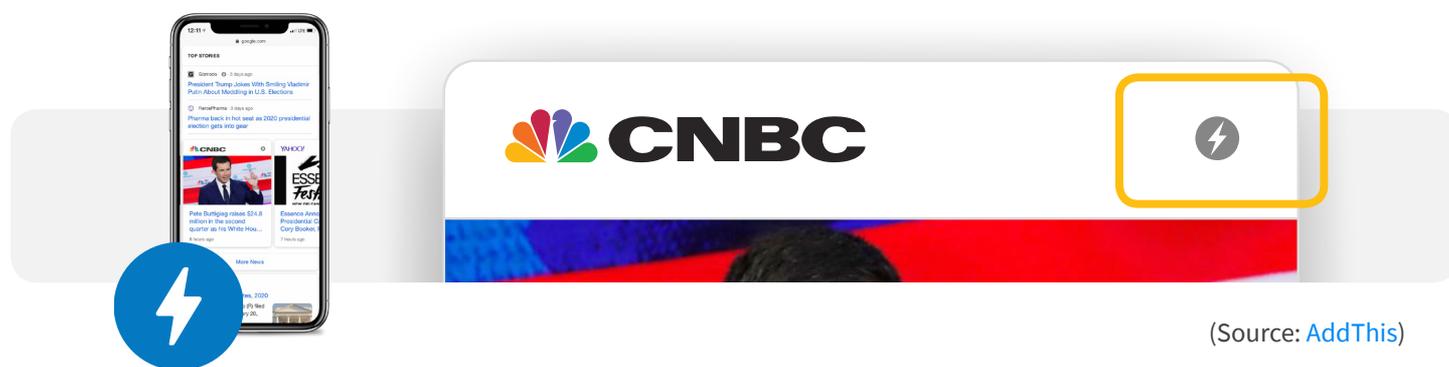
Introduction

How long will you wait for a web page to load?

If you're like a lot of mobile users – [40%](#), according to Kissmetrics – you'll give up after just three seconds. Slow page-load speeds are proven to make or break your website.

Good news, there's a solution! The [AMP Project](#).

You might have seen AMP pages displayed in the search results, indicated by a little lightning bolt symbol:



Curious about what they are and how to use them to improve your website?

This e-book serves as a comprehensive guide to help you:

- 1** Learn what AMP is
- 2** Get started setting up your AMP site
- 3** Navigate how to use AMP for WordPress
- 4** Customize your AMP page with components
- 5** Get started with AMP for Email

What is AMP?



A Brief History

Spearheaded by Google in 2016, the [AMP Project](#) is an open-source initiative with the goal of improving the web-browsing experience by ensuring pages load quickly and reliably. Since its launch, AMP has had a far-reaching, [positive effect](#) on the mobile web-user experience and engagement.

And while the initiative focused on optimizing mobile web pages at first, it's since expanded to improving web pages on desktop as well.

How it Works

Essentially, AMP is an alternative framework to HTML that strips away the code making a website robust on a desktop, but is unnecessary in a mobile environment. This makes any website built using AMP mobile-friendly, lightweight, and able to load much faster (less than half a second on average).

If you already have an HTML website created, you can build AMP versions of existing pages and pair them together. Or, if you're starting from scratch, you also can create an AMP-first website not needing to be paired with a non-AMP site. Creating an AMP site helps your website meet the criteria to be featured and ranked well in search engines.

Here's [how AMP works](#) under the hood.



AMP HTML

This is an alternative HTML framework with some restrictions to ensure reliable page performance. It includes custom elements, called [AMP components](#), for building rich content beyond the basics to customize your site.

AMP JavaScript Library

AMP JavaScript manages resource handling and asynchronous loading. To prevent delays in rendering pages, the AMP JavaScript Library includes custom elements that may have JavaScript at its core, but are designed to ensure they don't degrade page performance. Currently, third-party JavaScript is permitted with AMP on an [origin trial basis](#) through amp-script.

The AMP Cache

An AMP Cache stores a valid AMP page and serves its content via a proxy server near the user instead of embedding it on your site. AMP starts loading a page before a user even clicks on it. If they do, most of the content seen loads almost instantaneously.

For instance, previously, users would see <https://google.com/amp/> at the beginning of their URLs when they clicked on your AMP site. However, companies like [Cloudflare](#) provide AMP Real URL to ensure your users continue to see your domain in the web browser when viewing your page. After you add Cloudflare to your site, it's as simple as toggling the feature in their dashboard:



After a short delay, your users will see your actual URL when visiting your page from Google, potentially lowering your bounce rate.

Now that you know how it works, there are several additional benefits to implementing AMP.

The Benefits of AMP

As excited as you and your team are about AMP, you likely have more people to convince before getting started. The following list provides additional compelling reasons to help win over key stakeholders.

Save Time and Money

Just a [one-second delay](#) in page load speed translates into:

- 11% fewer page views
- 16% decrease in customer satisfaction
- 7% loss in site conversions

Here's how that translates monetarily for major businesses.

COMPANY	LOAD TIME CHANGE / RESULTS	IMPACT
	0.1 second 1% decrease in sales	\$1.3B / year
	1 second decrease 2% increase in conversions	\$274M / year
	0.4 second decrease 9% increase in traffic	600M visitors per month

(Source: [Stone Temple](#))

Optimize Your Search Rankings

More than half of all website traffic across the world is generated through mobile phones. Search rankings are based on a number of factors including speed, mobile-friendliness, user experience, relevance, and more. These features are hard to achieve, but if you build your site with AMP, it becomes much easier.

So, what does that mean? If you build using AMP, the framework enforces a lot of best practices that might increase traffic to your site and search engine rankings.

Decrease Bounce Rate and Increase Engagement

Even if you have the highest quality content on your site, if users are unable to access it easily, they'll find what they need elsewhere.

Website publishers like Renovation Brands recognized this as a potential issue and implemented AMP. Once they did, the company saw a 30% decrease in bounce rate.

And as an added bonus, with less time spent waiting for pages to load, AMP shows double time spent on a page and an increase in web-session length. What does that mean for websites? Overall higher engagement for your content and higher visibility for the ads on your site.

Increase Conversion Rates

Almost half – 47% – of people say they expect a page to load in two seconds or less. Depending on how fast your website loads, that can be the difference in whether or not a visitor does what you want them to do on your site.

In fact, data shows ecommerce companies taking the time to improve their page load speeds saw a direct correlation in increased revenue.

How to Get Started

Congratulations! By now, you know how AMP works and have convinced your bosses to support this venture.

Here's a quick-start tutorial on how to create your first AMP HTML page and prepare it for publication and distribution.

Boilerplate Code

Use this [boilerplate code](#) as a template to get started. Save it as a file with an .html extension.

There are several pieces of [required markup](#) to add to the <head> to make it an AMP page.

```
<!doctype html>
<html amp lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width,minimum-scale=1">
    <meta name="description" content="This is the AMP Boilerplate.">
    <link rel="preload" as="script" href="https://cdn.ampproject.org/v0.js">
    <script async src="https://cdn.ampproject.org/v0.js"></script>
    <!-- Import other AMP Extensions here -->
    <style amp-custom>
      /* Add your styles here */
    </style>
    <style amp-boilerplate>body{-webkit-animation:-amp-start 8s steps(1,end)
0s 1 normal both;-moz-animation:-amp-start 8s steps(1,end) 0s 1 normal
both;-ms-animation:-amp-start 8s steps(1,end) 0s 1 normal both;animation:-
amp-start 8s steps(1,end) 0s 1 normal both}@-webkit-keyframes -amp-
start{from{visibility:hidden}to{visibility:visible}}@-moz-keyframes
-amp-start{from{visibility:hidden}to{visibility:visible}}@-ms-keyframes
-amp-start{from{visibility:hidden}to{visibility:visible}}@-o-keyframes
-amp-start{from{visibility:hidden}to{visibility:visible}}@keyframes -amp-
start{from{visibility:hidden}to{visibility:visible}}</style><noscript><style
amp-boilerplate>body{-webkit-animation:none;-moz-animation:none;-ms-
animation:none;animation:none}</style></noscript>

    <link rel="canonical" href=".">
    <title>My AMP Page</title>
  </head>
  <body>
    <h1>Hello World</h1>
  </body>
</html>
```

(Source: [AMP](#))

Google also strongly recommends using HTTPS protocol since many AMP features require it, including iframes, videos, etc. While it's not required for basic AMP page components, it helps fortify your site's security and users' privacy.

Add Media

As noted earlier, there are some specialized tags you'll need to use for AMP HTML. This includes new tags for [media](#), including images. To include an image, replace the `` tag with the `<amp-img>` tag.

```
<amp-img src="welcome.jpg" alt="Welcome" height="400" width="800"></amp-img>
```

(Source: [AMP](#))

These new tags help AMP understand the page layout before the assets load. They also help prioritize which resources should load first.

Styling Your Page

Just like any web page, use CSS properties to add styling to your AMP page and the elements within it.

There are [some restrictions](#), however. You'll can only use one embedded style sheet and inline styles. This ensures – you guessed it – that the page loads quickly and eliminates the continuous recalling of an extensive external stylesheet.

Additionally, instead of laying out elements using CSS, all AMP elements have an explicit size set from the beginning. There's more detailed documentation on how to [change the layout](#) on the AMP site.

```
<style amp-custom>
  /* any custom style goes here */
  body {
    background-color: white;
  }
  amp-img {
    background-color: gray;
    border: 1px solid black;
  }
</style>
```

(Source: [AMP](#))

Get Your Page Ready for Search

If you have a regular HTML page and an AMP page you want to “pair” together in search results, add `<link>` tags in the `<head>` of each version of the page.

Add the following to the non-AMP page:

```
<link rel="amphtml" href="https://www.example.com/url/to/amp/document.html">
```

And this to the AMP page:

```
<link rel="canonical" href="https://www.example.com/url/to/full/document.html">
```

(Source: [AMP](#))

If the AMP page is the only version, still put the canonical link in the `<head>` and point it to itself in search results.

Make Sure it Works

If you’re developing in Chrome, validate your AMP page and make sure it’s compliant with AMP requirements by following these steps:

- 1 Open your page in your browser.
- 2 Add “#development=1” to the end of the URL.
- 3 Check for errors using the [Chrome DevTools console](#).

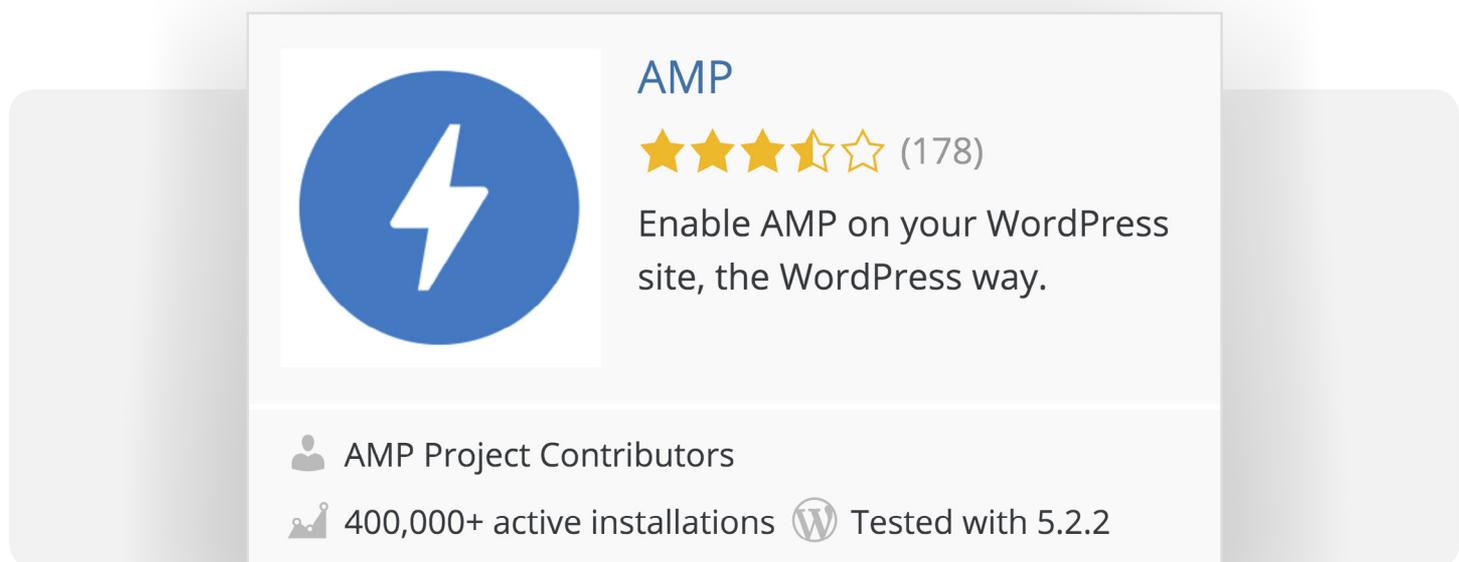
Google provides extensive documentation on how to [validate and debug your page](#). If you do receive validation errors, you’ll see details on what the issues are and how to fix them. When your AMP page is error-free, it’s ready for publishing!

If your site isn’t hosted on WordPress and you’re interested in converting your HTML pages to AMP, Google offers a [tutorial](#) to take you through the process.

AMP for WordPress

If you do have a WordPress site (as a [third](#) of all internet websites do), use the [AMP plugin](#) to automate much of this process and make sure your pages are AMP compliant.

Once the plugin is set up, your content is automatically validated on the backend. The plugin also helps the process of generating AMP content in WordPress.



(Source: [AMP for WordPress](#))

Part of the necessary conversions are done automatically, making content rendering a smoother process.

If some assets or elements get screened as incompatible, you'll get detailed information about which components are flagged and how to take action to address them.

Customize Your Page

When you're ready to go beyond the basics, there are a number of customizable features called [AMP components](#) to add to enhance the content of your page. Check out AMP's [tutorial](#) for an introduction on how to incorporate them into your site.

The following components are a few ways to make your site stand out.

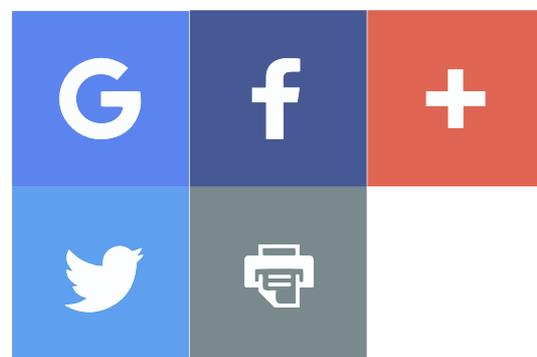
Accordion

The [AMP-accordion component](#) provides your visitors a way to display collapsible and expandable content sections.



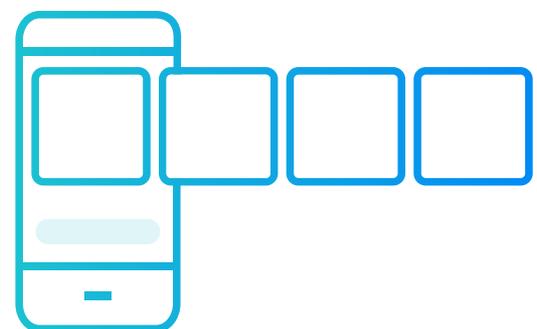
AddThis

Install [AddThis Share Buttons](#) on your AMP page directly, or install the [AddThis Share Buttons plugin](#) on your WordPress site. It's compatible with the AMP plugin for WordPress and makes it easier to share content on your AMP website to your social networks.



Carousel

The AMP [carousel component](#) displays multiple images horizontally offering various layouts to choose.



Fonts

The AMP [font component](#) allows you to include custom fonts in the body or header of your page.

```
<amp;font
  layout="nodisplay"
  font-family="My Font"
  timeout="3000"
  on-error-remove-class="my-font-loading"
  on-error-add-class="my-font-missing"></amp;font>
<amp;font
  layout="nodisplay"
  font-family="My Other Font"
  timeout="1000"
  on-load-add-class="my-other-font-loaded"
  on-load-remove-class="my-other-font-loading"></amp;font>
```

(Source: [AMP](#))



AMP for Email

What is AMP for Email?

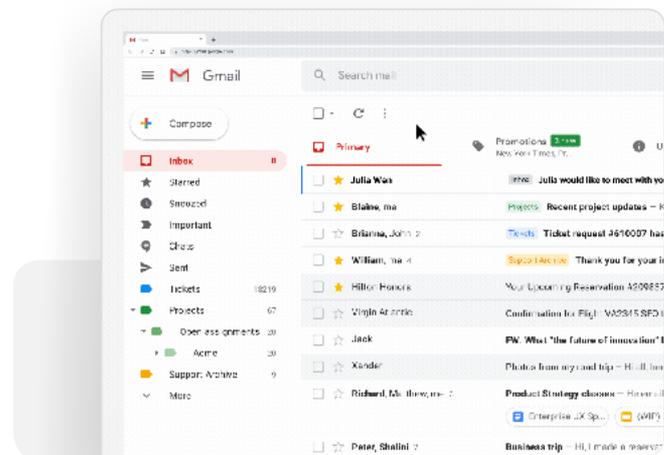
AMP for Email was officially released on March 26, 2019 and is a modified version of the AMP framework and rendering technology.

AMP for Email gives senders the ability to enhance messages with interactive features that transform the way recipients interact with emails.

It provides email developers with a set of rich components like carousels, responsive form elements, and – maybe most exciting of all – the ability to dynamically retrieve content updates even after a message is sent.

Email recipients can view and complete tasks directly in the email without leaving their primary inbox. Imagine a seamless experience where you can accomplish all of the following in your inbox:

- ❑ RSVP to an event
- ❑ Schedule an appointment
- ❑ Reply to a document comment
- ❑ Complete a survey
- ❑ Verify an email address
- ❑ Acknowledge a security alert



(Source: [SparkPost](#))

How it Works

AMP for Email combines personalization and interactivity through a subset of AMP components, like carousels and responsive form elements, which can be included in email messages. AMP for Email not only provides interactive content, but also uniquely provides dynamic up-to-date content to the inbox.

Getting Started with AMP for Email

Embed AMP MIME Part

Email is structured as a Multipurpose Internet Mail Extensions (MIME) tree. This MIME tree contains the message body and any attachments to the email. Embedding AMP into your email is fairly simple – just include text/x-amp-html alongside the usual text/html and text/plain parts.

This way, when a message contains an AMP part, email clients that support it will render it instead of the HTML. Non-AMP clients will continue to render the HTML or plaintext parts like standard emails.

Required Markup

A properly formed AMP email needs to adhere to a basic structure to be considered an AMPHTML email.

The following example code includes all required components and shows the minimum amount of markup required to create a valid AMPHTML email.

```
<!doctype html>
<html amp4email>
<head>
  <meta charset="utf-8">
  <style amp4email-boilerplate>body{visibility:hidden}</style>
  <script async src="https://cdn.ampproject.org/v0.js"></script>
</head>
<body>
Hello, world.
</body>
</html>
```

Further information on all the [required markup components](#) is on the AMP Developer website.

Note: Since emails are not hosted on your server, URLs must use absolute paths in AMP emails and must be HTTPS.

AMP Components

There also are several AMP components available to incorporate in your AMP emails to make them interactive and dynamic. They're grouped into the following categories, linked to their respective AMP documentation.

- ❑ **Dynamic Content:** These include forms, lists, and more.
- ❑ **Layout:** These include accordions, carousels, sidebars, and more.
- ❑ **Media:** These include images and gifs.

Registration with Gmail

Some email clients, such as Gmail, require registration to send AMP emails.

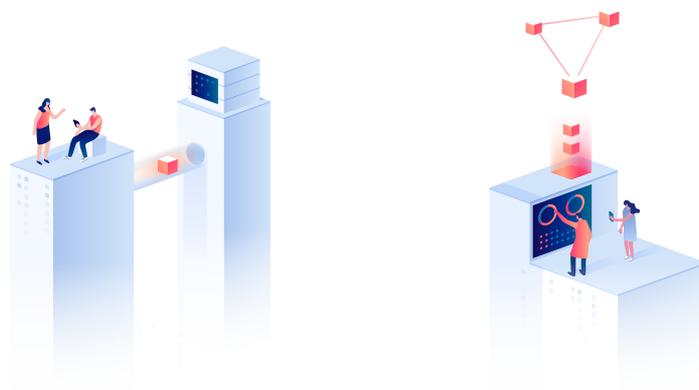
In addition to being subject to Google's [Bulk Senders Guidelines](#), you must adhere to the AMP-specific requirements set for sending dynamic email.

When you're ready to start sending production emails, follow their [registration guide](#) to get started.

CSS Requirements

All CSS in any AMP document needs to be included in a `<style amp-custom>` tag within the header or as inline-style attributes. The entire `<style>` tag cannot exceed 50,000 bytes.

The CSS allowed within email messages will vary depending on the email provider. The [list of CSS properties](#) allowed for AMP email is found on the Gmail Developer website.

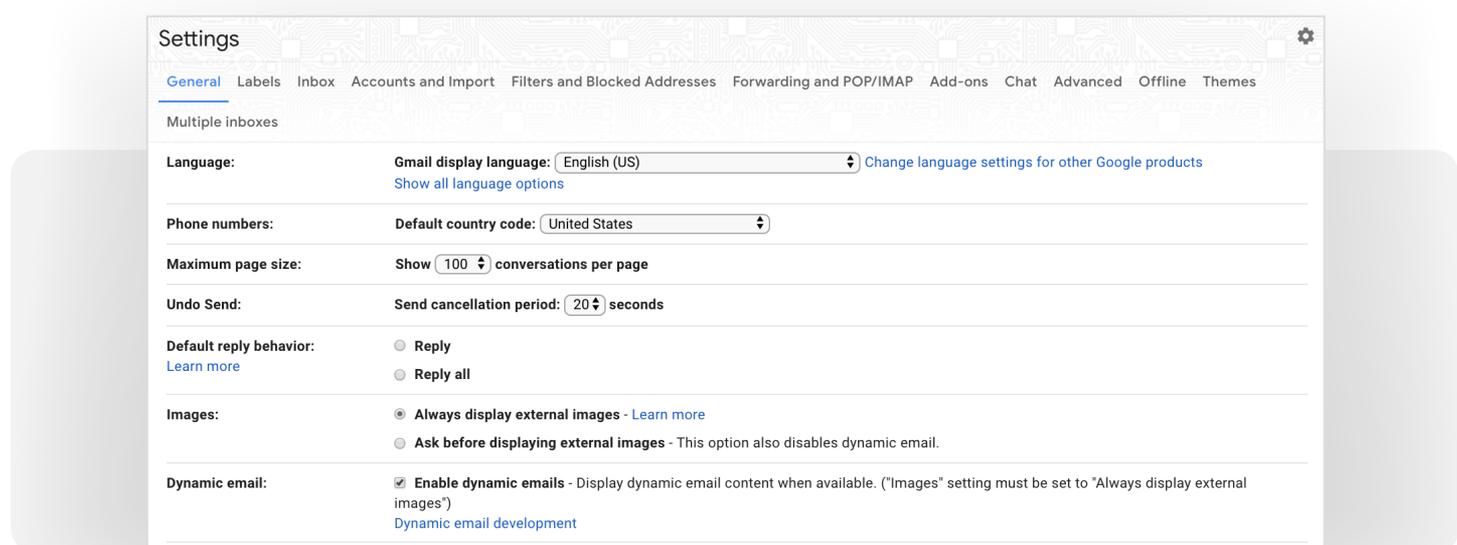


Send a Test AMP Email to Yourself

Even if you're not an approved AMP sender, you can still send test emails to yourself and ensure your AMP content really does work!

To do this, go to your email account and access **Settings**. Then on the **General** tab, click **Dynamic Email Development** under **Dynamic Email**. Type in your sender email address to opt in to display dynamic emails during development.

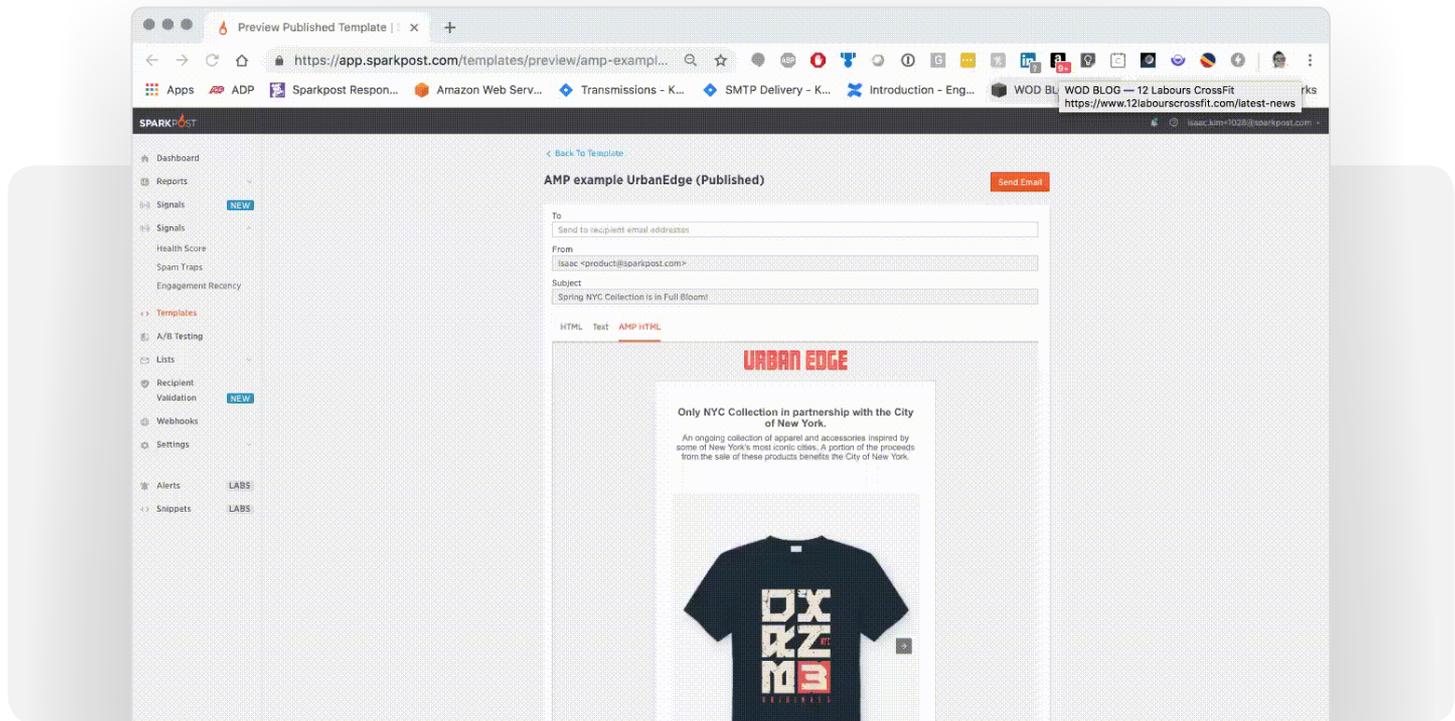
It's recommended that this setting is only used on test accounts and in private browsing mode.



(Source: [SparkPost](#))

AMP Email Services

If you're a business and run multiple email campaigns, you also can streamline sending AMP-enabled messages using services like [SparkPost](#). You'll be able to receive AMP-specific email engagement metrics and compare them to traditional email metrics, plus save AMP email templates for future use.



(Source: [SparkPost](#))

AMP for Email does for email what AMP did for the web – it makes the user's experience the No. 1 priority. And since [99% of consumers](#) check their email every day, making it easier for them to take action within their inbox is a natural way to make their experience even better.

Now it's Your Turn

We hope you've learned a lot about AMP and AMP for Email in this guide! With this starter kit in hand, you now have the resources to optimize how your visitors experience your website and emails.





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