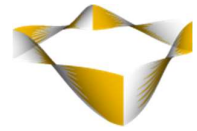


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# JaJuMa

## Resource Hints: Preload Critical Resources & Assets

03/2023



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## 1. Introduction

JaJuMa Preload Critical Resources and Assets enables you to add Resource Hints as HTTP Link headers for preloading important resources and assets on your Magento 2 site that are critical for the browser to render a page.

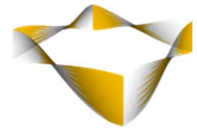
By loading critical resources and assets sooner, the page speed in your Magento 2 store can be improved in general and also specifically regarding the Core Web Vitals metric “Largest Contentful Paint” (LCP) by having the LCP element / “Hero-Image” preloaded.

Since LCP time is not only determined by when the download of the LCP element is started, but also how long the download takes, it is recommended to also optimize the size of the LCP image file.

The best way to optimized image size, while still keeping the image quality, is to use next-generation image formats, such as WebP and AVIF.

This extension is compatible with [JaJuMa WebP Optimized Images](#) and with [JaJuMa Ultimate Image Optimizer](#).

By using JaJuMa Preload Critical Resources and Assets together with one of these two image optimization extension, you can ensure to load your LCP image as soon as possible and as fast as possible, thanks to preloading and smallest possible image file size that needs to be downloaded.



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## 2. Installation

For installing the extension, follow installation process as with any Magento Extension.

### 2.1. Extension Installation via composer

For installing the extension via composer, follow installation process as with any Magento Extension from Magento Marketplace.

### 2.2. Manual Extension Installation via FTP

For manual installation by FTP, please follow these steps:

#### Before Installing

1. We recommend you to duplicate your live store on a staging/test site and try installation on your staging/test site before deploying to your live store
2. Backup Magento files and the store database

Please Note: It's very important to backup all themes and extensions in Magento before installation, especially when you are working on a live server.

We strongly recommend you to do not skip this step.

#### Upload the Extension

1. Log into your hosting space via a FTP client (e. g. FileZilla, WinSCP, cuteFtp)
2. Create Folder: <magentoroot>/app/code/Jajuma/AssetPreload
3. Unzip extension package and upload files into:  
<magentoroot>/app/code/Jajuma/AssetPreload
4. Enter and run the following commands at the command line:

---

```
php bin/magento setup:upgrade  
php bin/magento setup:static-content:deploy
```

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### 3. Extension Scope

With JaJuMa Preload Critical Resources & Assets, critical resources such as JS-, CSS-, Font-files etc. can be configured globally, for being preloaded on every page.

Besides that, the extension allows to preload Largest Contentful Page (LCP) elements / images. These images can be added as preload either following manual configurations or by getting the relevant image automatically for each page depending on content type.

#### Global Preloads

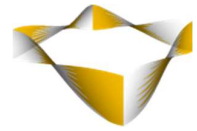
Global Preloads that apply to every page on your site can be configured as

- **DNS Prefetch**  
With DNS-Prefetch DNS lookups can be performed in the background before resources get requested, e. g. a file loaded later or link target a user tries to follow.  
[See here for more explanations](#)
- **Preconnect**  
With Preconnect the browser can preemptively initiate a connection to a certain origin before an HTTP request to download a file is actually sent to the server This includes DNS lookups, TLS negotiations, TCP handshakes.  
[See here for more explanations](#)
- **Preload**  
With Preload, downloading the most important resources and assets can be started early in the page lifecycle, even before browsers starts parsing and rendering.  
[See here for more explanations](#)
- **Prefetch**  
Prefetching tells the browser to fetch a resource with low priority and save it in cache. Prefetched resources will be then already available when the user visits a page later that requires this file.  
[See here for more explanations](#)

#### Page Specific Preloads

For CMS pages (incl. Homepage), Category Pages & Product Pages Largest Contentful Paint images / "Hero-Images" can be added as preload for optimizing the LCP metric results. Depending on page type, these images can be configured manually and/or determined automatically per page.

#### Support for modern Next-Generation Image Formats



When used together with [JaJuMa WebP Optimized Images](#) or [JaJuMa Ultimate Image Optimizer](#) the extension will automatically add WebP or AVIF (incl. High-Res versions) as preload if available.

This applies to both, automatically determined as well as manually configured image preloads. Simply configure the link to default .jpg/.png image and the extension will do the rest.

**Note:**

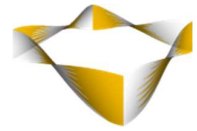
As of now, browsers do not support content sensitive image preload depending on browser capabilities.

This means, preloading WebP or AVIF images yields to “unnecessary” downloads in browsers that do not support these image formats, users with old browsers will not benefit from preloaded images.

However, almost all browsers support WebP now (~98%) and majority of users already use browsers with AVIF support (~85%). Since also a fair share of the remaining older browsers also does not support the preload-tag “unnecessary” downloads will only occur in very few cases.

And with regards to Core Web Vitals / Largest Contentful Paint, these metrics are only measured and reported by Chrome users that do have both, WebP & AVIF support.

So preloading the most advanced image format available on your site and as supported by Chrome is the best way to go at this point for optimizing your performance KPIs as well as user experience for most users.



## 4. Configuration

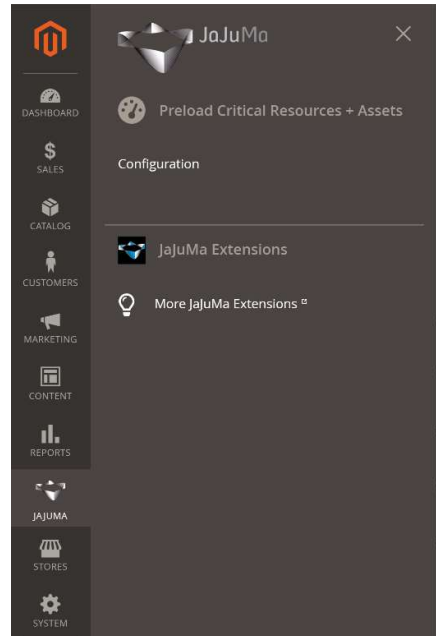
In Magento Backend see

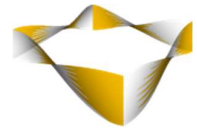
**Stores -> JaJuMa -> Preload Critical Resources & Assets**

For JaJuMa Preload Critical Resources & Assets configuration with 6 sections:

- Extension Information
- General Configuration
- Global Preload Resources
- Preload on Homepage / CMS Pages
- Preload on Category Page
- Preload on Product Page

JAJUMA	Extension Information	⊙
Preload Critical Resources & Assets	General Configuration	⊙
GENERAL	Global Preload Resources	⊙
CATALOG	Preload on Homepage / CMS Pages	⊙
SECURITY	Preload on Category Page	⊙
CUSTOMERS	Preload on Product Page	⊙





## 4.1. General Configuration

To enable Resource Hints/Preloading, select from Drop Down:

- Yes → Enable Extension:  
Resource Hints/Preloading as configured below will be applied
- No → Disable Extension:  
No Resource Hints/Preloading will be applied

General Configuration ⌵

Enable [store view] Yes ▾

Enable / Disable Resource Hints/Preloading as configured below.

## 4.2. Global Preload Resources

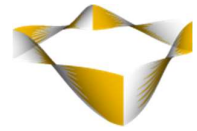
### Note:

**Make sure to only preload the really important resources and assets on your site. Preloading too much may have an adverse effect instead of the expected performance improvement. If “everything” is loaded with high-priority, nothing has priority...**

Preloads configured in this section will be applied to every page on your site.

For explanations on these configurations, see sections below.





The extension allows to add 1 – x Global Preloads, that will be added to each page. Each preload configured as Global Preload can have

- **Type:**
  - DNS Prefetch
  - Preconnect
  - Preload
  - Prefetch
- **Resource:**

Link/URL to be used.  
Please add your preloads as relative paths like this:  
*frontend/[Theme/Path]/[Locale]/[...].js*  
e. g.:  
*frontend/Hyva/Jajuma/de\_DE/Hyva\_Theme/js/alpine3.min.js* or  
*frontend/Hyva/Jajuma/de\_DE/css/styles.css*
- **Sort Order:**

Order in which the preloads are added to HTML Head section.
- **Preload as:**

MIME Type to be added (only applies to type “Preload”/“Prefetch”).  
Supported MIME Types:

  - Script
  - CSS
  - Font
  - Image
  - Fetch/XHR
  - Document
- **Enable CORS Support:**

Only needed depending on type, e. g. when preload font or when using fetch, see here for more details on [CORS](#).



## Global Preload Resources



**Note:**

Preloads configured in this section will be applied to every page on your site.  
For page specific preload configurations, see sections below.



**Use Resource Hints and Preloading wisely:**

Only preload resources that are *really* critical.  
Otherwise, when "preloading everything", there might be no or even a negative impact.

**Global Preloads**  
[store view]

Type	Resource	Sort Order	Preload as	Enable CORS Support	Action
Preload ▼	frontend/Hyva/jajuma/de_C	1	Style ▼	No ▼	
Preload ▼	frontend/Hyva/jajuma/de_C	2	Script ▼	Yes ▼	
<input type="button" value="Add Global Preload"/>					

Please add your preloads as relative paths like this:  
`frontend/[Theme/Path]/[Locale]/[...].js`  
 e. g.:  
`frontend/Hyva/jajuma/de_DE/Hyva_Theme/js/alpine3.min.js` or  
`frontend/Hyva/jajuma/de_DE/css/styles.css`



### 4.3. Preload on Homepage / CMS Pages

LCP image to be preloaded on homepage and other CMS pages can be configured for each CMS page in

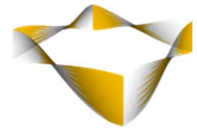
**Content -> Pages -> Select & Edit Page -> Asset Preload -> LCP Image/LCP Image Mobile**

The screenshot shows a configuration form for 'Asset Preload'. At the top, there is a toggle for 'Enable Page' set to 'Yes'. Below that is a 'Page Title' field containing 'Home Page'. A list of sections follows: 'Content', 'Search Engine Optimization', 'Page in Websites', 'Design', 'Custom Design Update', and 'Asset Preload'. The 'Asset Preload' section is expanded, showing two input fields: 'LCP Image' with the path 'https://hyva.extension.jajuma.de/media/wysiwyg/home/jajuma-company-header.jpg' and 'LCP Image Mobile' with the path 'https://hyva.extension.jajuma.de/media/wysiwyg/home/jajuma-company-header-small.jpg'.

Input the path to your LCP element image, optionally different images for Desktop/Mobile, to have this image preloaded.

**Note:**

**When using this extension together with JajuMa WebP Optimized Images or JajuMa Ultimate Image Optimizer, simply input the path to your original .jpg/.png image. The extension will automatically preload optimized WebP or AVIF version, if available.**



## 4.4. Preload on Category Page

### Preload on Category Page

**Note:**  
LCP image can also be configured manually for each category in category management.  
A manually configured category LCP image  
- also works with this config disabled  
- will always override the automatically fetched category image / first item image  
A automatically fetched category image will always override the first item image

**Get Category Image** [store view] Yes

If enabled, the category image as configured in category management will be preloaded.

**Get Category First Item Image** [store view] Yes

When enabled, the image of first item in category will be preloaded if category image is null.

On Category Pages, the image can be either

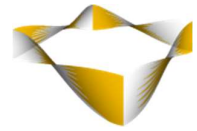
1. A manually configured image
2. The Category Image or
3. First item in grid image

**Note:**

LCP image can also be configured manually for each category in category management. A manually configured category LCP image has the highest priority and  
- also works with this config disabled  
- will always override the automatically fetched category image / first item image

If enabled, a automatically fetched category image will always override the first item image.

If enabled, the first item image will only be used if category image is disabled or enabled but empty and no LCP image was configured manually.

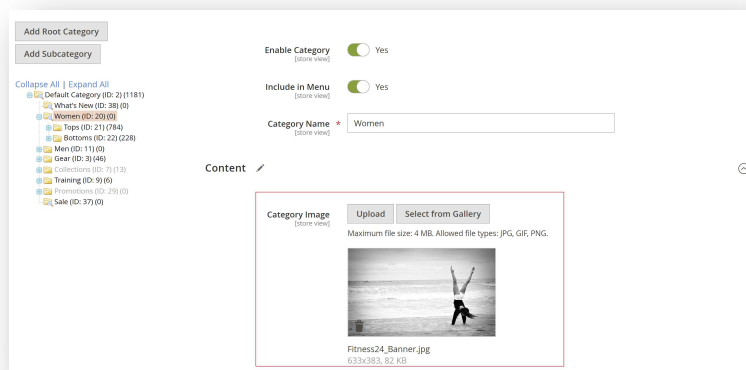


## Use Category Image

For using the category image as configured in Category Management, select from Drop Down “Get Category Image”:

- Yes → Enable
- No → Disable

If enabled, the category image as configured in category management will be preloaded. (unless LCP image was configured manually for this category)



## Use First Item Image

For using the first item image in category, select from Drop Down “Get Category First Item Image”:

- Yes → Enable
- No → Disable

If enabled, the category first item image as configured in category management will be preloaded.

(unless LCP image was configured manually for this category or Get Category Image was enabled and not empty)



## Use manually configured Image

LCP image to be preloaded on Category Pages can be configured for each Category Page in

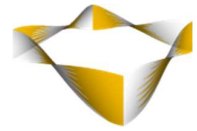
**Catalog -> Categories -> Select Category -> Asset Preload -> LCP Image**

Input the path to your LCP element image, optionally different images for Desktop/Mobile, to have this image preloaded.

A manually configured category LCP image will always override the automatically fetched category image / first item image.

### Note:

**When using this extension together with JajuMa WebP Optimized Images or JajuMa Ultimate Image Optimizer, simply input the path to your original .jpg/.png image. The extension will automatically preload optimized WebP or AVIF version, if available.**



## 4.5. Preload on Product Page

Preload on Product Page ⌵

First Product Image [store view]  ▼

If enabled, the first product image will be preloaded.

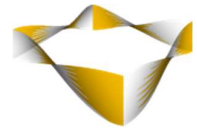
For preloading the first product image as configured in Product Management, select from Drop Down “First Product Image”:

- Yes → Enable
- No → Disable

If enabled, the first product image will be preloaded.

**Note:**

**When using this extension together with JaJuMa WebP Optimized Images or JaJuMa Ultimate Image Optimizer, simply input the path to your original .jpg/.png image. The extension will automatically preload optimized WebP or AVIF version, if available.**



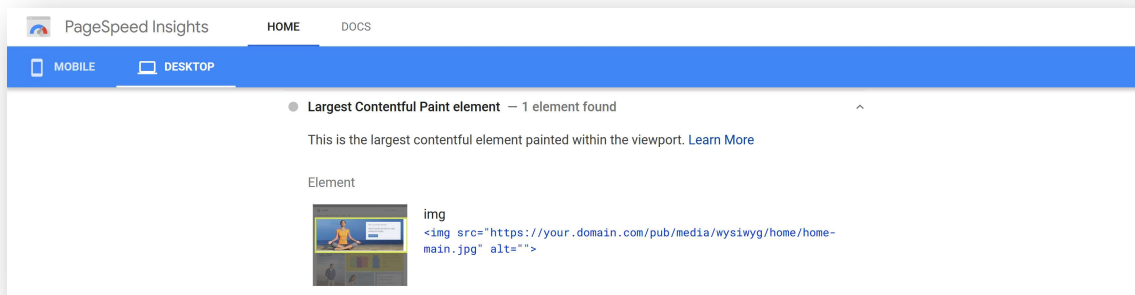
## 5. FAQ & Further Recommendations

### 5.1. Is Preloading supported by all Browsers?

<link rel="preload"> is supported by all major browsers, see <https://caniuse.com/?search=preload>

### 5.2. How do I know which image is the LCP element on my site?

You can e. g. use Google Page Speed to identify the LCP image on your page:



### 5.3. How can I check if the extension and preloading is working?

You can inspect the page source on your site to see <link rel="preload"> tags added in HTML <head> section and check the network tab in your browsers developer tools to see the order in which resources are loaded from your site.





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## 6. Support

Please feel free to contact JaJuMa support team via [support@jajuma.de](mailto:support@jajuma.de).

In case any additional information is required. We'd be more than happy to assist in setting up the extension.