

# For Developers

If you are an advanced user or web developer you will be pleased to know that extension is fully configurable. You can change optimization options even swap utilities used for optimization with the ones you like only requirement is that they are command line utilities. By default our extension is using optimization utilities recommended by Google PageSpeed Insights. These are gifsicle, jpegtran, and optipng. For example you could change utility for JPG optimization and instead of jpegtran use jpegoptim. To do this in extension configuration change "JPG Utility" option to "jpegoptim" and for "JPG Utility Options" type "--strip-all %filepath%". If jpegoptim is installed on your server then for "JPG Utility Exact Path" type "jpegoptim".

For sites with many images please be aware of **memory\_limit** requirement. Our extension is tested with 1000000+ images in the index. To operate index with 1000000+ images you need to set PHP value **memory\_limit** to 1024M or more. You should not worry about this for sites with up to 500000 images because Magento 2 default value for **memory\_limit** is 768M (you can see this in .htaccess file in your Magento root and this is also where you change **memory\_limit** if needed).

**Warning!** Before using our extension on real images you must test optimization utilities. (Please follow configuration and testing instructions.)

**Warning!** Extension relays on third party utilities (gifsicle, jpegoptim (32-bit only), jpegtran and optipng). It is also highly dependent on a server type and configuration. There is a possibility it will not work for you. Please understand that there is no PHP code we can write that will make previously mentioned utilities work if they are not compatible with your server nor circumvent your server configuration.

Our extension **will NOT** change visual quality of the images.

Our extension **will NOT** change resolution of the images.

Our extension is only the last step in the image optimization that will help you to pass Google PageSpeed Insights and GTmetrix tests, it is **not** the substitution for best practices regarding preparation of images for the web.

Before uploading images to the web (in this case Magento) you need to prepare them. This is wide subject but the most important things are:

- Choose the right format for the image (gif, jpg, png) (Read the FAQs for more information)
- Choose the right resolution for the image (Read the FAQs for more information)

**Image Optimizer is fully compatible with Google Perceptual JPEG encoder "guetzli".**

However you need to:

## 1. Install guetzli on your server.

This is not covered by our Installation and Support services. More info on how to install guetzli can be found [here](#).

## 2. Configure our extension to use guetzli.

In our extension config in "Utility" section

For "JPG Utility" type **guetzli**

For "JPG Utility Exact Path" type full path where you installed guetzli or if you added it to the system

path then type only name of the binary it should be **guetzli**

For "JPG Utility Options" type:

**--quality 90 %filepath% %filepath%**

you can adjust quality option to your liking.

**3. Test optimization** by using test images we provided and manually compare file size before and after optimization. (Configuring and testing guetzli is covered by our Installation and Support services.)

## FAQ

Q: After upgrading from older version of Image Optimizer to v2.1.0 (or newer) my old index data is gone and Progress Bar is reset?

A: Image Optimizer v2.1.0 and newer save index data to a file instead of database. If you are upgrading from any previous version of Image Optimizer prior to v2.1.0 you will lose old index data. Previously optimized images will still be optimized but you will need to re-index and re-optimize all images again. Optimizing images twice or multiple times will not change quality of images. Image optimization utilities sense if images are optimized and just re-save images without changing them.

To upgrade to new version delete all files from:

**app/code/Apptrian/ImageOptimizer**

then copy new extension files and issue following commands:

**php bin/magento setup:upgrade**

**php bin/magento cache:flush**

**php bin/magento setup:static-content:deploy**

then delete all files from:

**var/generation/Apptrian/ImageOptimizer**

directory.

Q: Image Optimizer does not work for me, is there anything I can do?

A: Maybe. First, follow Testing Instructions. Second step is to check permissions on files inside Image Optimizer "bin" directory. (Can be "app/code/Apptrian/ImageOptimizer/bin" or "vendor/apptrian/image-optimizer/bin".) Third is to try 64-bit Utilities option. Forth use "Utility Exact Path" options but before you do gifsicle, jpegtran, and optipng must be installed on your server (Contact your server support and ask them to install these for you and to send you full path where these are installed. Some hosting companies will do this other will not). If gifsicle, jpegtran, and optipng are added to system path you can just type name of the binary not a full path. (Some servers usually have jpegtran installed. Minimal version required for Image Optimizer to work is v8d but the latest version is preferable.)

Q: Why after clicking "Start Optimization Process" button, none of the images are optimized?

A: Utility binaries located in "app/code/Apptrian/ImageOptimizer/bin" or "vendor/apptrian/image-optimizer/bin" must be executable which means you have to set right permissions on files inside this directory.

Q: After clicking "Start Optimization Process" button, error message appears "Optimization failed because PHP exec() function is disabled."?

A: This means your server PHP is configured in such a way that PHP exec() function is disabled. Contact your hosting company and ask them to allow exec() function. This usually happens on shared hosting accounts and hosting companies keep this function disabled until you ask them to enable it. This function is needed in order for image optimization utilities to be executed. If you cannot execute optimization utilities you cannot optimize images.

Q: Why Google PageSpeed Insights reports my images are not optimized despite I optimized them

properly and can see difference in file size (in bytes)?

A: Our extension only optimizes images on your site, it will not change format nor resolution of your images. This brings us to the best practices regarding images and web. You must prepare your images from the start if you want to pass Google PageSpeed Insights test. This means choosing the right format and resolution for every image.

Image Formats:

GIF is used for images that have very few colors (small web design elements). It is also used for simple animations if it is animated GIF (banners).

JPG is used for images with many colors (photos, product images, and some other design elements).

PNG is used for images where accurate transparency is needed (usually used for design elements, small element backgrounds/css sprites).

Resolution is best explained via example. Lets say you have an image on your site that is 2000x2000px. However on your page it is resized via CSS to 1000x1000px. This means your image is much bigger than it needs to be. If you check your page containing this image via Google PageSpeed Insights it will tell you something like this:

**Compressing and resizing <http://www.example.com/pub/media/wysiwyg/image.jpg> could save 110.1KiB (79% reduction).**

You need to download image.jpg then resize it to 1000x1000px with the image editing program of your choice and upload back to original location on the server. Then use our extension to optimize it. Only if you done everything correctly you will pass Google PageSpeed Insights test.

Q: Progress bar is stuck?

A: This happens when in one batch of images there are many very large ones and due to memory and time limits for script execution optimization is aborted. To overcome this, lower the "Batch Size" option to 10. In some cases of very large images and certain server configurations you will need to set "Batch Size" to 1. After you optimize these large images you can set "Batch Size" back to default value of 50.

Q: Why are not all images optimized?

A: Only images that are on your server can be optimized. Also sometimes Google PageSpeed Insights will report .gif images with transparency not optimized despite the fact they are. For images that have transparency use .png files. There is also an edge case when you use one format while you would get much smaller file using another. (Read one of the above FAQ for more information on how to choose appropriate image format.)