

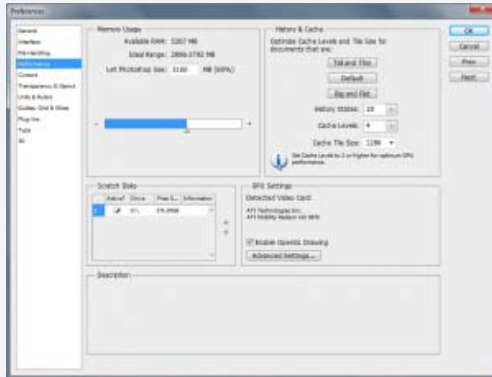
Home

Optimize Performance of Photoshop CS5, Part 2

View Edit Track

The *TLR Tutorial* has been updated.

Submitted by mitch on Sun, 09/05/2010 - 03:22.



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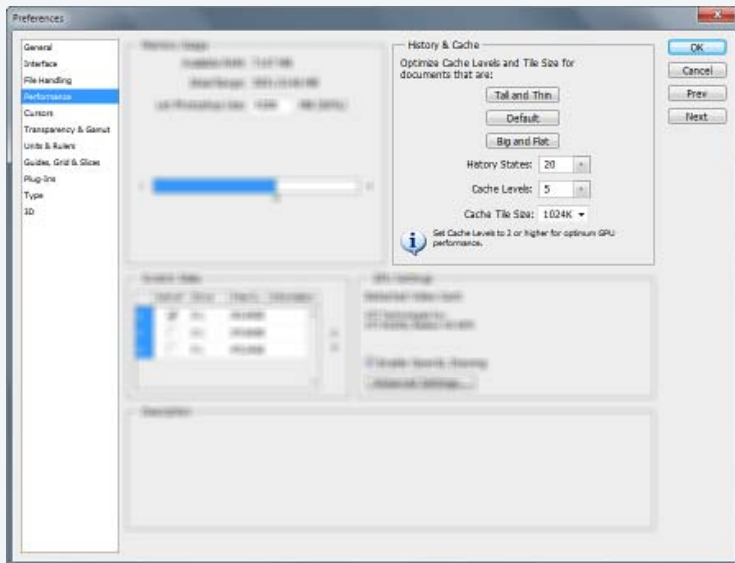
<http://www.thelightsright.com/files/tutorials/OptimizePerformanceOfPhoto...>

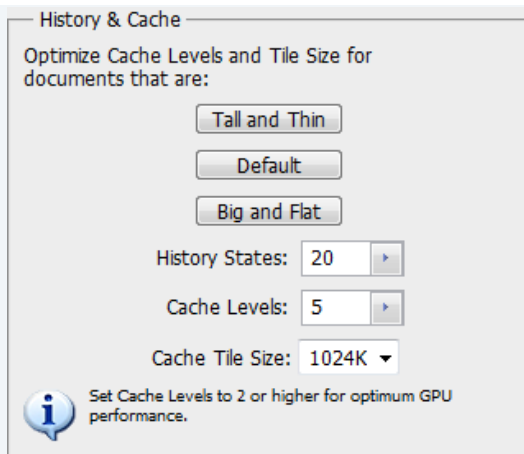
To optimize performance in CS5, users need to carefully consider the memory and hard space requirements for Photoshop. While some choices, like the number and types of layers are rather obvious in their demands for system resources, other changes in Photoshop CS5 are more obscure.

Cache Level and Tile Size

Photoshop uses image caching to redraw screen images faster while edits are in progress. The valid range for the Cache Level setting is 1 to 8. A setting of 1 will disable image caching. This can produce lower quality results with some Photoshop features. Larger settings will slow the opening of files as Photoshop prepares more low resolution versions. By default, Photoshop CS5 uses a setting of 4.

- When your images have small pixel dimensions and many layers (many meaning *dozens* in this context), Photoshop will perform better with a setting of 1 or 2.
- Photoshop can redraw the screen more quickly with larger images with a setting greater than 4.





You'll also find a set of radio buttons on the History & Cache section of the Preferences | Performance dialog. These will automatically set the Cache Levels and Tile Size options.

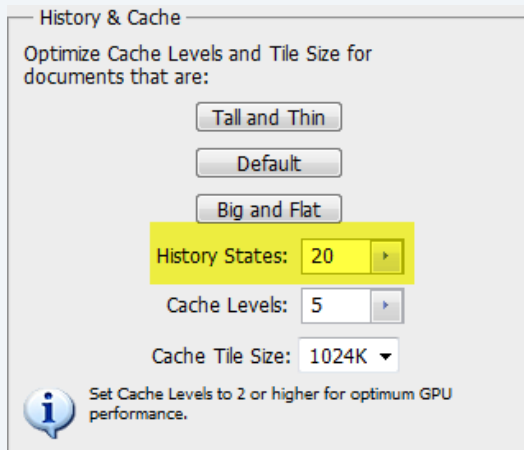
Photoshop works on images in segments called Tiles. Photoshop works on each tile in turn and as it completes its work on a tile, it provides visual feedback by redrawing the tile. Photoshop editing operations are generally more efficient when working on larger tiles. The trade-off is that larger tiles take longer to redraw.

- When your images have large pixel dimensions, a handful of layers, and plenty of RAM, you should select the Big and Flat option.
- When your images have lots of layers and RAM is at a premium, you should select the Thin and Tall option.

Users no longer need to add a plug-in to make adjustments to Tile Size (as they did with Photoshop CS4). If you select the Big and Flat or the Thin and Tall, Photoshop CS5 will set Tile Size based on your processor and the number of cores.

History States

When you perform an operation in Photoshop that affects pixel values for the entire image, Photoshop automatically makes a copy of the previous state to allow for undo operations and painting with history states. Each copy will be a full copy at the original image size. If you use a selection or restrict effects to a portion of the image, only the tiles affected by the operation will be copied and stored.



Each additional level for History States potentially doubles the amount of scratch space required by Photoshop. Users should balance the need for undo levels and the scratch space requirements for their images.

Image Windows

Image windows consume more system RAM in Photoshop CS5 than in previous versions. If your workflow includes multiple images open, you might find that Photoshop issues Out of Memory errors more often with CS5.

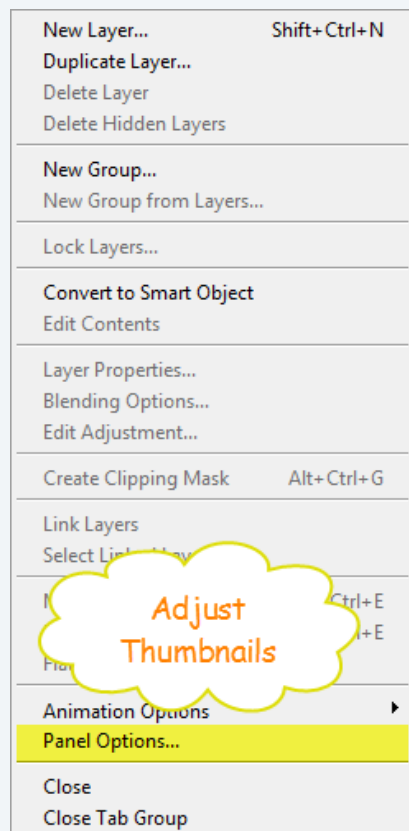
This is especially true if you're a Mac user and you choose to use the Application Frame feature

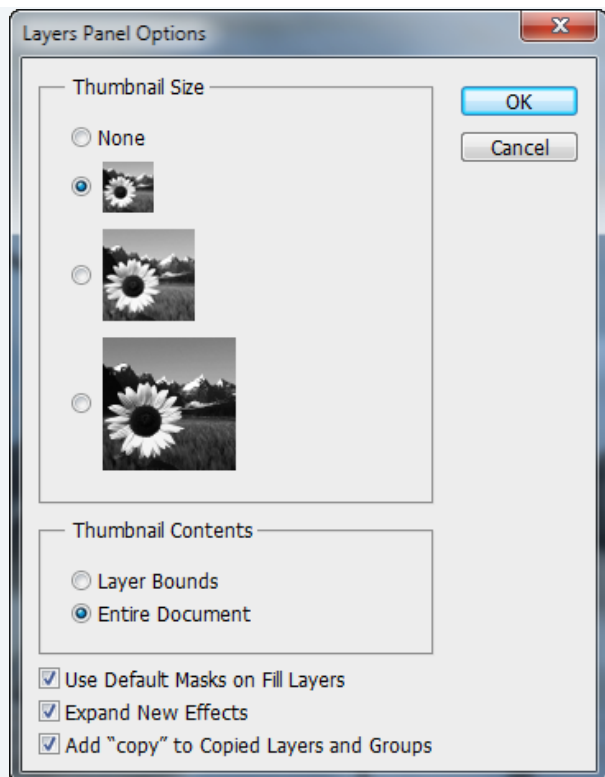
in Photoshop CS5. Application Frame makes each tabbed image the full size of the monitor. It also consumes additional system RAM.

If you encounter Out of Memory errors or Photoshop CS5 performance drops significantly and additional RAM is not an option, try closing some images or disable the Application Frame feature.

Palette Preview Thumbnails

Each of the thumbnails that you see in the Layers, Channels, and Paths palettes consumes system RAM. As you makes changes to the image, Photoshop updates the thumbnails. Users can minimize the size of the thumbnails (or turn them off) from the palette menu for each respective palette.





Patterns and Brush Tips

Some Photoshop users load a large number of seldom (or never) used brushes and patterns into their Presets collections. Additional brushes and patterns require more scratch disk space. Patterns used in Layer Styles consume additional system RAM as well as scratch disk space.

Filters and Other Resource-Intense Features

There are a number of features in Photoshop CS5 that require considerable RAM and/or scratch disk space. These include a number of filters (such as the Distort Filters) as well as popular new features like Content Aware Scaling, Liquify, and 3D. It is quite common for 32-bit versions of Photoshop with low RAM or reduced scratch file space to run extremely slow, hang, or generate Out of Memory errors when running these operations.

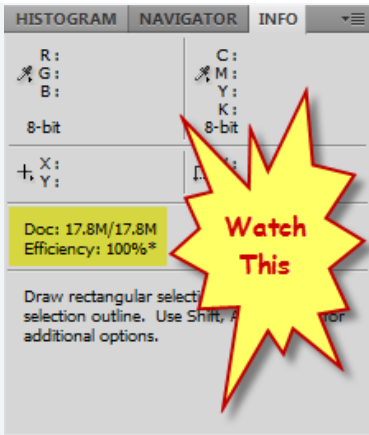
These new features can easily require more RAM than 32-bit Windows can provide. This is true also for the 32-bit version of Photoshop running under 64-bit Windows Vista or Windows 7. Keep these maximum values in mind for different combinations of Photoshop and OS.

- 32-bit Photoshop CS5 and 32-bit OS: 1.7GB
- 32-bit Photoshop CS5 and 64-bit OS: 3.4GB
- 64-bit Photoshop CS5 and 64-bit OS: limited only by OS

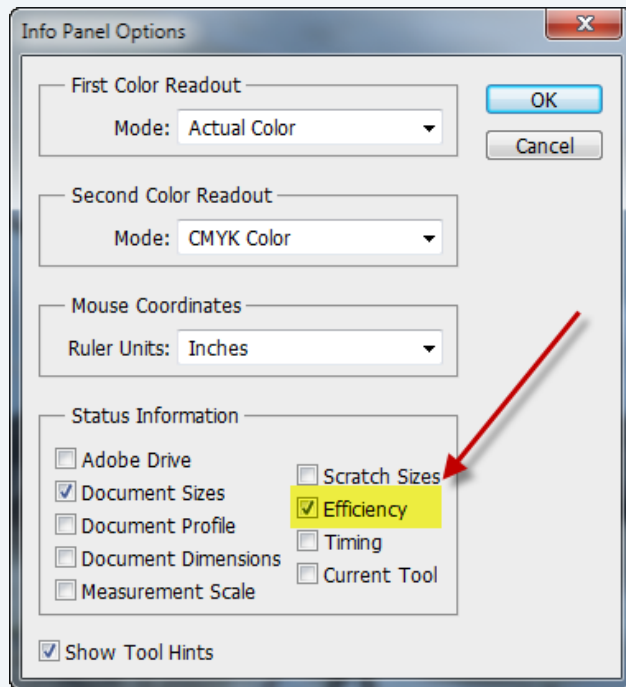
Even if you typically use the 64-bit version of Photoshop, there are occasions where you might need to resort to the 32-bit version. That's why Photoshop CS5 (and CS4) load both 32- and 64-bit versions by default. For example, if you own a collection of plug-ins designed for earlier versions of Photoshop, you'll find that 32-bit plug-ins do not work with the 64-bit version of Photoshop CS5. Until you obtain a 64-bit replacement, you can switch between 32- and 64-bit Photoshop as needed.

Efficiency Indicator

You can monitor the Efficiency Monitor on the Info Palette to determine the optimal amount of RAM you'll need to reduce the use of scratch file space. When the Efficiency Indicator goes much below 90%, Photoshop will make increased use of scratch disk space. You should increase Photoshop's RAM allocation or add more system RAM. If those are not practical options, then consider using a RAID drive array or a Solid State Drive for Photoshop's scratch file.

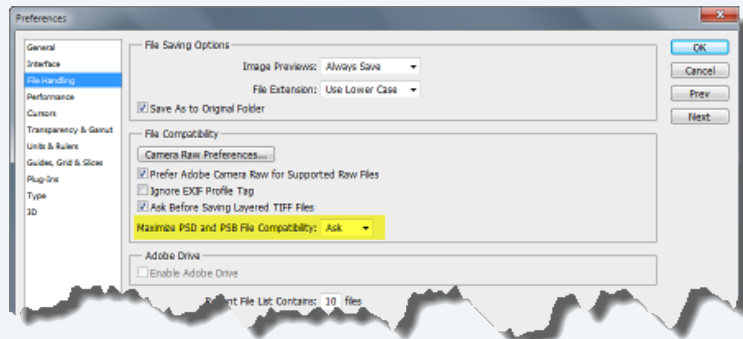


If the Efficiency Monitor on the Info Palette is not visible, you can turn it on from its palette menu.



PSD and PSB File Compatibility

Photoshop's Maximize PSD And PSB File Compatibility feature increases the size of your file by attaching a flattened when you save your image. This extra data ensures that PSD and PBS files saved in Photoshop will open in earlier versions of Photoshop and in other software.



You should select this option if you intend to edit your images in non-Adobe software.

Important! Select this option if you intend to edit your images in Adobe Lightroom using the **Edit in Photoshop** feature.

This ends Part 2 of *Optimize Performance of Photoshop CS5*. Part 3 will conclude with a discussion of operating system and hardware configuration.

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Glenn Mitchell is an avid digital photographer, technical writer, and university administrator. He is an author with a long list of publications in trade magazines, peer-reviewed academic journals, and co-authored books. He is creative force behind The Light's Right. His photography can be seen at his gallery site: www.thelightsrightstudio.com.

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