

## Zend Optimizer™ Technical FAQs

### 1. What is the Zend Optimizer? What does it do?

The Zend Optimizer goes over the intermediate code generated by the standard Zend runtime compiler and optimizes it for faster execution. In addition, the Zend Optimizer enables PHP to load and execute files encoded by the Zend Encoder Unlimited™ and Zend Encoder SE™.

### 2. What are the system requirements for the Zend Optimizer?

The Zend Optimizer supports the following platforms:

- Solaris®/sparc 2.6 or later
- Linux® (i386/glibc 2.1 and libc5)
- FreeBSD 3.4 or later
- Microsoft® Windows® NT 4.0, Windows 2000 and Windows XP

In addition, the Zend also provides unsupported builds of the Zend Optimizer for the following platforms:

- Mac OSX
- OpenBSD
- Solaris/x86 2.6 or later

To use the Zend Optimizer, a supported version of PHP 4.0 must be installed. The Zend Optimizer is currently available for PHP built as an Apache module, or as a CGI binary. For additional information, see the Zend Optimizer User Guide.

### 3. How do I get the Zend Optimizer?

The Zend Optimizer is available **for free** at the [Zend Store](http://www.zend.com/store/), at <http://www.zend.com/store/>.

### 4. How do I install the Zend Optimizer?

Please see the “Installation” section in the Zend Optimizer User Guide.

### 5. I have installed the Zend Optimizer. How do I start it?

The Zend Optimizer is a passive module that runs within the framework of PHP. It optimizes scripts automatically, and transparently detects and loads encoded files, therefore there is no need for you to start it.

### 6. How many optimizations does the Zend Optimizer perform altogether?

The Zend Optimizer is capable of performing around 20 different optimizations, some of which are quite complex. One of the simpler optimizations that the Zend Optimizer does

is to change post-incrementing to pre-incrementing, where possible, since pre-incrementing is the faster operation of the two.

## 7. Can the Zend Optimizer be configured not to perform one or more of the optimizations?

Yes. Each optimization pass of the Zend Optimizer can be turned on or off. It is controlled via the `zend_optimizer.optimization_level` INI directive. The current version supports three optimization passes so the INI directive can be set between 0 and 15. The first level of optimization is pass 1, the second is pass 2, the third is pass 4, and the fourth is pass 8. The four passes can be combined to include only one or more passes. The settings are as follows:

0	No passes
1	Pass 1
2	Pass 2
3	Passes 1 and 2
4	Pass 3
5	Passes 1 and 3
6	Passes 2 and 3
7	Passes 1, 2 and 3

## 8. Is there any way to further improve the performance of the Optimizer?

If you don't plan to use the Zend Optimizer in order to load encoded files, you can slightly improve the performance of the Optimizer by adding the `zend_optimizer.enable_loader = 0` directive to `php.ini`. This disables the transparent auto-loading mechanism that is built into the Zend Optimizer.

## 9. Can encoded and non-encoded (source) PHP files be used together?

Encoded and non-encoded PHP files can be used together transparently.

## 10. Will using encoded files (instead of source files) change run-time speed or file size?

There might be some speed gain because the compilation stage is saved on every run of the script, however, speed improvements, if any, are dependent on the nature of the script. The size of an encoded file might be somewhat smaller or larger than the source file, but this too is dependent on the nature of the script. The factors that tend to improve run-time speed are not necessarily the same as those that tend to decrease file size.

## 11. When I start my server, the Zend Optimizer gives error messages and fails; why?

Your version of PHP may be incompatible with the Zend Optimizer that you installed. Make sure that you download a version of the Zend Optimizer that is compatible with your version of PHP.

**12. When I try to run an encoded file, error messages are displayed; why?**

The most common cause of error messages and failure is incompatibility, either with the PHP version, or with the Zend Intermediate Code file (that is, with the version of the Zend Encoder that encoded the file). For additional information, see the “Avoiding Incompatibilities” section in the Zend Optimizer User Guide.

**13. How can I get support?**

If you have problems or questions about the Zend Optimizer, you can use the online Optimizer forum on Zend.com at <http://www.zend.com/zend/optimizer-forum.php>.

Zend SOS subscribers can also submit questions about setup and installation support through [Zend Support-Online Services \(SOS\)](#). To access [Zend SOS](#), go to the Pickup Depot, fill in our convenient form, and click on the "Submit" button. Our worldwide team of experts will get to work to resolve your problem. Track the status of your incident anytime through [Zend SOS](#).

For any other issues you may have, please email us at [info@zend.com](mailto:info@zend.com)