



Community Experience Distilled

# Getting Started with Phalcon

Design, implement, and deliver superior web applications using the most popular PHP framework available

Stephan A. Miller

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# Getting Started with Phalcon

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# Getting Started with Phalcon

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# About the Author

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**Stephan A. Miller** is an SEO specialist, writer, and software developer from Kansas City, MO. He has expertise in operating systems, a few databases, and a handful of programming languages. He is currently working as a software contractor. He is also the author of *Piwik Web Analytics Essentials* published by *Packt Publishing*. He also blogs when he has the time at <http://stephanmiller.com>.

I would like to thank the developers of Phalcon for fielding any questions I had, and for helping me get this book finished. I would also like to thank my co-workers at Penton who learned Phalcon with me on the job.

# About the Reviewers

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**Vladimir Kolesnikov** has been developing server and web applications for over 20 years. He is the Vice President of Development at Goldbar Enterprises, LLC. Over his career, he has been involved in designing and writing very complex and high-performance software.

His passion for writing fast, robust, and optimized software introduced him to Phalcon, and he soon joined the development team. He mainly concentrates on Phalcon's stability and performance.

In his free time, he enjoys the company of his beloved wife, writes a technical blog at <http://blog.sjinks.pro/>, contributes to open source projects, and studies foreign languages.

**Calin Rada** is a full-stack developer with over nine years of experience, developing the server, network, and hosting environment; data modeling; business logic; the API layer, Action Layer, or MVC; user interface; and user experience, and understanding what the customer and business needs are. He is continuously hungry about learning new things and working with new technologies.

Currently, he occupies the position of IT Director at SOLOMO365 ([www.solomo365.com](http://www.solomo365.com)). He is also the creator of SharePathy ([www.sharepathy.com](http://www.sharepathy.com)), the social discovery network built on top of the Phalcon framework.

**Ivan Vorontsov** admires the process of building applications and the power of open source. He loves developing client/server applications and is always looking for a reason to develop a useful program. His first application was Anti-cheat for the game World Of Warcraft coded with Delphi. He is also interested in game engines such as NeoAxis and Unity 3D. Currently, he is actively developing applications in the field of web-based technologies using modern PHP frameworks such as Phalcon, Symfony2, and ZF2. His favorite motto is: "Everything is possible!"

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# Preface

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The developers of Phalcon made it their mission to develop the fastest and most efficient PHP framework around, and they have done a good job of completing that mission. With the speed of C programming, simplicity of PHP, and the structure of a framework, Phalcon streamlines web application development.

*Getting Started with Phalcon* is an introduction to using Phalcon to develop web applications. You will learn by building a blog application using Phalcon Developer Tools and web tools to flesh out the CRUD skeleton for the application quickly, and then modifying it to add features

As features are added to the blog, you will learn how to use other Phalcon functionalities such as the Volt template engine, view helpers, PHQL, validation, encryption, cookies, sessions, and event management.

# What this book covers

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[Chapter 1](#), *Installing Phalcon*, covers installing the Phalcon PHP extension on Linux, Windows, or Mac, and configuring PHP, Apache, or Nginx.

[Chapter 2](#), *Setting Up a Phalcon Project*, covers setting up a project in Phalcon manually using Phalcon Developer Tools or Phalcon web tools.

[Chapter 3](#), *Using Phalcon Models, Views, and Controllers*, covers the MVC structure of Phalcon.

[Chapter 4](#), *Handling Data in Phalcon*, covers Phalcon Models in depth, PHQL, session data, and filtering and sanitizing data.

[Chapter 5](#), *Using Phalcon's Features*, covers even more features in Phalcon, including hashing passwords, controlling user access, setting cookies, and using view partials, logging, and view helpers.

# Who this book is for

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This book is intended for PHP developers who want to learn how to use the Phalcon PHP framework. Some knowledge of PHP but no prior knowledge of MVC frameworks is required.

# Conventions

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In this book, you will find a number of styles of text that distinguish between different kinds of information. Here are some examples of these styles, and an explanation of their meaning.

Code words in text, database table names, folder names, filenames, file extensions, path names, dummy URLs, user input, and Twitter handles are shown as follows: "So, we have to locate the `php.ini` file and edit it."

A block of code is set as follows:

```
phalconBlog/  
  app/  
    config/  
    controllers/  
    library/  
    logs/  
    models/  
    plugins/  
    views/  
      index/  
      layouts/  
public/  
  css/  
  files/  
  img/  
  js/  
  temp/
```

Any command-line input or output is written as follows:

```
sudo apt-get install git  
sudo apt-get php5-devphp-mysqldb
```

**New terms** and **important words** are shown in bold. Words that you see on the screen, in menus or dialog boxes for example, appear in the text like this: "So, search for the word **Compiler** in your browser window."

## Note

Warnings or important notes appear in a box like this.

## Tip

Tips and tricks appear like this.





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## Errata

Although we have taken every care to ensure the accuracy of our content, mistakes do happen. If you find a mistake in one of our books—maybe a mistake in the text or the code—we would be grateful if you would report this to us. By doing so, you can save other readers from frustration and help us improve subsequent versions of this book. If you find any errata please report them by visiting <http://www.packtpub.com/support>, selecting your book, clicking on the **errata submission form** link, and entering the details of your errata. Once your errata are verified, your submission will be accepted and the errata will be uploaded to our website, or added to any list of existing errata, under the Errata section of that title.

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## Questions

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# Chapter 1. Installing Phalcon

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This chapter will walk you through installing Phalcon on your chosen platform. The installation process differs a little bit depending on which operating system you happen to be using. Since Phalcon is a PHP extension written in C, installation is a little bit more involved than downloading an archive of PHP files and uploading them to your server.

But installation should still take you less than an hour. Depending on your system and experience with PHP extensions, it could take only minutes. At the end of this chapter, you will have a high performance PHP framework that will simplify the process of developing your application and help you get your project up and running faster.

In this chapter, you will learn how to:

- Meet Phalcon's system requirements
- Find the correct Phalcon DLL for use on a Windows machine
- Install the Phalcon DLL on a Windows machine
- Install Phalcon on Linux
- Install Phalcon on Mac
- Install Phalcon on FreeBSD
- Edit your `php.ini` to use Phalcon
- Configure Apache for Phalcon

## Phalcon system requirements

You will of course need a web server in order to use Phalcon. Apache is the most common, but if you have an Nginx or Cherokee web server, that will work too. You can even use PHP's built-in web server as your Phalcon development server if you wish. For the purposes of this book, we will assume you have Apache installed.

Along with that, you will need PHP installed. While Phalcon will work with any version of PHP higher than Version 5.3.1, it is recommended that you use PHP 5.3.11 or greater. Versions of PHP before 5.3.11 still have security flaws and memory leaks that were fixed in the later versions.

But that is about all you need. Phalcon is not really very picky. There are a few other requirements you may need to meet on each specific operating system, and we will cover them in the individual installation processes.

# Installing Phalcon on Windows

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In this section, we will walk through installing Phalcon on Windows. Even if you aren't installing the extension on Windows, please read through this section. Many of the steps involved, such as locating your `php.ini`, apply to all operating systems.

The Phalcon extension for Windows comes compiled as a DLL. However, you must locate the correct DLL for your version of PHP. The first requirement when installing Phalcon in Windows is a PHP binary compiled with Windows Visual Studio 9.0. It is possible to have a Windows PHP installation compiled with another version of Visual Studio. If you have one of these other versions, you will have to install the correct version of PHP if you want Phalcon to work on your system.

So, let's take a look at your PHP installation to discover just which version of PHP you have installed. First, you need to locate the document root of your web server. Or, in other words, you need to locate the folder on your computer that corresponds to the page you get when you browse to <http://localhost> or the folder on your server that maps to the home page of <http://yourdomain.com>. We are going to create a PHP file that will tell us everything we need to know to pick the right version of the PhalconPHP DLL and drop it in that folder.

So, open up your text editor or IDE and create a new file. Name it `info.php`. In that file, insert the following code:

```
<?php
    phpinfo();
?>
```

Save the file to your document root. Where your document root is depends upon which web server stack you have installed on your machine. It could be Apache directly from the official site, such as XAMPP, Wamp, or AMPPS, or one of the other versions of Apache, PHP, and MySQL stacks available. Your best bet is to visit the site where you downloaded your chosen version of Apache and read the documentation.

Once you have saved the file, browse to <http://localhost/info.php> and you should see a page like the following screenshot:



<b>System</b>	Windows NT KSOPSMILLER1 6.1 build 7601 (Windows 7 Enterprise Edition Service Pack 1) i586
<b>Build Date</b>	Feb 12 2013 11:20:09
<b>Compiler</b>	MSVC9 (Visual C++ 2008)
<b>Architecture</b>	x86
<b>Configure Command</b>	cscript /nologo configure.js "--disable-phar" "--disable-ipv6" "--disable-zts" "--disable-bcmath" "--disable-calendar" "--disable-odbc" "--disable-tokenizer" "--without-sqlite" "--without-wddx" "--enable-debug-pack" "--enable-cli-win32" "--enable-pdo" "--enable-xmlreader" "--enable-xmlwriter" "--enable-cgi" "--with-php-build" "--with-libxml" "--with-pdo-sqlite" "--with-openssl" "--with-sqlite3"
<b>Server API</b>	CGI/FastCGI
<b>Virtual Directory Support</b>	disabled
<b>Configuration File (php.ini) Path</b>	C:\Windows
<b>Loaded Configuration File</b>	C:\zend\ZendServer\etc\php.ini
<b>Scan this dir for additional .ini files</b>	(none)
<b>Additional .ini files parsed</b>	(none)
<b>PHP API</b>	20090626
<b>PHP Extension</b>	20090626
<b>Zend Extension</b>	220090626
<b>Zend Extension Build</b>	API220090626,NTS,VC9
<b>PHP Extension Build</b>	API20090626,NTS,VC9

You will notice the PHP version at the top of the page. We will be paying attention to the first two numbers separated by a dot. They will either be **5.3** as shown in the previous screenshot or 5.4. If they are 5.2 or less, you will need to update your PHP installation.

Next, you want to make sure that your version of PHP was compiled with Microsoft Visual Studio 9.0. So, search for the word **Compiler** in your browser window. The command to open the search box on most browsers is *Ctrl + F*. It is usually near the top of the page as shown in the following screenshot. If your PHP was compiled with Visual Studio 9.0, you should see **MSVC9 (Visual C++ 2008)**, as shown in the following screenshot:

PHP Version 5.3.21



System	Windows NT KSOPSMILLER1 6.1 build 7601 (Windows 7 Enterprise Edition Service Pack 1) i586
Build Date	Feb 12 2013 11:20:09
Compiler	MSVC9 (Visual C++ 2008)
Architecture	x86

Below the **Compiler**, you will see the **Architecture** listing. It will say **x86** or **x64**. In the previous screenshot, PHP was compiled for the **x86** architecture.

Next, we need to see if you have a thread-safe version of PHP or not. So, search for PHP Extension Build in your browser window. Next to this, you will see the build version of your PHP installation. If you see an NTS at the end of this number, then you do not have a thread safe version of PHP.

Now that we have these pieces of information, we can go to <http://phalconphp.com/en/download/windows>.

## Tip

### Downloading the example code

You can download the example code files for all Packt books you have purchased from your account at <http://www.packtpub.com>. If you purchased this book elsewhere, you can visit <http://www.packtpub.com/support> and register to have the files e-mailed directly to you. You can also find all the code used in the book by visiting GitHub page <http://eristoddle.github.io/phalconBlog/>.

Here, we will see the page as shown in the following screenshot, which lists multiple versions of the Phalcon PHP extension:

# Phalcon for Windows

[Linux/Unix/Mac](#)[Windows DLLs](#)[Developer Tools](#)[IDE stubs](#)

We highly recommend you use the latest version of PHP corresponding to our DLLs, so as to take advantage of the full feature set of Phalcon.

## Stable/Master versions

**x86**

Phalcon 1.2.4 - Windows x86 for PHP 5.3.9 (VC9)

October 29 2013 00:51:21 EDT / sha1:

998ae89edd494c092cebea854a10d82a28baef8ea

[Download](#)**x64**

Phalcon 1.2.4 - Windows x64 for PHP 5.3.9 (VC9)

October 29 2013 00:51:21 EDT / sha1:

29b18cde48dd61f4dc48e92d07a36c2c776ecd62

[Download](#)

It may look daunting, but we just did the research that will enable us to choose the correct version. We know whether we have a thread-safe version or not. We know whether we have an x86 or x64 architecture. And we know whether we have PHP 5.3 or 5.4. Don't worry about the last number in the PHP version. We just need to download the extension that fits our configuration. The Phalcon extension for PHP 5.3.9 will work for all versions of PHP 5.3 and the extension for PHP 5.4.0 will work for all versions of PHP 5.4.

After downloading the extension, unzip it. Inside the zip file will be a DLL. Next, we need to move this DLL into the folder where your other PHP extensions exist. If you have XAMPP installed, this folder will most likely be `c:\xampp\php\ext`, and with Wamp, that would be `c:\wamp\bin\php_version_number\ext`, where `php_version_number` is replaced with the version number of PHP you have installed. For other versions of web server stacks, you will have to visit the documentation to find the PHP extension folder.

Now we have the extension where it needs to be, but we aren't done yet. We need to have PHP load the extension when it runs. So we have to locate the `php.ini` file and edit it. But guess what, we can use our `info.php` file to tell us where this file is. So load it again in your browser and search for **Loaded Configuration File**. Listed beside this entry is its location, as shown in the following screenshot:

Configuration File (php.ini) Path	C:\Windows
Loaded Configuration File	C:\zend\ZendServer\etc\php.ini
Scan this dir for additional .ini files	(none)
Additional .ini files parsed	(none)

Once you locate this file, open it with your text editor or IDE and scroll to the very bottom. This file can be quite long. At the very bottom of this file, you will want to add the following line to tell PHP to load Phalcon:

```
extension=php_phalcon.dll
```

Save the file. Some server stacks like XAMPP have desktop software to stop and start Apache, while others like Apache from the official site only have a tray icon to control stopping and starting of the server. Or, you can just restart Apache from the command line. Restart Apache now and Phalcon is installed. But let's check to make sure. Load <http://localhost/info.php> in your browser again and search for Phalcon and you should be greeted by a page as shown in the following screenshot:

<b>pdo_sqlite</b>	
PDO Driver for SQLite 3.x	enabled
SQLite Library	3.7.15.2
<b>phalcon</b>	
Version	1.2.0



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