



## Web Development with Symfony2

**Duration:** 4 days – 28 hours

**Price:** 1 990 € /person

**Code:** SF2C4

### GOALS

In four days, discover the essential of the Symfony2 framework with the best experts in the world. You will how to master the MVC design pattern, forms management, authentication principles and of course the best practices with unit testing and HTTP caching.

**PRE-REQUISITES:** Mastering Object Oriented Programming in PHP

**PUBLIC:** PHP web Developers

### FULL PROGRAM

#### OBJECT ORIENTED PROGRAMMING

- Classes vs objects
- Constructor / destructor
- Properties and methods
- Inheritance
- Visibility
- Exceptions
- Namespaces

#### EXPLORING SYMFONY2

- General introduction to the framework and its integrated tools
- Standard edition installation
- Symfony2 project architecture (application, bundles, libraries)
- request and response principle
- Routing configuration
- Environments
- Creating a new Bundle architecture

#### CONFIGURATION AND DEBUGGING TOOLS

- The web debug toolbar
- The profiler application
- Annotations, XML, YAML and PHP configuration

#### TEMPLATING WITH TWIG

- Twig template engine syntax
- Templates inheritance
- Templates and actions inclusion
- View helpers: filters, functions and macros
- Supporting output formats (html, json, xml, atom...)

## REQUEST PROCESSING

- Designing controller classes and actions
- Mapping controllers with the routing system
- Generating raw responses and template based responses
- Accessing request data
- Dealing with the end user's session
- Dealing with cookies
- Triggering a 404 error page and redirects

## INTERACTING WITH A RELATIONAL DATABASE

- Introduction to PDO (DSN, prepared statements, transactions...)
- Opening a connection on an SQLite or MySQL server
- Executing an SQL query on the database
- Securing SQLqueries with transactions and prepared statements
- Factoring the business logic into model classes
- Implementing the data mapper or active record patterns for model classes

## HANDLING END USER'S FORMS SUBMISSION

- Discovering the form framework
- Creating and processing basic forms
- Defining validation rules to validate submitted data
- Prototyping the form rendering with Twig
- Retrieving validated user's data
- Designing and validating advanced forms (embedded forms, file upload...)

## CONTRACTING A QUALITY INSURANCE WITH AUTOMATED TESTS

- Introduction to PHPUnit
- Installing the PHPUnit 3.5 unit testing framework
- Understanding the goals of unit testing the code
- Configuring a new unit test suite for PHPUnit
- Writing unit tests cases
- Executing the unit tests suite
- Generating and understanding the code coverage report
- Writing and executing functional tests

## SECURITY

- Securing your code against XSS issues
- Securing your code against CSRF issues
- Protecting your SQL queries to avoid SQL injection issues

## RESTRICTING ACCESS TO THE APPLICATION

- Configuring an Apache virtual host for a Symfony2 project
- Introduction to authentication and authorization principles
- Establishing an authentication with a web form
- Establishing an HTTP authentication
- Restricting actions thanks to an access control list
- Testing user's permissions from within the controller and the view layers

## IMPROVING CLIENT SIDE PERFORMANCES WITH HTTP CACHING AND ESI

- Introduction to HTTP cache
- Comparing caching solutions (HTTP, APC, memcached...)
- Modifying the response object before it is sent to the client
- Applying validation and expiration rules with HTTP headers
- Discovering and using Edge Side Includes (ESI)
- Installing et configuring the Symfony2 Reverse Proxy Cache

## EXTENDING SYMFONY2 AND TWIG

- Understanding the Dependency Injection (or Inversion of Control) design pattern
- Configuring new Symfony2 services in the dependency injection container
- Extending Twig with macros, functions and filters
- Installing and activating third party bundles