Using Adobe Flash Builder 4.5 for PHP

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Legal Notices

Using Adobe® Flash® Builder™ for PHP

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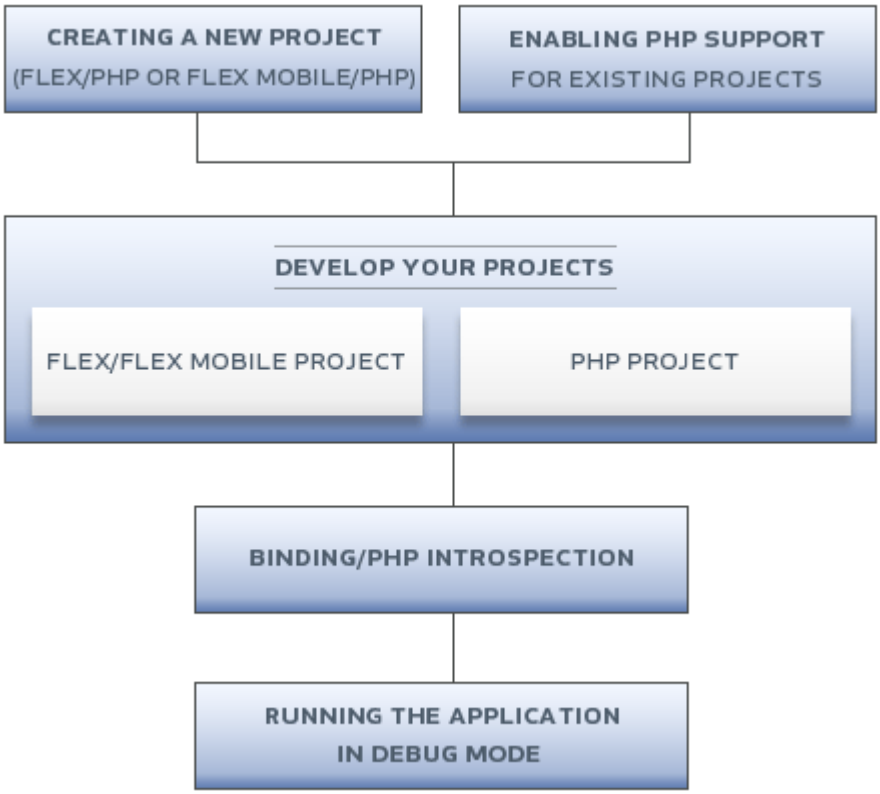
About

Flash Builder 4.5 for PHP is an integrated IDE based on Eclipse Helios that allows you to develop and test the Flex and PHP sides of your application together. Using the functionalities of Flash Builder and Zend Studio together in one environment means you can develop the client side and server side of your application in one place. Additionally, the Flash Builder 4.5 for PHP debugger allows you to debug your entire application (Flex and PHP) together, which makes finding and fixing bugs easier for you.



Using Flash Builder 4.5 for PHP includes the following:

- Installation Guide
- Working with Flash Builder 4.5 for PHP
  - Creating Projects
  - Enabling/Disabling PHP Support
  - Binding/PHP Introspection
  - Launching Your Application
- PHP Support Properties

Installation Guide

Prerequisites

This section describes the system requirements and components required to install and run Flash Builder 4.5 for PHP, which allows you to develop and debug your Flex and PHP code in one integrated IDE.

The prerequisites are:

1. Zend Server 5.x or above, or a compatible PHP application server.
   You will need a PHP application server to debug your application. Go to http://www.zend.com/en/downloads/ to downlaod Zend Server 5.x, the Zend PHP application server. For more information see the Zend Server Installation Guide.

Note:

Make sure to save the username and password for your Zend Server. If you installed the optional components MySQL and phpMyAdmin, the credentials are by default “root” as the username with no password.

2. Uninstall any existing installations of Adobe Flash Builder 4.5 for PHP from your machine.
3. Close any running browsers on your machine.
4. Close all applications running on your machine.
5. It is recommended to temporarily turn off virus protection during the installation process.

Note:

If you are using Windows 7 and Apache, ensure that you have UAC permissions for the folder “C:\Program Files\Zend\Apache2\htdocs”.
If you are using Windows 7 and IIS, ensure that you have UAC permissions for the folder “C:\inetpub\wwwroot ”.

Minimum System Requirements

For the most up to date system requirements see Flash Builder's System Requirements.

Once you have met the prerequisites you can install Flash Builder 4.5 for PHP.

Installing Flash Builder 4.5 for PHP

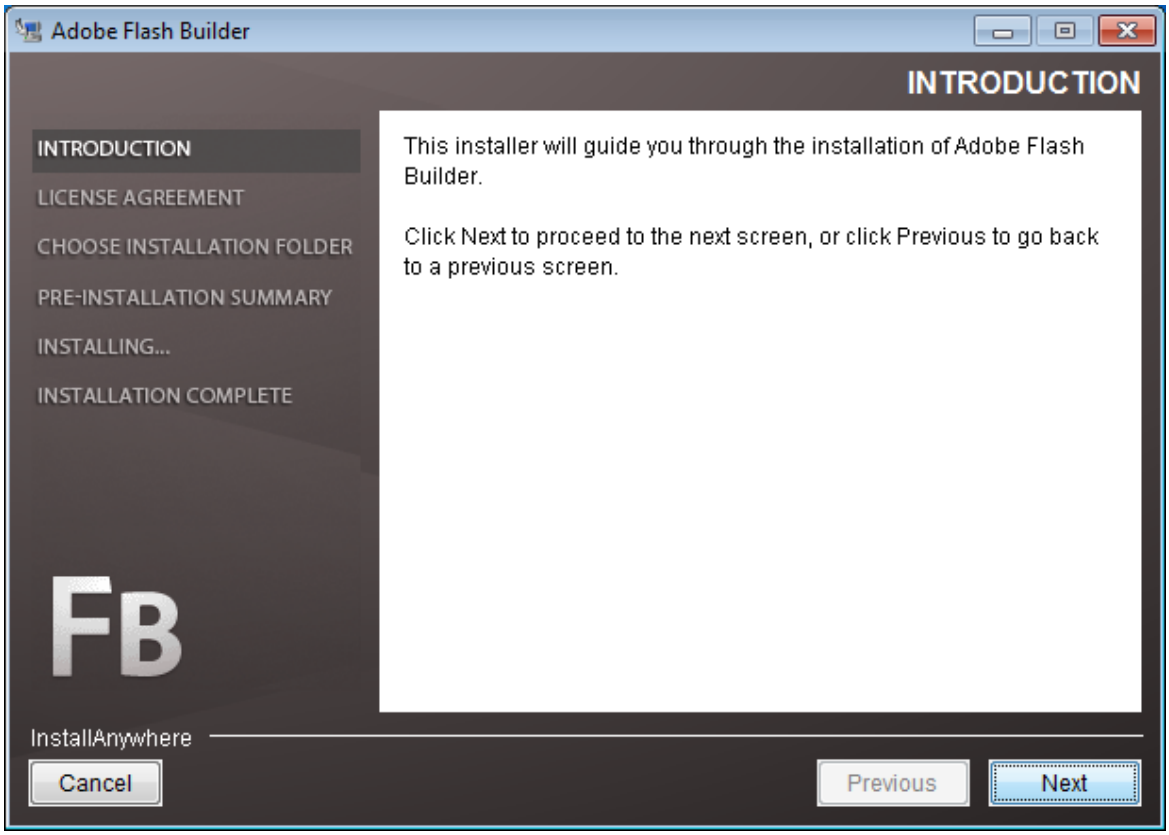
Before installing Flash Builder 4.5 for PHP make sure all prerequisites have been met.

Installing Flash Builder 4.5 for PHP on Windows

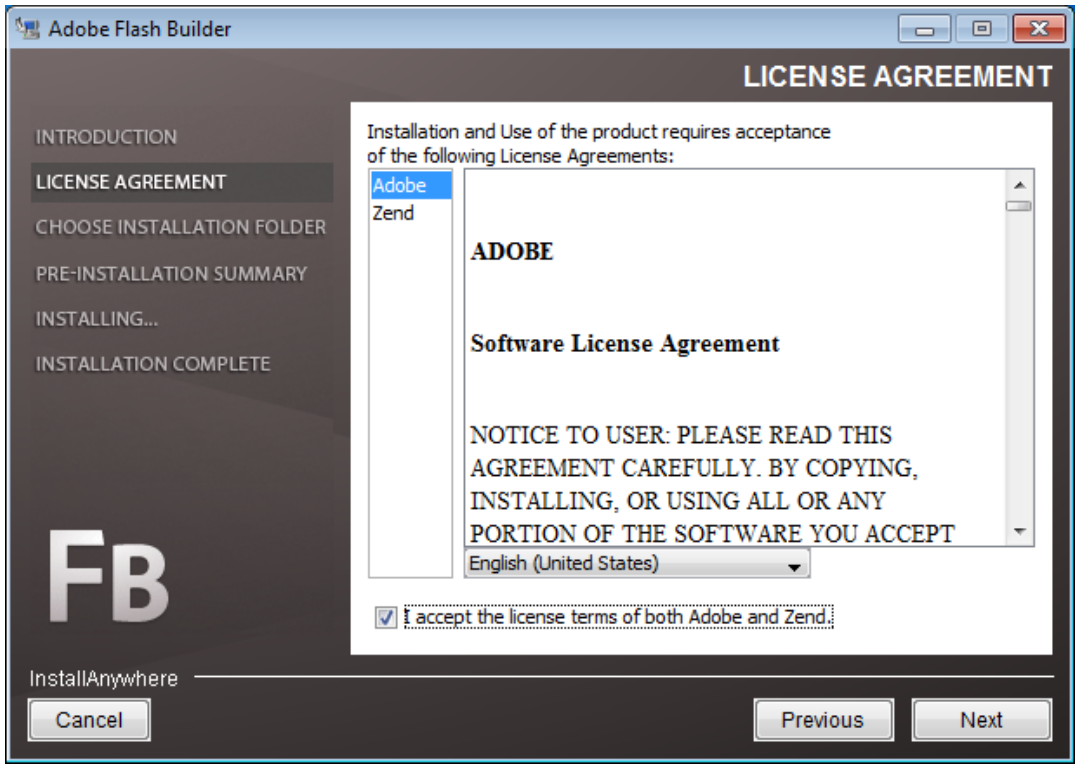
This procedure describes how to install Flash Builder 4.5 for PHP on Windows.

To install Flash Builder 4.5 for PHP:

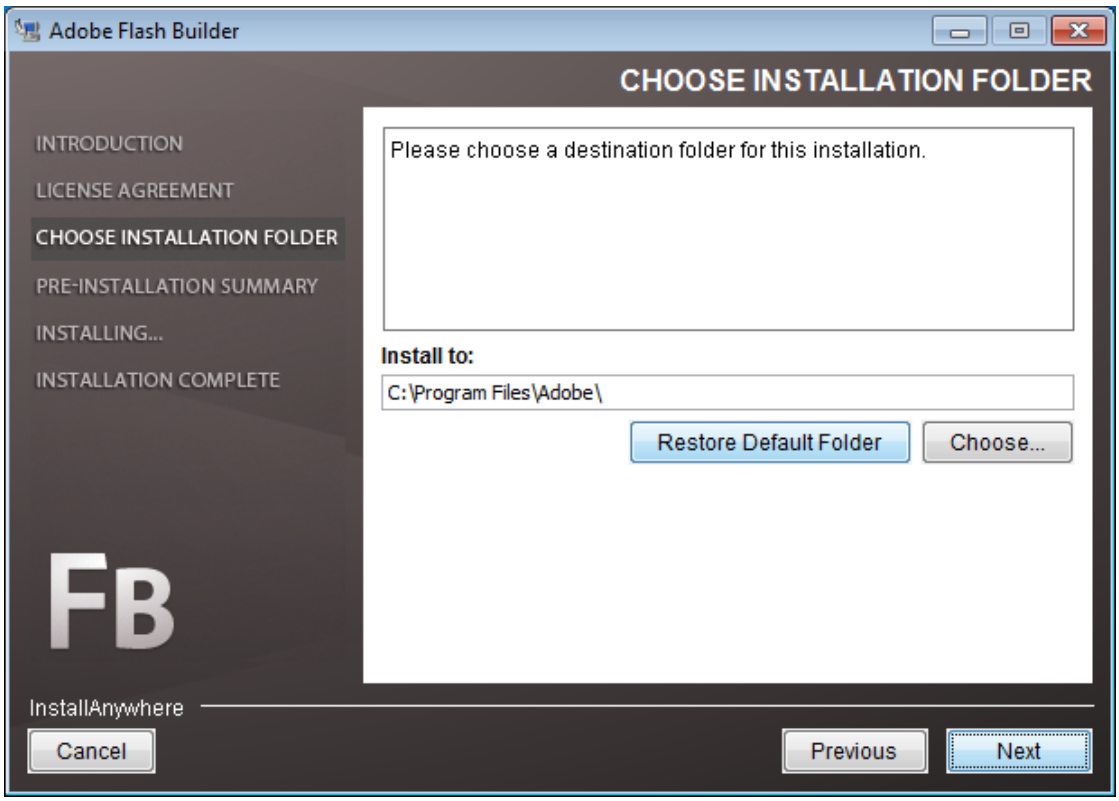
1. Go to http://www.zend.com/en/products/studio/flash-builder-for-php/downloads and save the Flash Builder 4.5 for PHP installation file, "FlashBuilderPHP_4_5_LS1.exe", in a temporary location on your machine.
   -OR- Insert the DVD in your drive and follow the on-screen instructions to launch the installer.
2. The File Download Complete dialog will inform you when the download is complete. Click **Run** in the dialog to launch the Installer.
   The Introduction dialog opens.



3. Click **Next** to open the License Agreement dialog.

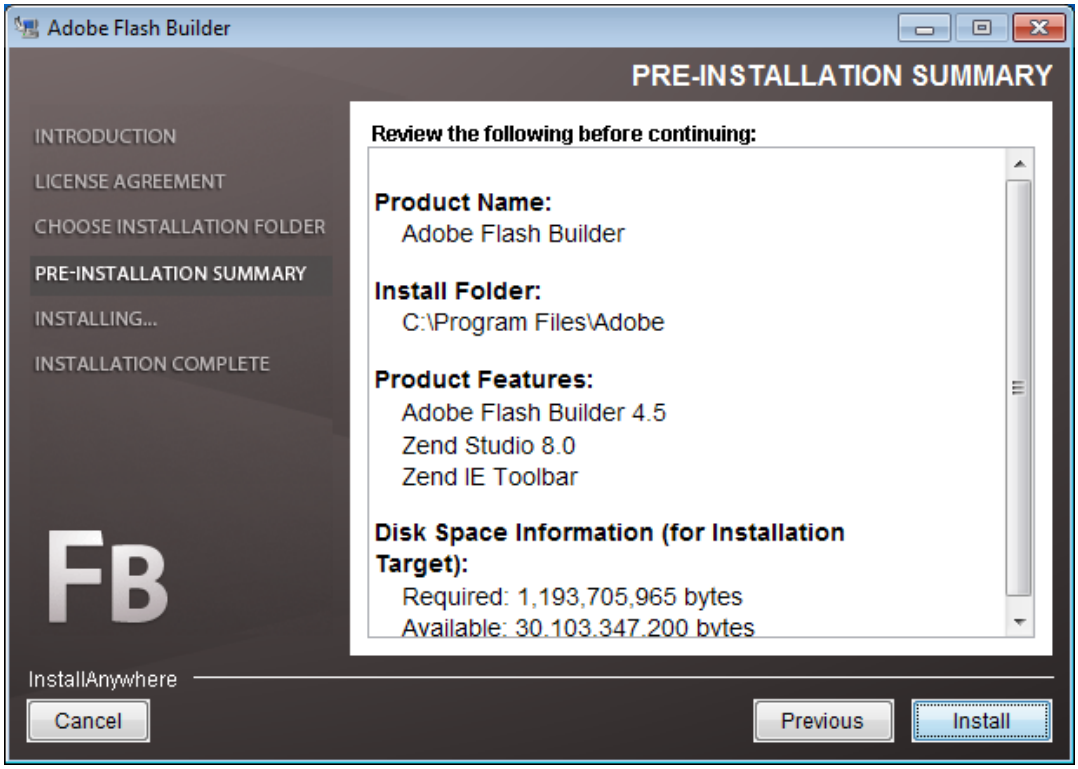


4. To see the Zend license click **Zend** in the left window.
   Select the 'I accept the terms of both Adobe and Zend' checkbox and click **Next** to open the Choose Installation Folder dialog.

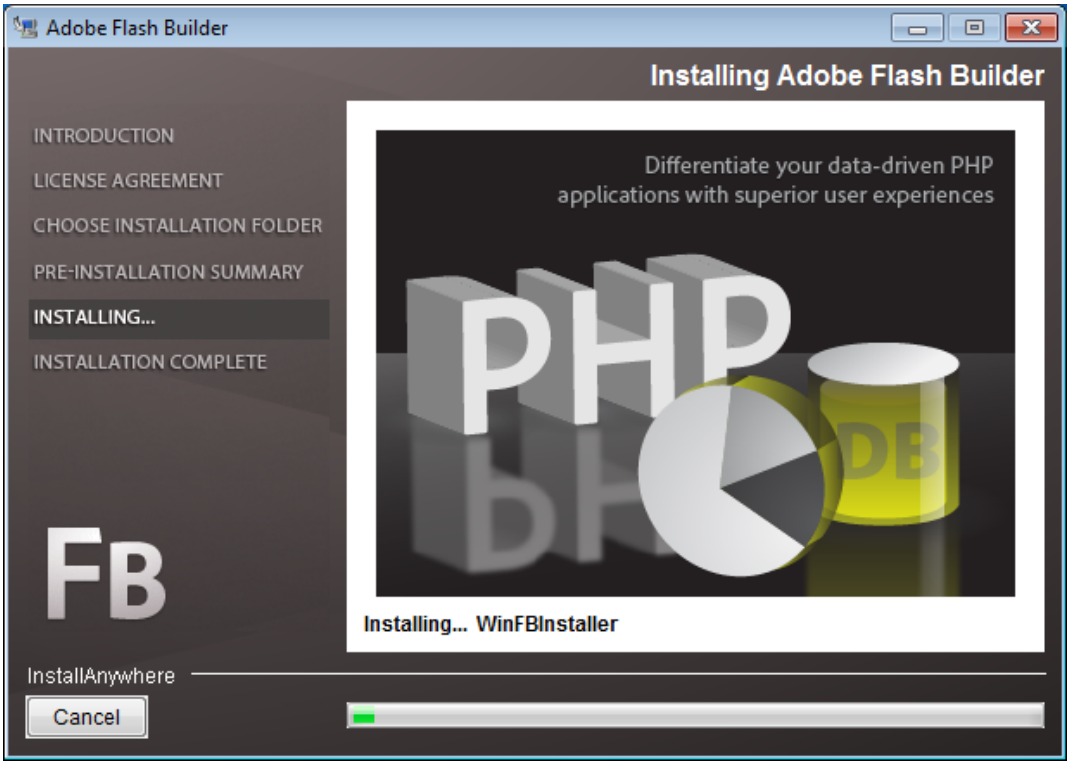


5. To select a location other than the default click **Choose**. Otherwise click **Next** to install to the default location.

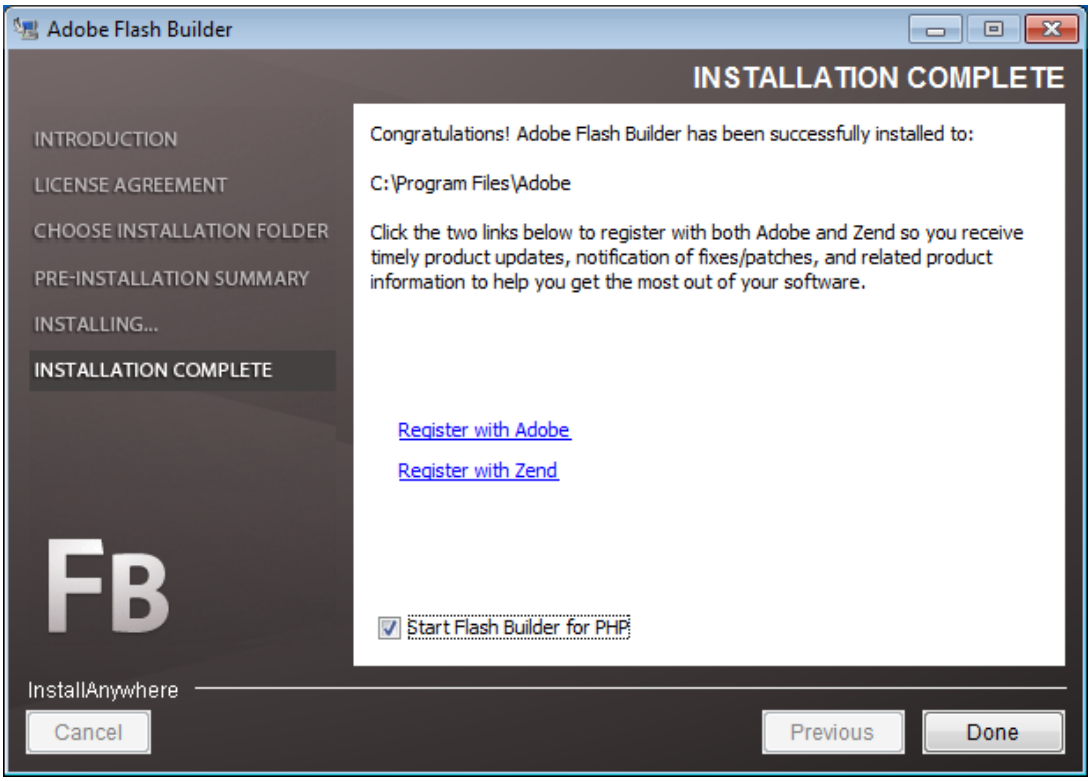
   The Pre-Installation Summary Dialog opens.



6. Review the information in the dialog. If any of the information is incorrect click **Previous** to change it in a previous screen. If the information is correct click **Install**.
   The Installing Adobe Flash Builder dialog opens.



7. When the installation is finished the Installation Complete dialog opens.



8. Select the 'Start Flash Builder for PHP' checkbox and click **Done** to exit the installation process and open Flash Builder 4.5 for PHP.
   To register your product with Adobe and Zend click on the links in the dialog.

To activate Flash Builder 4.5 for PHP see License Registration, or to start working with Flash Builder 4.5 for PHP see Working with Flash Builder 4.5 for PHP.

For information on uninstallation see Uninstalling Flash Builder PHP Edition.

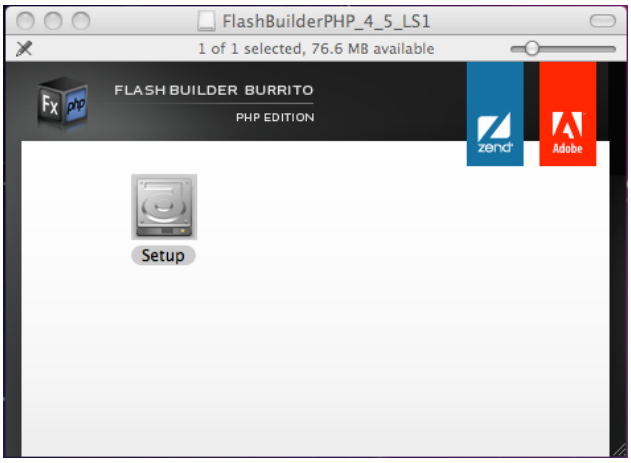
Installing Flash Builder 4.5 for PHP on Mac OS X

This procedure describes how to install Flash Builder 4.5 for PHP on Mac OS X.

To install Flash Builder 4.5 for PHP:

1. Go to http://www.zend.com/en/products/studio/flash-builder-for-php/downloads and save the Flash Builder 4.5 for PHP installation file, “FlashBuilderPHP_4_5_LS1.dmg”, in a temporary location on your machine.

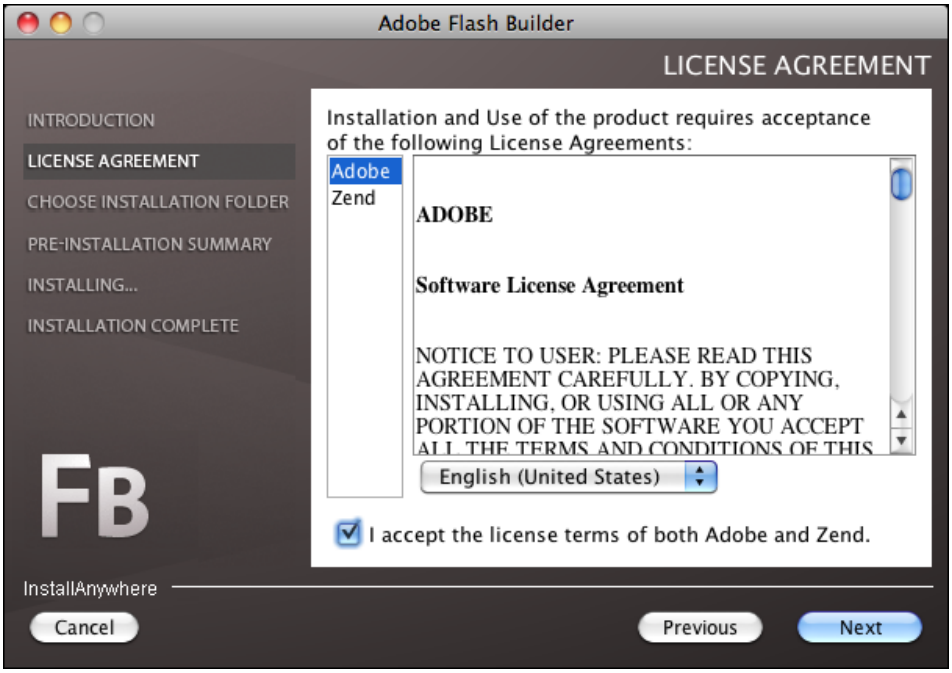
   -OR- Insert the DVD in your drive and follow the on-screen instructions to launch the installer.



2. When the download is complete click **Setup** to begin the installation.

   The Introduction dialog opens.

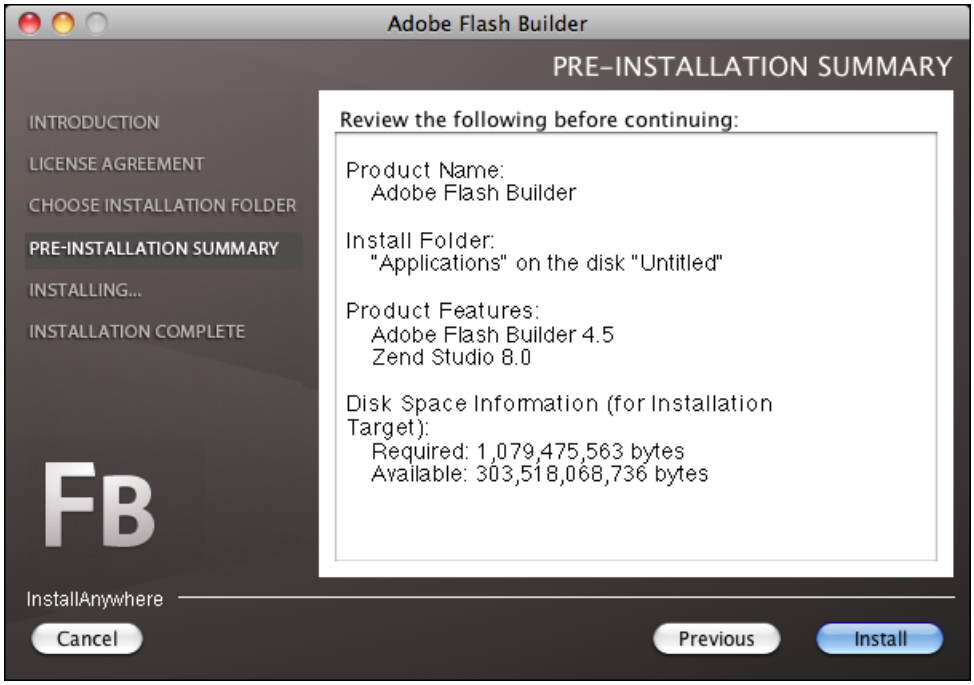
3. Click **Next** to open the License Agreement dialog.



4. To see the Zend license click **Zend** in the left window.
   Select the 'I accept the terms of both Adobe and Zend' checkbox and click **Next** to open the Choose Installation Folder dialog.

5. To select a location other than the default click **Choose**. Otherwise click **Next** to install to the default location.

The Pre-Installation Summary Dialog opens.



6. Review the information in the dialog. If any of the information is incorrect click **Previous** to change it in a previous screen. If the information is correct click **Install**.
   The Installing Adobe Flash Builder dialog opens.

7. When the installation is finished the Installation Complete dialog opens.

8. Select the 'Start Flash Builder for PHP' checkbox and click **Done** to exit the installation process and open Flash Builder 4.5 for PHP.

   To register your product with Adobe and Zend click on the links in the dialog.

Flash Builder 4.5 for PHP is now installed on your machine. To activate Flash Builder 4.5 for PHP see License Registration, or to start working with Flash Builder 4.5 for PHP see Working with Flash Builder 4.5 for PHP.

For information on uninstallation see Uninstalling Flash Builder 4.5 for PHP.

License Registration

Once Flash Builder 4.5 for PHP is installed, all its features will be available for a 60 day trial. At the end of the 60 day trial, the professional features will be disabled.

To enjoy the full range of Flash Builder 4.5 for PHP functionality, you need to register a valid Flash Builder 4.5 for PHP license.

Note:

A Flash Builder license is not valid for Flash Builder 4.5 for PHP.

Registering a License

This procedure describes how to register a valid Flash Builder 4.5 for PHP license. If you have already entered a license into Flash Builder 4.5 for PHP but would like to change it, you must first deactivate the license and close the product.

To register a license:

1. Open Flash Builder 4.5 for PHP on your machine.
   The Flash Builder 4.5 for PHP Trial dialog opens.

2. Mark the 'Provide a serial number' box and enter your serial number.
   If a green check appears next to the serial number, it is valid. If a red X appears, the license is not valid.

3. Once you have entered a valid license click **Continue**.
   Flash Builder 4.5 for PHP opens with all of the functionalities available.

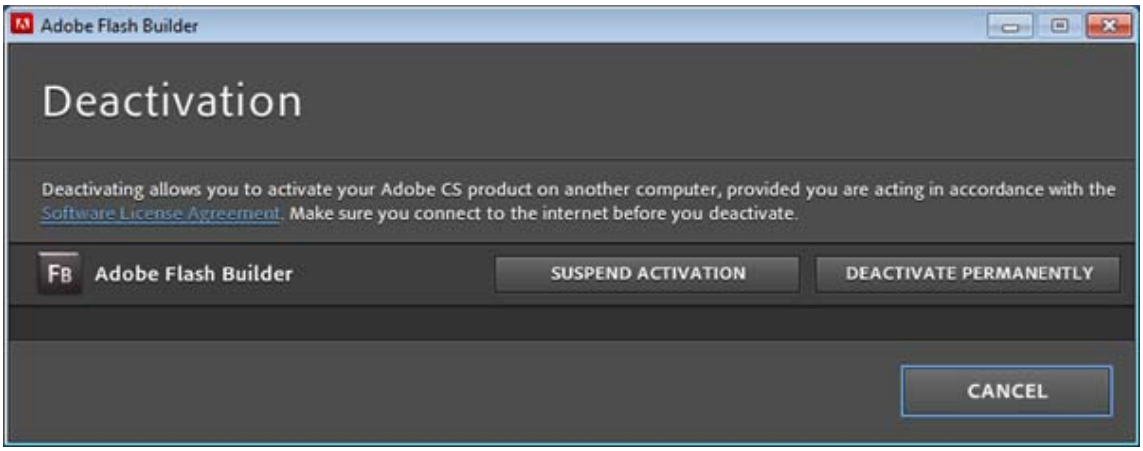
For information on how to deactivate your license see Deactivating a License.

Deactivating a License

This procedure describes how to deactivate a license. This will deactivate your Flash Builder 4.5 for PHP and all of its functionalities. In order to deactivate a license, you must have first registered a valid license.

To deactivate a license:

1. Go to Help **Deactivate | Flash Builder 4.5 for PHP**.
   The Deactivation dialog opens.



2. This dialog has the following options:
   - Suspend Activation - This option will not deactivate a Flash Builder 4.5 for PHP license.
   - Deactivate Permanently - Deactivates the product and removes your serial number. This option will deactivate a Flash Builder 4.5 for PHP license and allow you to activate with a different license the next time you run the product.
3. Select the desired option and click **Done**.
4. Close Flash Builder 4.5 for PHP for the deactivation to take effect.

After deactivating the product, you must register a valid license to use the functionalities of Flash Builder 4.5 for PHP. For more information see Registering a License.

Upgrading Flash 4.5 for PHP

Before upgrading you must have installed Flash Builder 4.5 for PHP.

Upgrading Flash Builder 4.5 for PHP

This procedure describes how to upgrade Flash Builder 4.5 for PHP when there is already a previous version installed.

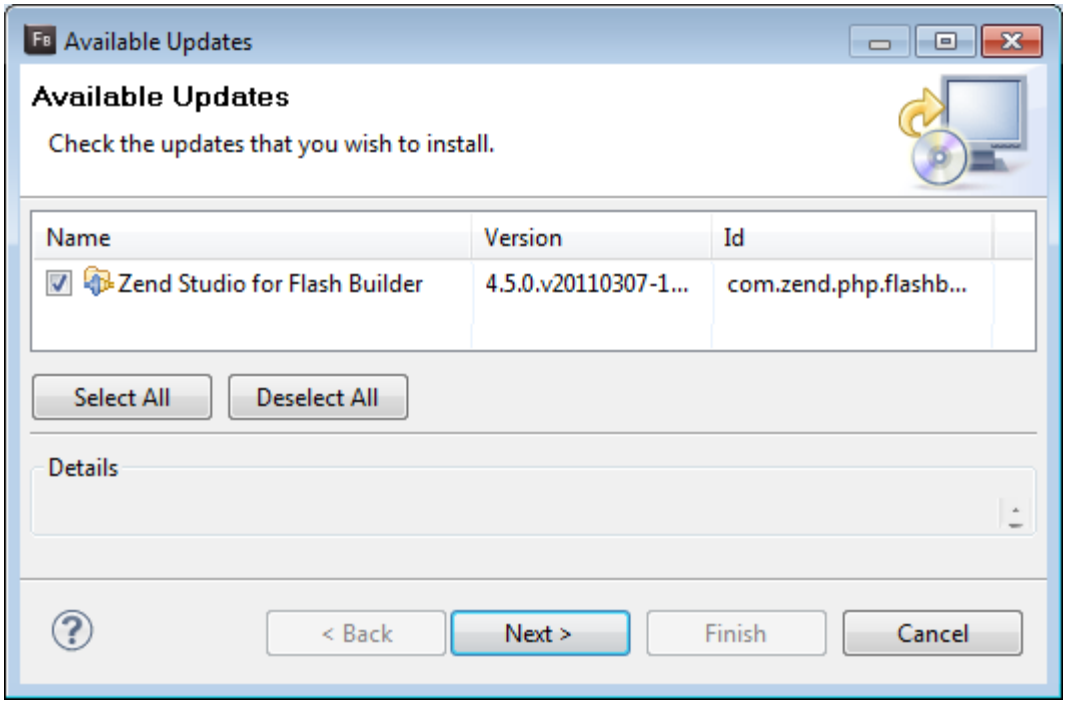
Note:
In order to update you should sign on to your operating system with the same user permissions that were used during the initial installation of Flash Builder 4.5 for PHP.

To update an existing Flash Builder 4.5 for PHP installation:

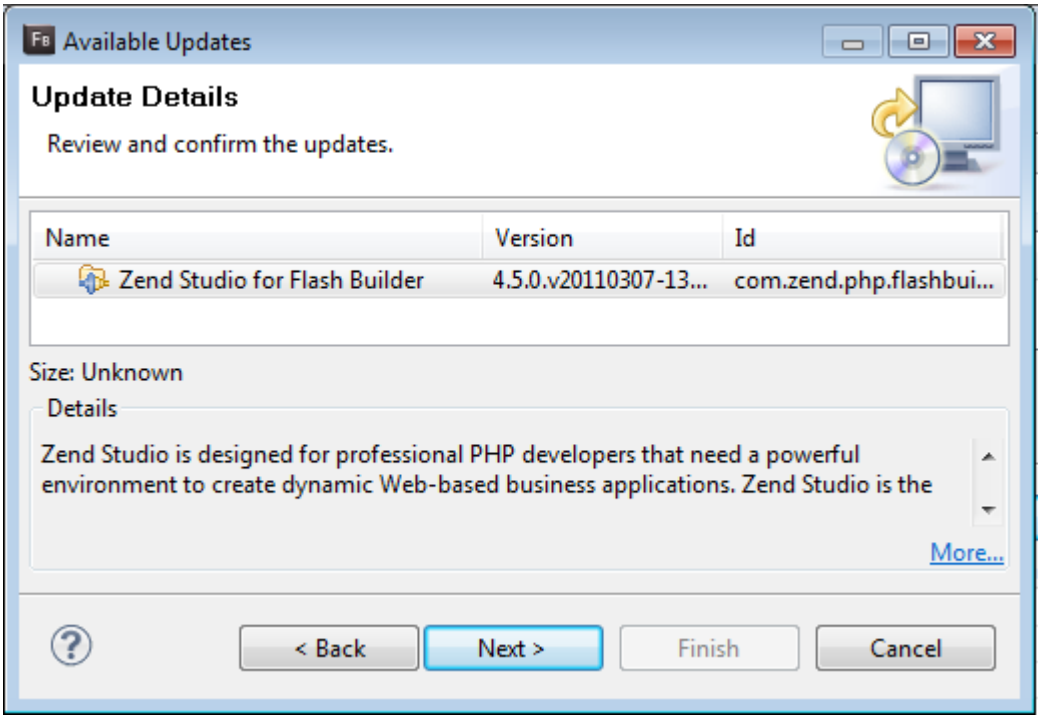
1. Windows - Launch Flash Builder 4.5 for PHP as an administrator by selecting **Run as Administrator** from the applications Right Click Menu.
   Mac - Run Flash Builder 4.5 for PHP with administrative privileges.

Important Note:
To update on a Mac, you must first start Flash Builder with following command: "/Applications/Adobe Flash Builder 4.5/Adobe Flash Builder 4.5.app/Contents/MacOS/Adobe Flash Builder 4.5" -configuration "/Applications/Adobe Flash Builder 4.5/eclipse/configuration/"

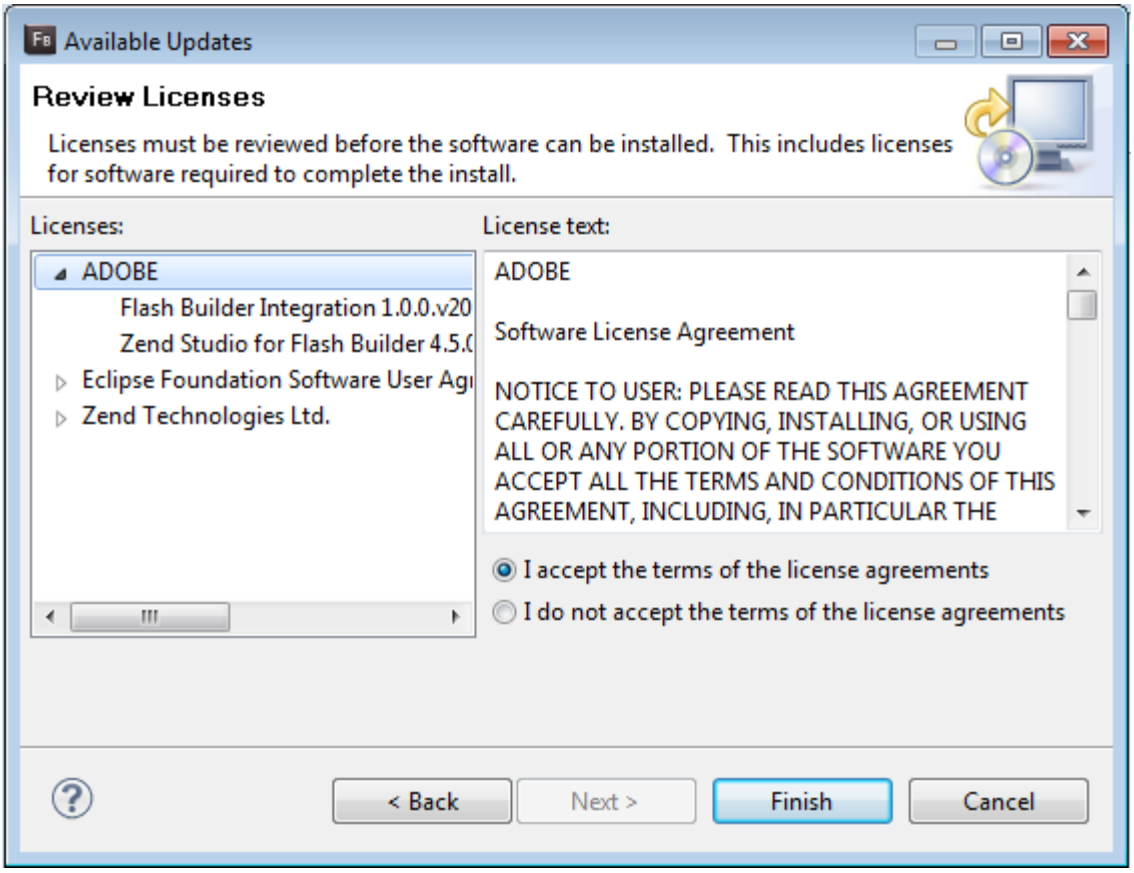
2. From the Menu Bar, go to **Help | Software Updates**.
   The Contacting Software Sites screen opens with a progress bar as it searches for available updates.
   Flash Builder 4.5 for PHP's update site is already set as an available Update Site. To learn how to add an update site manually see Adding an Update Site.
3. If there are any updates, the Available Updates wizard opens.



4. Select which updates you would like to install and click **Next**.
   The Update Details dialog opens.



5. Review and confirm the updates that are waiting to be installed and click **Next**.
   The Review Licenses dialog opens.



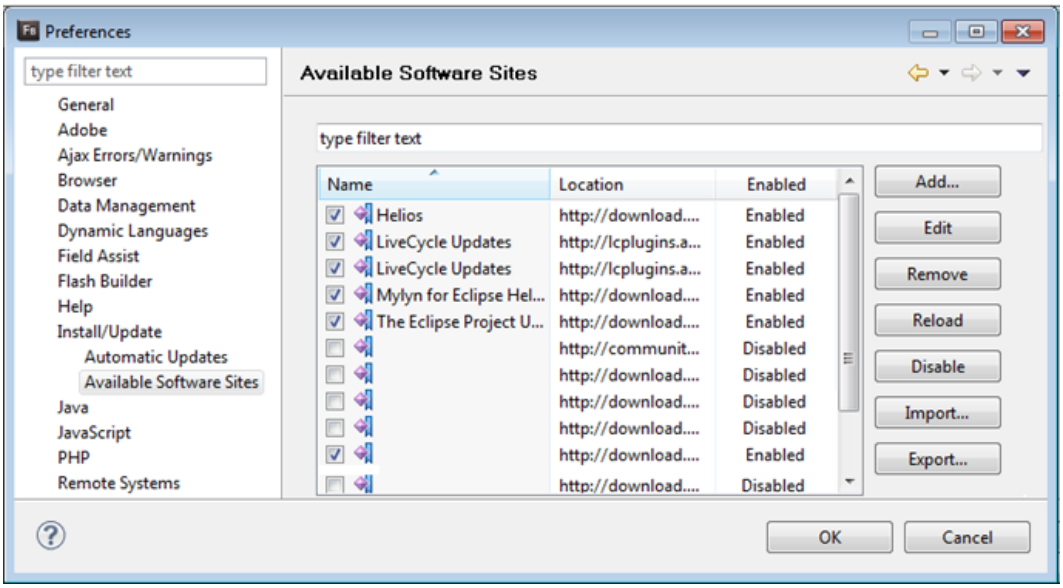
6. Review the licenses in the dialog. Expand a node in the Licenses box to see the different licenses available, and select a license to display it in the License text box. Mark the 'I accept the terms of the License Agreements' checkbox and click **Finish**. The Update screen opens with a progress bar of the updates.
7. From this screen you can:
    - Run the update in the background **-** Choose to run the updates in the background by clicking **Run in Background** or mark the 'Always run in background' checkbox to save your choice for the future.
    - Cancel the update - Click **Cancel** to cancel the update.
    - Expand/collapse the update details - Click **Details** to expand or collapse the details of the update.

   The progress bar will close when the updates are complete.
8. When prompted to restart Flash Builder 4.5 for PHP click **Restart Now** for the update to take effect.

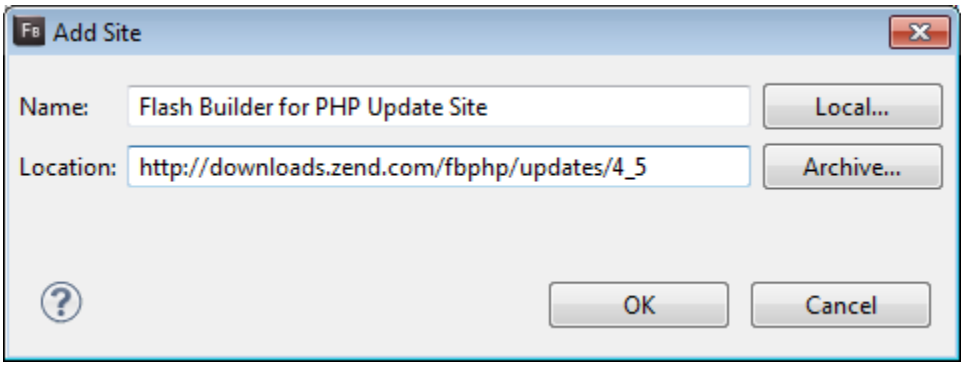
Adding an Update Site

To add an update site:

1. Go **Window | Preferences | Install/Update | Available Software Sites**.
   The Available Software Sites Preferences page opens.



2. Click **Add** to open the Add Site dialog.



3. Enter a name and URL for your update site.
   The Flash Builder 4.5 for PHP update site is "http://downloads.zend.com/fbphp/updates/4_5".
4. Click **OK** to return to the Available Software Sites Preferences page with your update site added.
5. Click **OK** to save the changes.

Your update site has been added. You can now upgrade Flash Builder 4.5 for PHP.

Uninstalling Flash Builder 4.5 for PHP

Uninstalling Flash Builder 4.5 for PHP on Windows

When uninstalling Flash Builder 4.5 for PHP on windows, you can uninstall one of the following options:

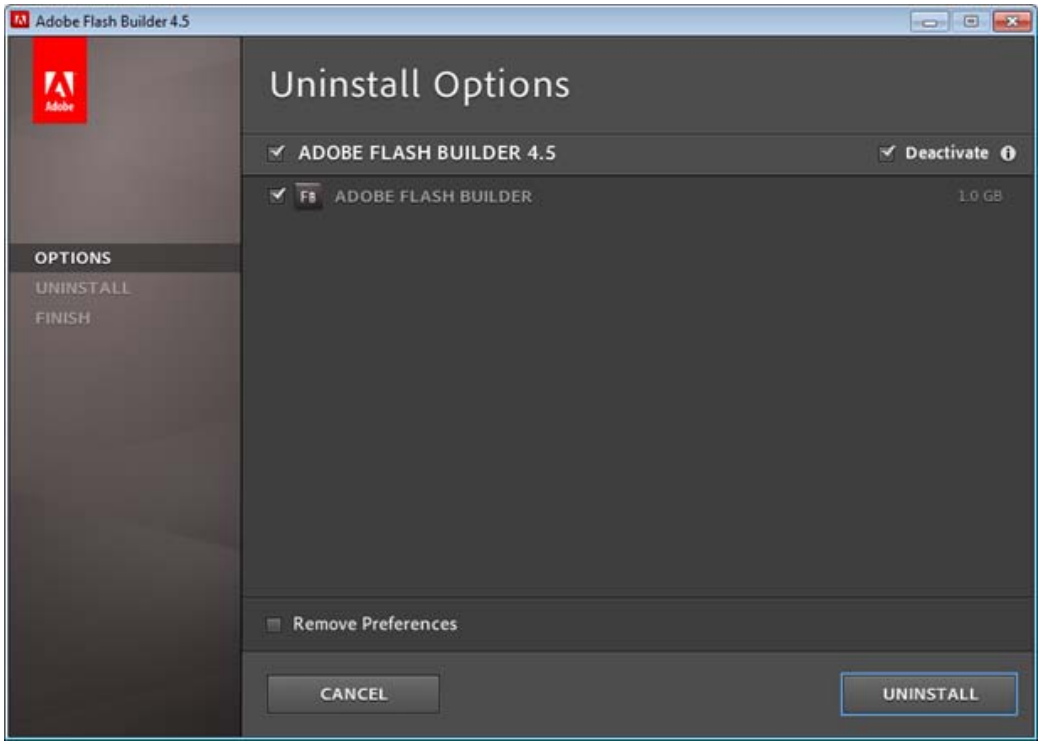
- Adobe Flash Builder 4.5 - Select this option to uninstall the Adobe Flash Builder components.
- Adobe Flash Builder 4.5 for PHP - Select this option to uninstall the Zend toolbars and PHP components.

Uninstalling Adobe Flash Builder 4.5

Uninstalling Adobe Flash Builder 4.5 will uninstall the Flash Builder components of the product. To uninstall the PHP components of Flash Builder 4.5 for PHP see Uninstalling Adobe Flash Builder 4.5 for PHP.

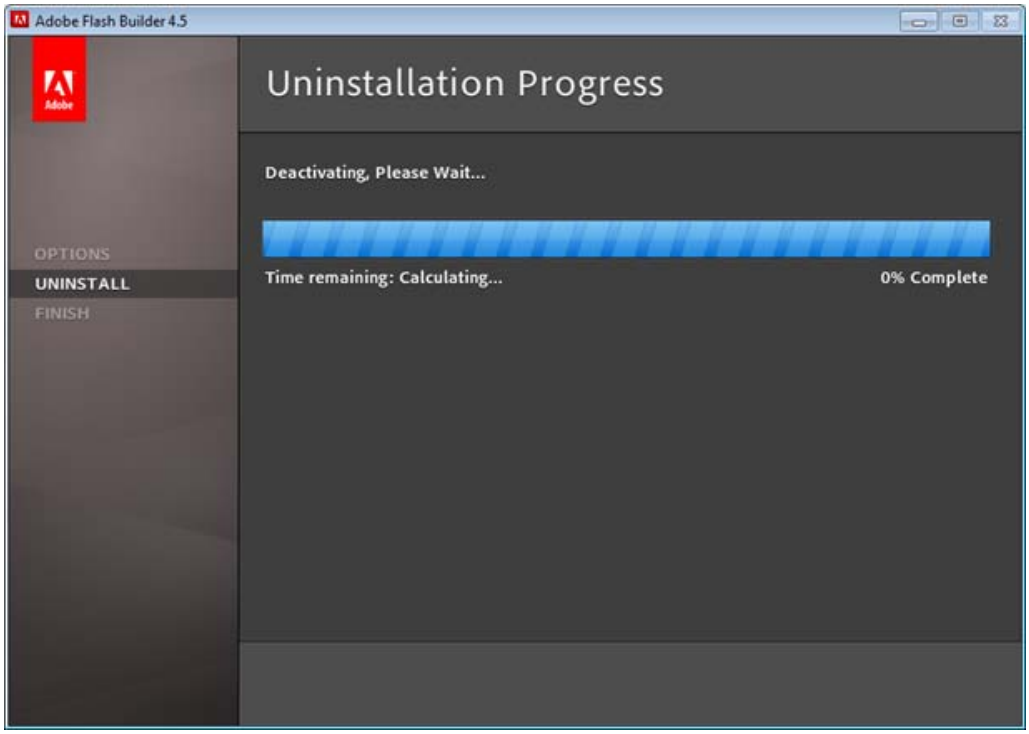
To Uninstall Adobe Flash Builder 4.5:

1. Close any running instance of Flash Builder 4.5 for PHP and go to the Start menu on your computer and select the Control Panel.
2. In the Control Panel select Add or Remove Programs.
   A list of all programs appears.
3. Select Adobe Flash Builder 4.5.
4. The Uninstall Adobe Flash Builder 4.5 wizard opens.



5. Click **Uninstall** to uninstall the product.

   The Uninstall tab opens.



6. When the uninstallation is complete the Uninstall Complete dialog opens.

7. Click **Done** to close the dialog.

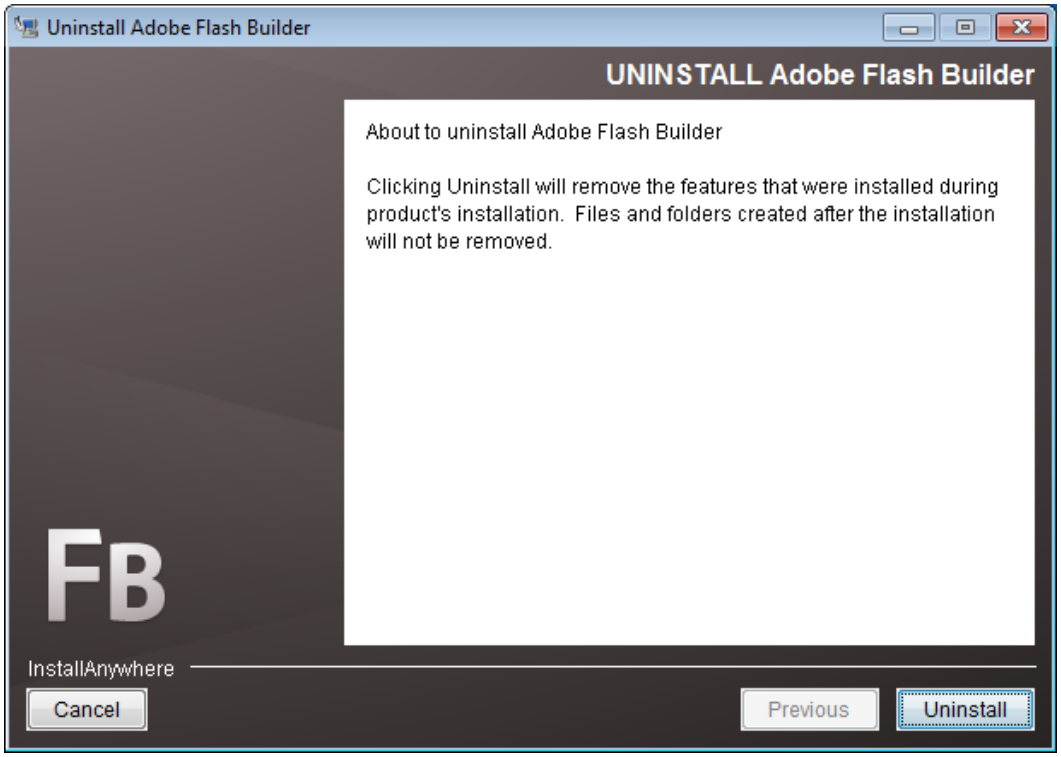
For information on installing the product see Installing Flash Builder 4.5 for PHP.

Uninstalling Adobe Flash Builder 4.5 for PHP

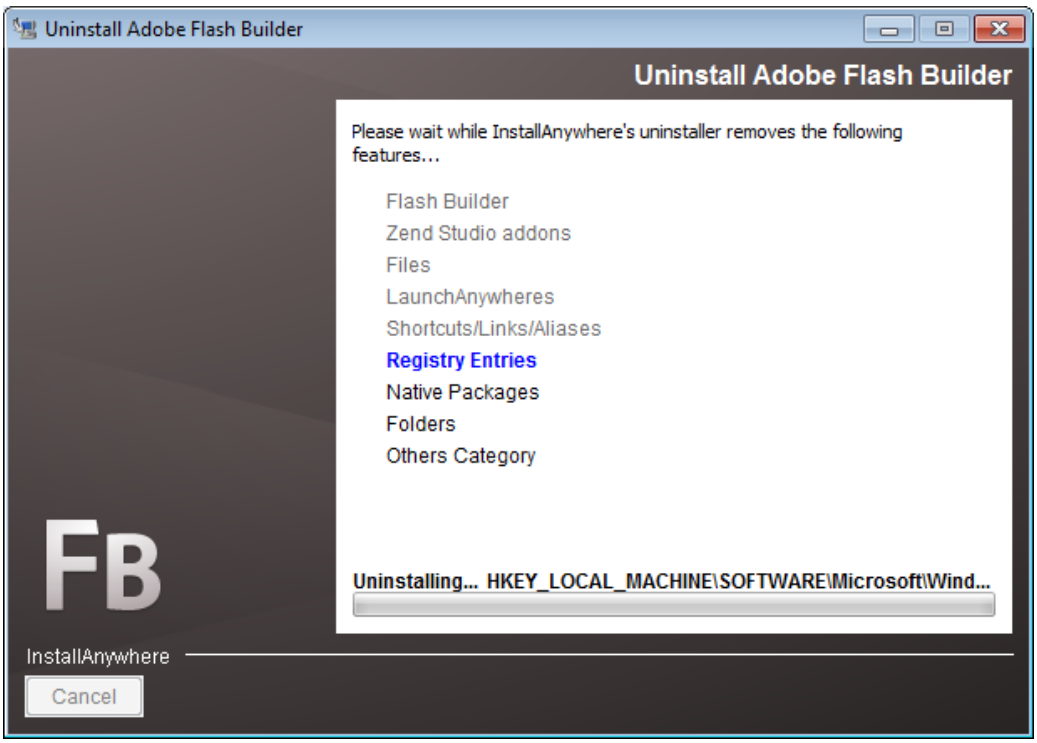
Uninstalling Adobe Flash Builder 4.5 for PHP will uninstall the PHP components of the product. To uninstall the Flash Builder components of Flash Builder 4.5 for PHP see Uninstalling Adobe Flash Builder 4.5.

To Uninstall Flash Builder 4.5 for PHP:

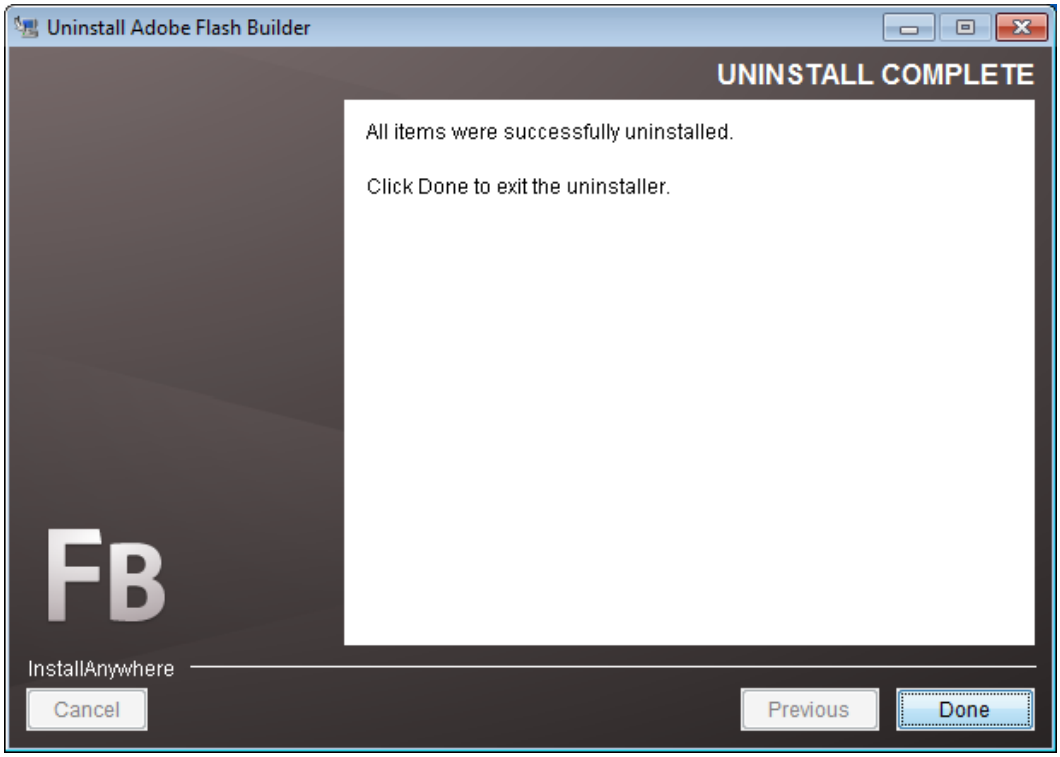
1. Close any running instance of Flash Builder 4.5 for PHP and go to the Start menu on your computer and select the Control Panel.
2. In the Control Panel select Add or Remove Programs.
   A list of all programs appears.
3. Select Adobe Flash Builder 4.5 for PHP.
4. The Uninstall Adobe Flash Builder 4.5 for PHP wizard opens.



5. Click **Uninstall** to uninstall the product.
   The Uninstalling Adobe Flash Builder dialog opens.



6. When the uninstallation is complete the Uninstall Complete dialog opens.



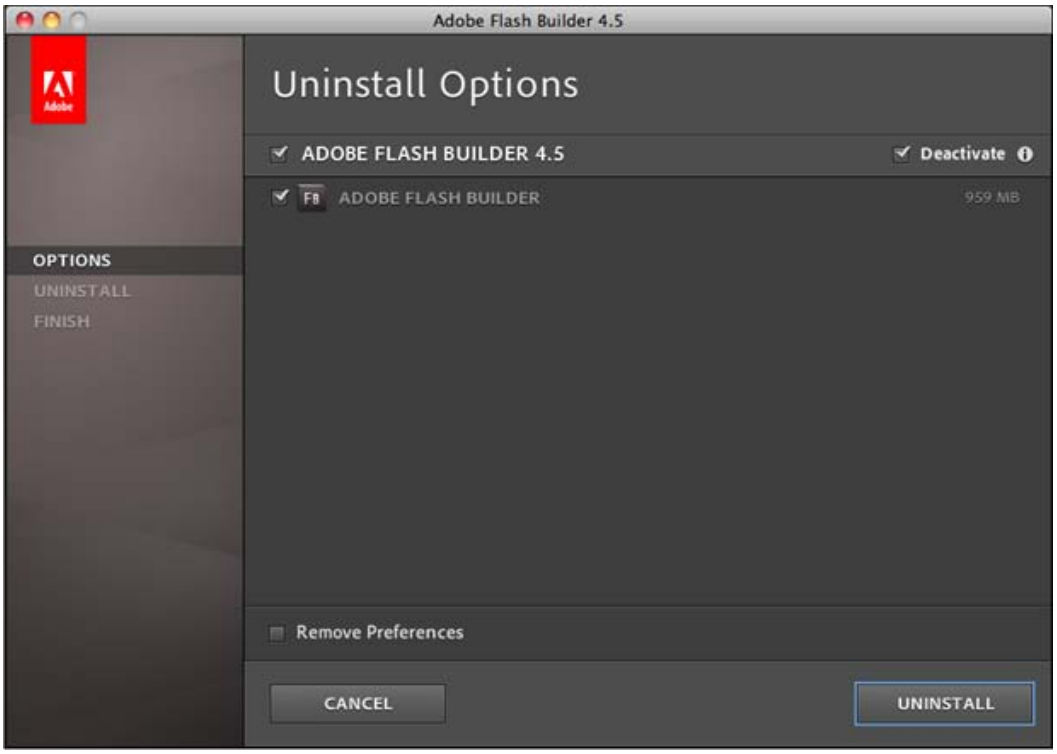
7. Click **Done** to close the dialog.

For information on installing the product see Installing Flash Builder 4.5 for PHP.

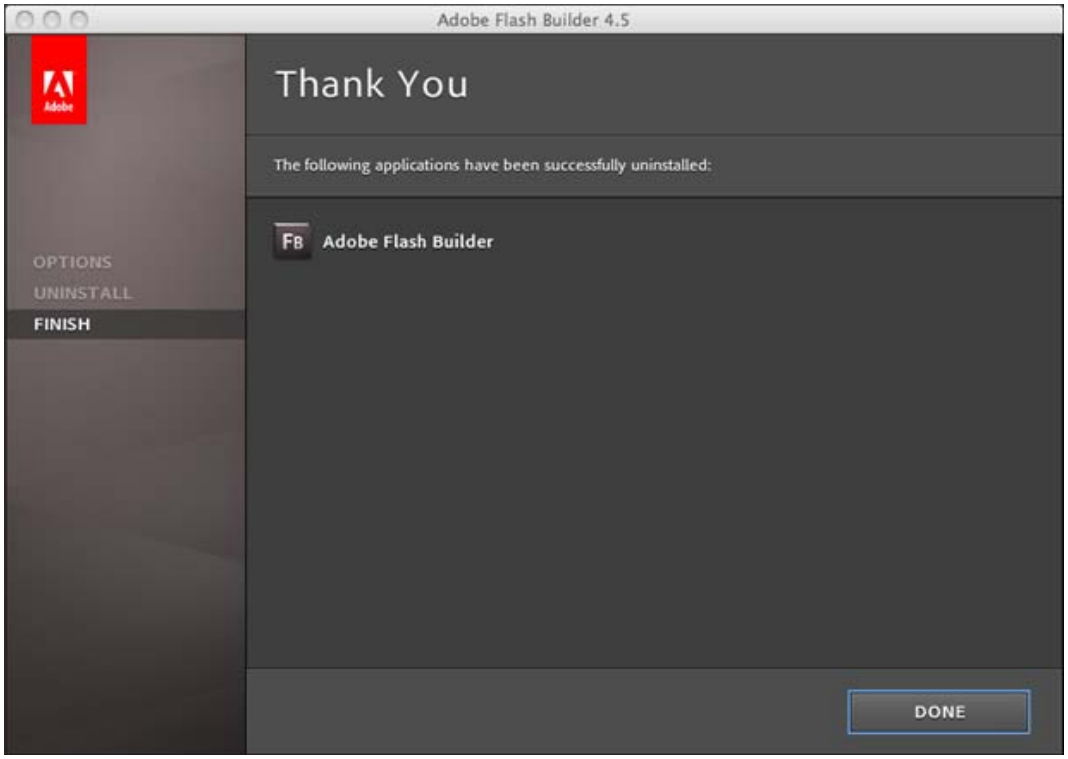
Uninstalling Flash Builder 4.5 for PHP on Mac

To uninstall Flash Builder 4.5 for PHP on Mac:

1. Close any running instance of Flash Builder 4.5 for PHP.
2. Go to the directory in which you placed Flash Builder 4.5 for PHP during the installation process, and click **Uninstall Adobe Flash Builder**.
   The Uninstall Options dialog opens.



3. Click **Uninstall**.
4. When the unistallation is finished the Finish dialog opens.

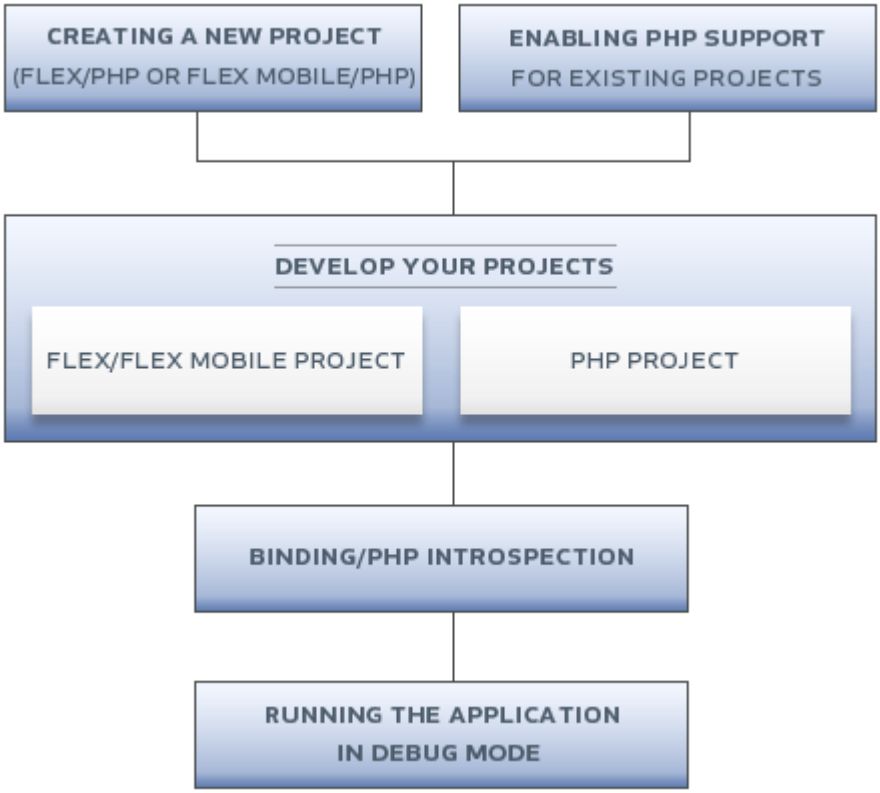


For information on installing the product see [Installing Flash Builder 4.5 for PHP](#).

Working with Flash Builder 4.5 for PHP

Flash Builder 4.5 for PHP is an integrated IDE based on Eclipse Helios that allows you to develop and test the Flex and PHP sides of your application together. Flash Builder 4.5 for PHP's functionalities make creating an application with a Flex client side and a PHP server side easy, whether it be a web or mobile application. Additionally, the integrated debugger gives you the option to debug both sides of your application simultaneously, or each one separately.

Flash Builder 4.5 for PHP simplifies creating your application by offering an easy to follow workflow that can be adjusted according to your specific needs.



Flash Builder 4.5 for PHP allows you to perform the following tasks:

- Create Projects
  - Create a New Flex/PHP Project
  - Create a New Flex Mobile/PHP Project
- Enable/Disable PHP Support
- Bind Data/PHP Introspection

        - Introspect PHP Services
        - Bind Data
    - Launch Your Application
        - Run a Flex/PHP Application
        - Run a Flex Mobile/PHP Application
        - Debug a Flex/PHP Application
        - Debug a Flex Mobile/PHP Application

Creating Projects

Flash Builder 4.5 for PHP allows you to create a Flex/PHP project and a Flex Mobile/PHP project. Creating these creates a pair of projects; one Flex (or Flex Mobile) project, and one PHP project. The Flex (or Flex Mobile) project automatically has PHP Support enabled, creating modular code, which allows the two projects to be independent and yet still be aware of one another so that they can create one joint application. This gives you the advantage of being able to distinguish between Flex developers (client side), and developers/back end developers (PHP server side).

Flash Builder 4.5 for PHP allows you to create:

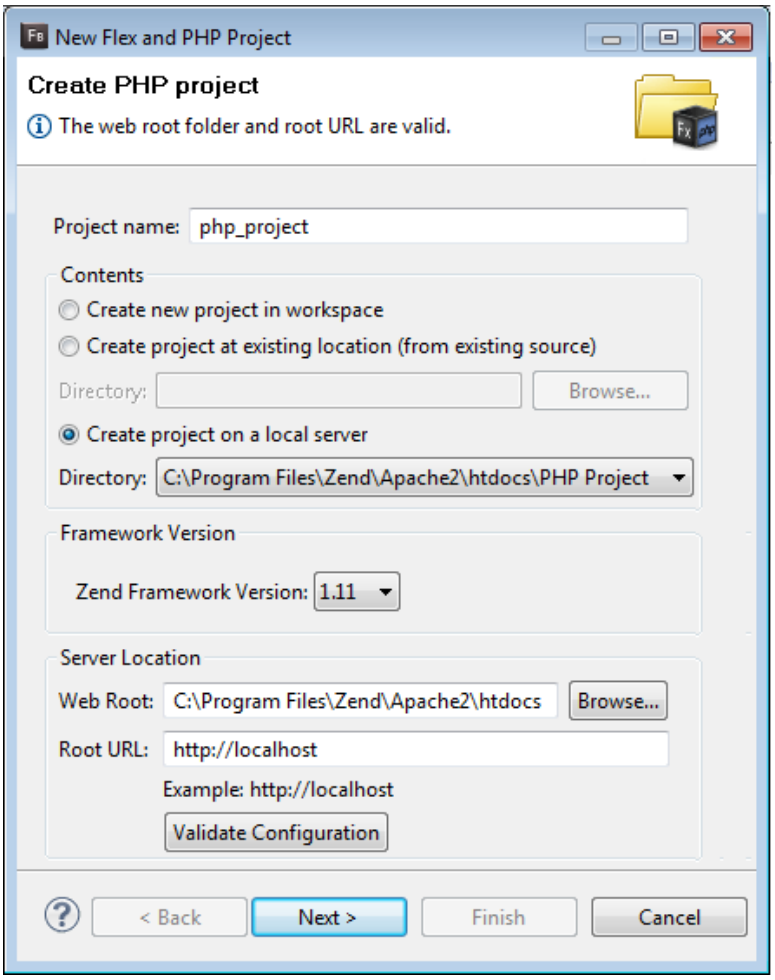
- A Flex/PHP Project
- A Flex Mobile/PHP Project

Creating a New Flex/PHP Project

Creating a Flex/PHP project creates a pair of projects; one Flex web project (an application that runs in Flash Player in a browser), and one PHP project. The Flex web project automatically has PHP Support enabled, creating modular code, which allows the two projects to be independent and yet still be aware of one another so that they can create one joint application. This gives you the advantage of being able to distinguish between Flex developers (client side), and developers/back end developers (PHP server side).

To create a new Flex and PHP project:

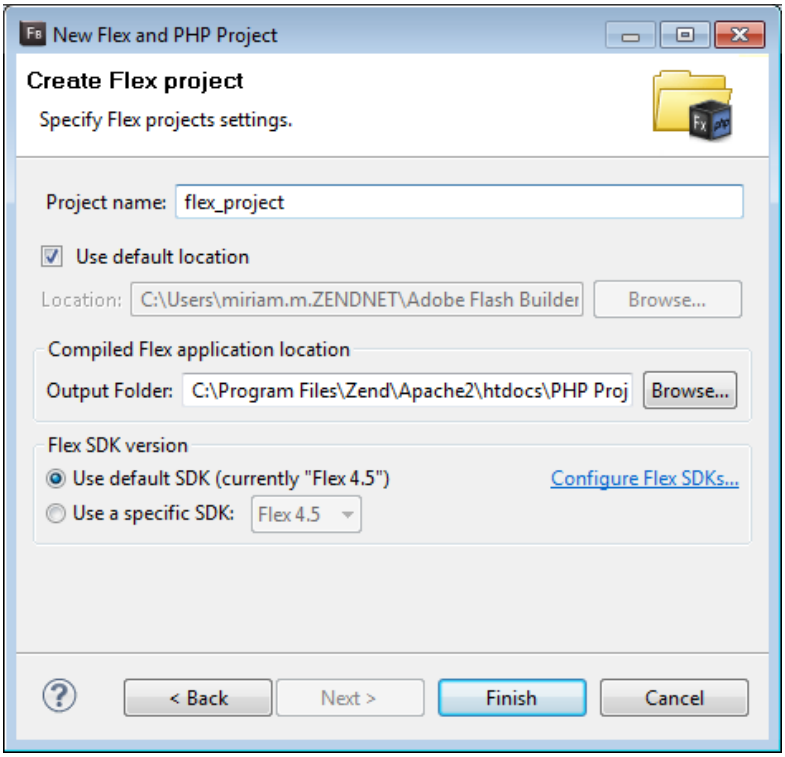
1. Go to **File | New | Flex and PHP Project**.
   -Or- In the Package Explorer view, right-click and select **New | Flex and PHP Project**..
   The New Flex and PHP Project wizard opens.



2. This dialog contains the details of your PHP project. In the dialog, enter the following information:

- Project name - The name for your PHP project.
- Contents - Select whether to:
    - Create new project in workspace - Creates a new PHP project in the workspace directory.
    - Create project at existing location (from existing source) - Creates a PHP project pointing to files situated outside of the workspace. Click **Browse** to select the required source content.
    - Create project on a local server - Creates the project on a local server. This option will only be available if a local Zend Server has been configured in the PHP Servers Preferences.
    - Framework version - Select the Zend Framework version you would like to work with from the dropdown menu.
- Server location - Enter the following
    - Web Root - The document root of your server.
      The web root is the directory where your web pages exist in your server, for example “C:\Program Files\Zend\Apache2\htdocs”.
    - Root URL - The URL of your server, for example “http://localhost”.

3. Click **Validate Configuration**.
   If Flash Builder 4.5 for PHP cannot validate the configuration, review your web root and root URL and make sure they both exist on the machine.
4. If the configuration has been validated click **Next**.
   The Create Flex Project dialog opens.



5. Enter the following information:

- Project Name - The name for your Flex project.
- Project location - Decide whether to use the default location, or select your own by clicking **Browse**.
- Output folder - Select an output folder for your compiled Flex/PHP application, where compiled output files are stored. By default they are stored in the “public” folder of your PHP project.

  To achieve streamlined debugging, the "bin-debug" folder of your Flex project will refer to this folder.
- Flex SDK version - Select whether to:
  - Use default SDK (currently “Flex Hero”) - Mark this check-box to use the default SDK.
  - Use a specific SDK - Use a different SDK than the default.

6. Click **Finish**.

   Your Flex/PHP application is created.

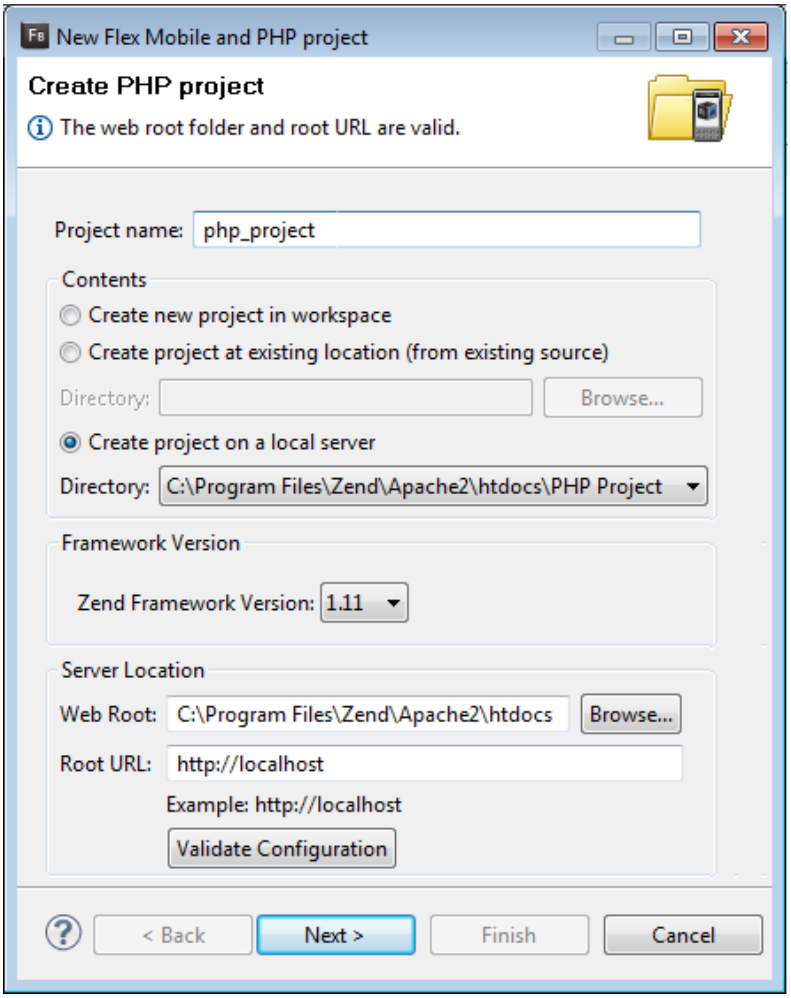
Creating a Flex/PHP application creates a PHP project and a Flex Web project with PHP Support enabled in your workspace. You can now use a PHP class you create and perform PHP Introspection to begin binding the data.

Creating a New Flex Mobile/PHP Project

Creating a Flex Mobile/PHP project creates a pair of projects; one Flex mobile project, and one PHP project. The Flex mobile project automatically has PHP Support enabled, creating modular code, which allows the two projects to be independent and yet still be aware of one another so that they can create one joint application. This gives you the advantage of being able to distinguish between Flex developers (client side), and developers/back end developers (PHP server side).

To create a new Flex Mobile and PHP project:

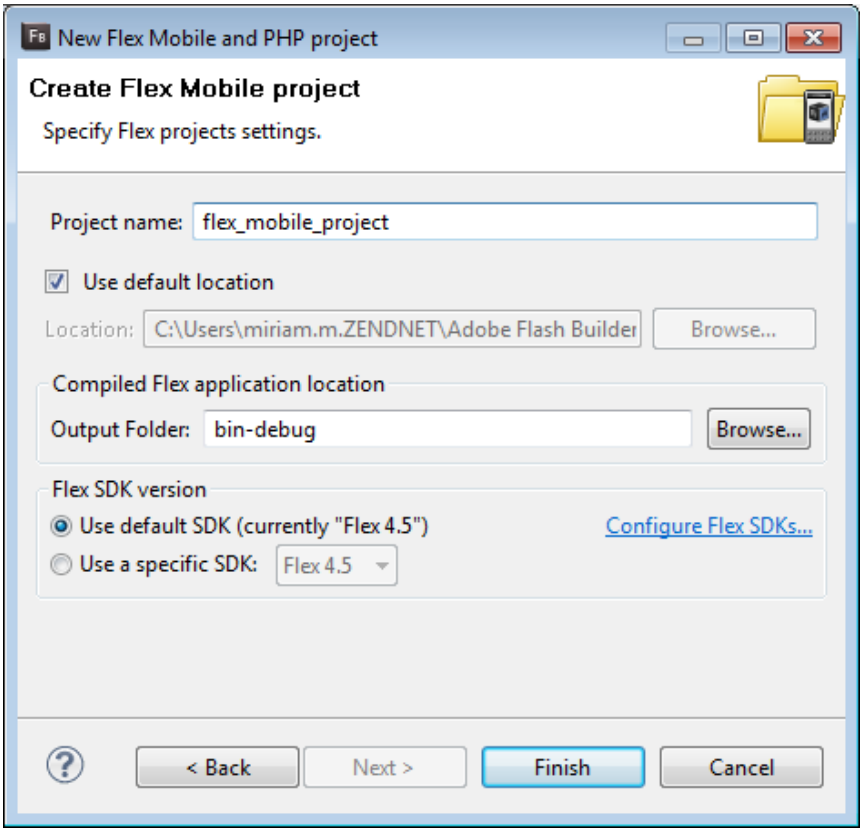
1. Go to **File | New | Flex Mobileand PHP Project**.
   -Or- In the Package Explorer view, right-click and select **New | Flex Mobile and PHP Project**..Flex
   The New Flex Mobile and PHP Project wizard opens.



2. The Create PHP Project dialog contains the details of your PHP project. In the dialog, enter the following information:

- Project name - The name for your PHP project.
- Contents - Select whether to:
    - Create new project in workspace - Creates a new PHP project in the workspace directory.
    - Create project at existing location (from existing source) - Creates a PHP project pointing to files situated outside of the workspace. Click **Browse** to select the required source content.
    - Create project on a local server - Creates the project on a local server. This option will only be available if a local Zend Server has been configured in the PHP Servers Preferences.
    - Framework version - Select the Zend Framework version you would like to work with from the dropdown menu.
- Server location - Enter the following
    - Web Root - The document root of your server.
      The web root is the directory where your web pages exist in your server, for example “C:\Program Files\Zend\Apache2\htdocs”.
    - Root URL - The URL of your server, for example “http://localhost”.

3. Click **Validate Configuration**.
   If Flash Builder 4.5 for PHP cannot validate the configuration, review your web root and root URL and make sure they both exist on the machine.
4. If the configuration has been validated click **Next**.
   The Create Flex Mobile Project dialog opens.



5. Enter the following information:

- Project Name - The name for your Flex Mobile project.
- Project location - Decide whether to use the default location, or select your own by clicking **Browse**.
- Output folder - Select an output folder for your compiled Flex Mobile/PHP application, where compiled output files are stored. By default they are stored in the “bin-debug” folder of your Flex project.
- Flex SDK version - Select whether to:
    - Use default SDK (currently “Flex Hero”) - Mark this check-box to use the default SDK.
    - Use a specific SDK - Use a different SDK than the default.

6. Click **Finish**.
   Your Flex Mobile/PHP application is created.

Creating a Flex/PHP application creates a PHP project and a Flex project with PHP Support enabled in your workspace.

You can now use a PHP class you create and perform PHP Introspection to begin binding the data.

Enabling/Disabling PHP Support

Enabling PHP Support allows you to connect an existing PHP project to an existing or new Flex project. PHP Support allows your Flex Project to be aware of, and interact with, the PHP project you define. This will create a Flex/PHP or Flex Mobile/PHP application. PHP Support must be enabled before you can introspect your PHP service.

Note:

If you have created a new Flex and PHP project or created a new Flex Mobile and PHP project, PHP Support is automatically enabled for the projects.

Enabling PHP Support

This procedure describes how to enable PHP Support, which associates your Flex project with a PHP project. Before enabling PHP Support you must have a Flex or Flex Mobile project and a PHP project in your workspace.

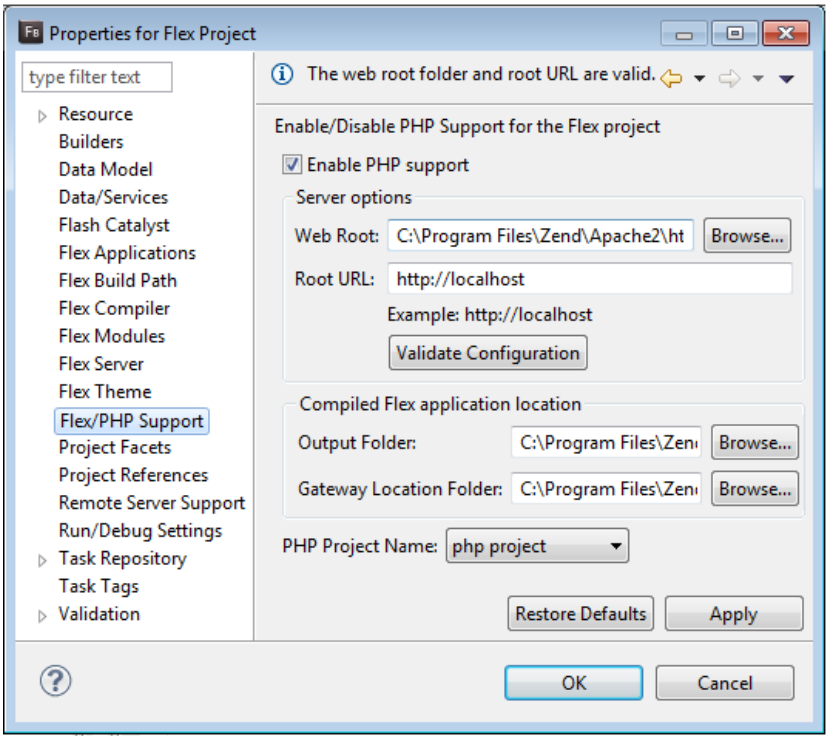
PHP Support can be enabled for a Flex or Flex Mobile project which was created separately from the PHP project.

To enable PHP Support:

1. Select the Flex project you would like to enable and go to **Project | Properties | Flex/PHP Support**

   - **Or** - Select **Properties | Flex/PHP Support** from the Right Click Menu of your project directory.

   The Flex/PHP Support Properties page opens.



2. Mark the ‘Enable PHP Support’ checkbox.
3. Enter the following information:

- Server options - Enter the following:
  - Web root - The web server's directory, for example “C:\Program Files\Zend\Apache2\htdocs”.
  - Root URL - The URL of your server. For example, your root URL can be “http://localhost”.
- Output folder - Select an output folder for your compiled Flex/PHP application. The output folder is where the debug output is kept, which by default is stored in the “public” folder of your PHP project.
- Gateway location - The location of your gateway file. The gateway file is located in your Web Root directory. For more information see The Gateway Script.
- PHP Project Name - Select a PHP project from the dropdown menu to associate with your Flex project.

4. Click **Validate Configuration**.

   If Flash Builder 4.5 for PHP cannot validate the configuration, review your web root and root URL and make sure they both exist on the machine.
5. Click **Apply** and **OK** to apply and save the changes.

   PHP Support is enabled.

You can now begin working with your Flex/PHP application or disable PHP Support.

Disabling PHP Support

This procedure describes how to disable PHP Support. Disabling PHP Support will disassociate your Flex or Flex Mobile project with your PHP project. Once PHP Support is disabled, you will not be able to work with your Flex/PHP or Flex Mobile/PHP application, but will instead have two separate projects which have no knowledge of one another.

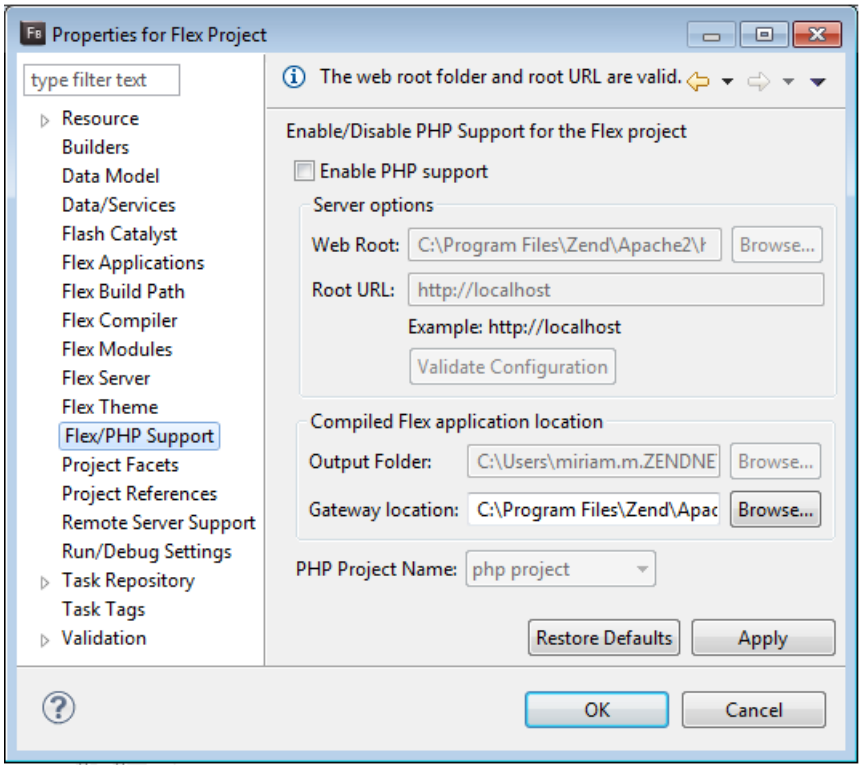
PHP Support can only be disabled if the Flex project was previously associated with a PHP project (either by enabling PHP Support or by creating a Flex/PHP or Flex Mobile/PHP project).

To disable PHP Support:

1. Select the Flex project you would like to disable and go to **Project | Properties | Flex/PHP Support**

   - **Or** - Select **Properties | Flex/PHP Support** from the Right Click Menu of your project directory.

   The Flex/PHP Support Properties page opens.



2. Unmark the 'Enable PHP Support' checkbox.
3. Click **Apply** and **OK** to apply and save the changes.

   PHP Support is disabled.

You can now enable PHP Support.

Binding/PHP Introspection

Binding is the process which allows you to connect your PHP code to your Flex code. Introspecting PHP services allows you to connect a specific PHP service to your Flex project. Once your Flex project is aware of the PHP service, you can bind the data together by tying specific Flex components to specific operations (PHP methods).

Flash Builder 4.5 for PHP allows you to:

- Inrospect PHP Services
- Bind the Data

Introspecting PHP Services

PHP Introspection allows you to connect your Flex project to a pre-defined PHP service. This makes the methods in the PHP service easily accessible while developing the client side of your application.
PHP Introspection will connect the PHP service you choose with the Flex project currently associated with it, as defined in the PHP Support Properties page.

A PHP service is a PHP class containing PHP methods. The PHP methods you define in your PHP service are used as operations for the Flex side of your application. You can use an existing PHP service, or write one in a PHP file.

Important Note:

The PHP file must have the same name as the PHP class within it.

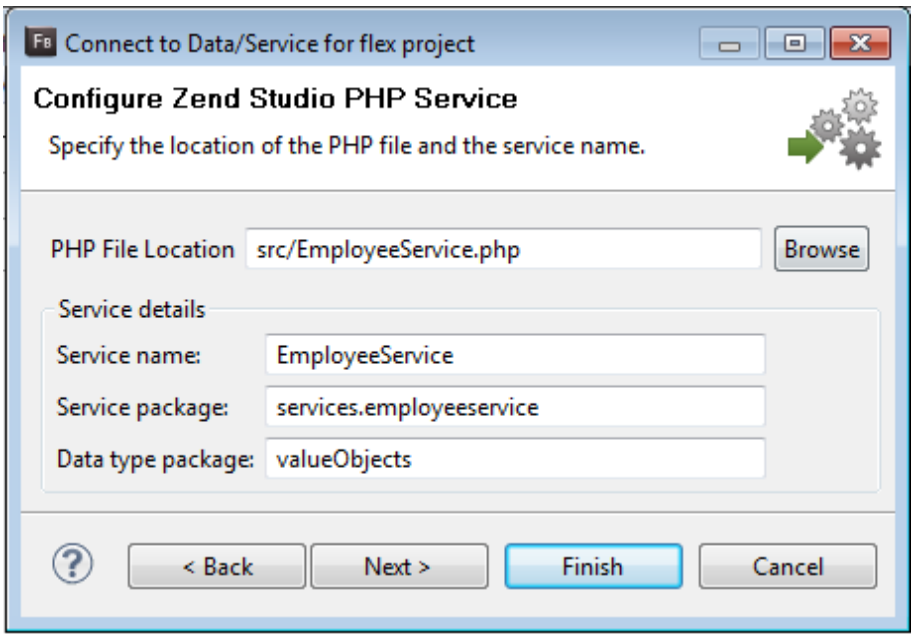
Before performing PHP Introspection you must create a PHP class in a PHP file, and enable PHP Support.

Performing PHP Introspection via the Right Click Menu

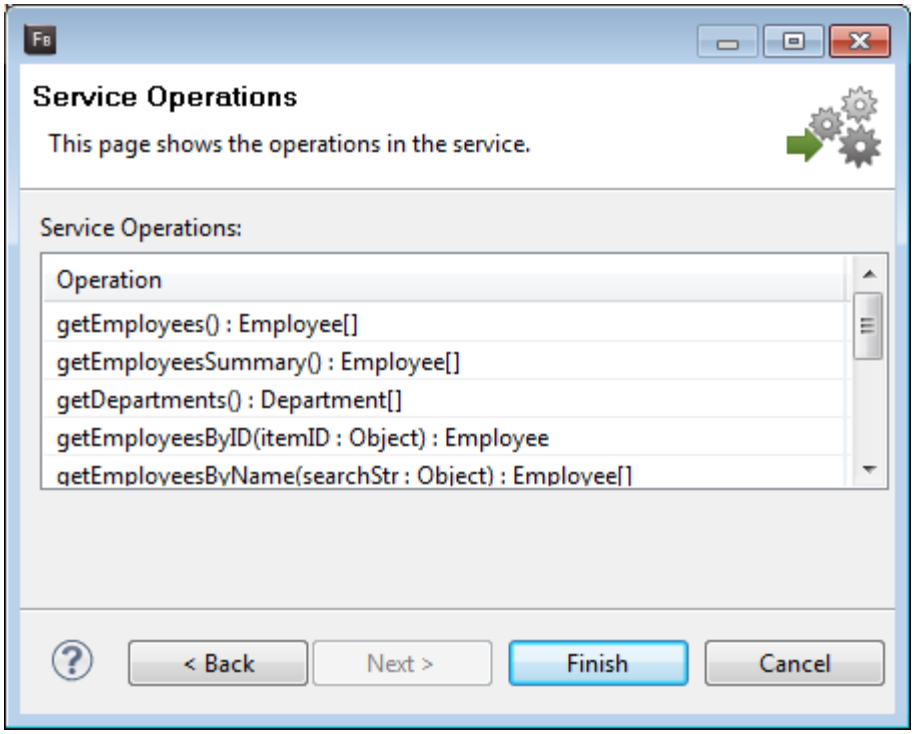
This procedure describes how to perform PHP Introspection from the Right Click Menu of your PHP service.

To perform PHP Introspection via the Right Click Menu:

1. Make sure you are in the Flash perspective, which can be manually accessed by going to **Window | Open Perspective | Flash**.
2. In the Package Explorer or PHP Explorer view select **Create PHP Service for Flex** from the Right Click Menu of your PHP service.
   -**Or**- go to **Data | Connect to Data/Service**.
   The Configure Zend Studio PHP Service dialog opens.

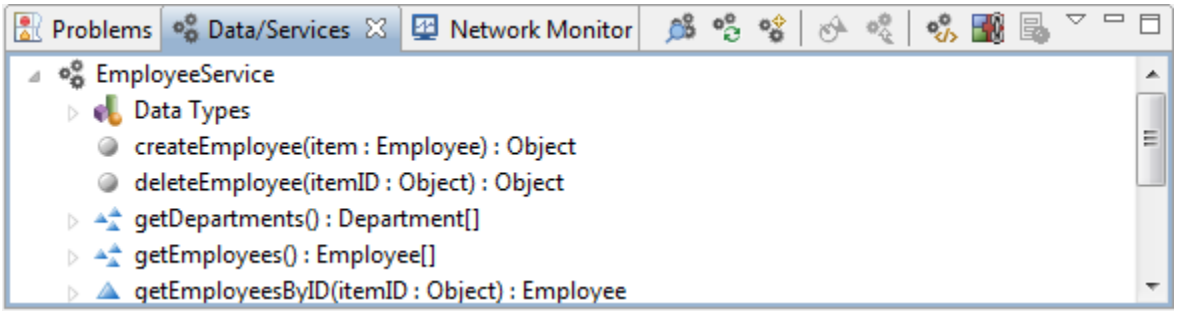


2. The service details (service name, service package, and data type package) are automatically generated according to the PHP class.
3. Click **Next** to open the Service Operations dialog.



4. The Service Operations dialog allows you to review all of the methods that are included in your PHP class.

5. Click **Finish** to complete the PHP Introspection.
   Your PHP service is now connected to your Flex project.
6. Select your Flex project in the Package Explorer view, and open the Data/Services view to see all the public methods included in the PHP service.



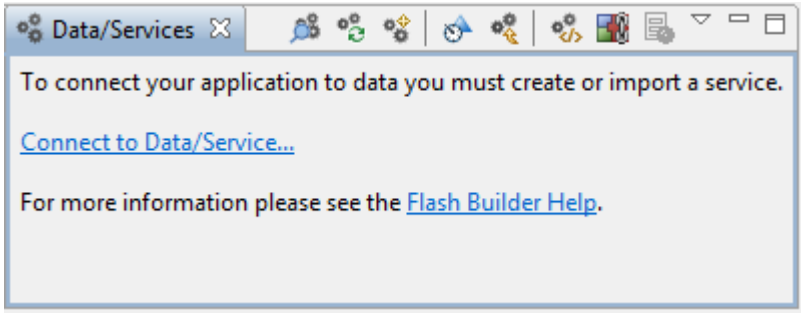
After performing PHP Introspection, you can bind the data. For more information see Binding.

Performing PHP Introspection via the Data/Services View

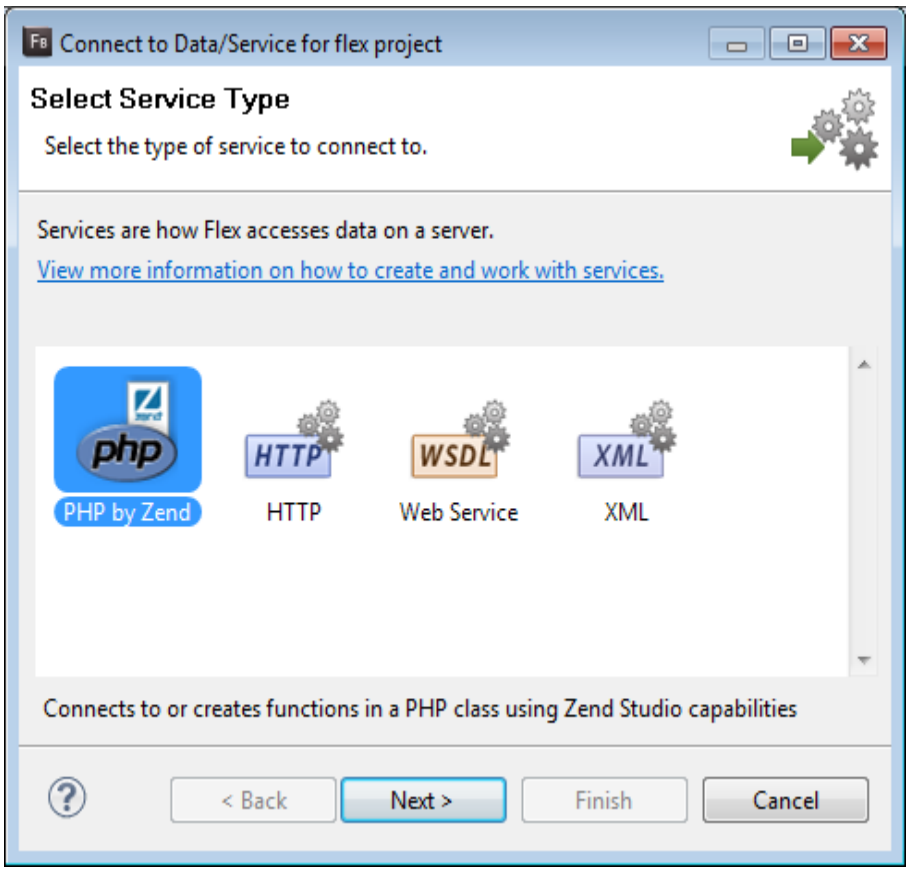
This procedure describes how to perform PHP Introspection from the Data/Services view.

To perform PHP Introspection via the Data/Services view:

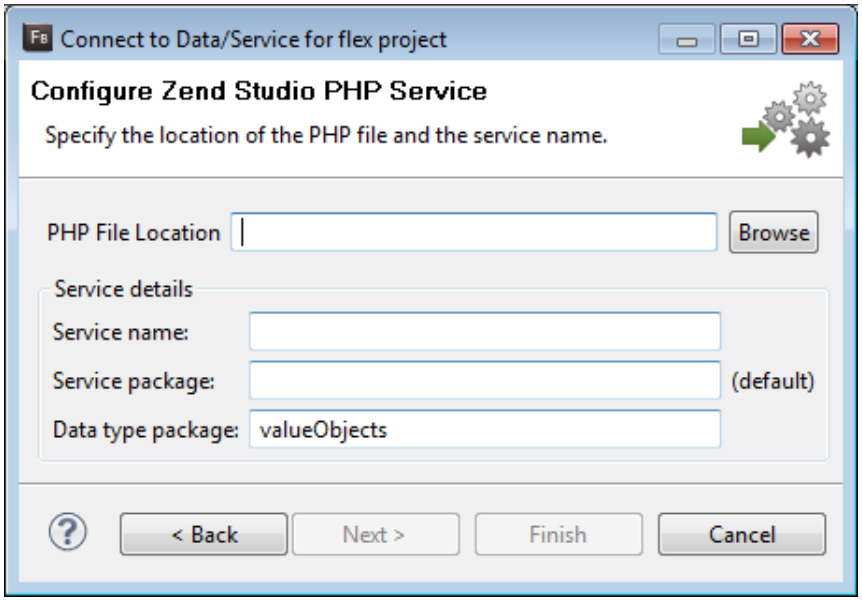
1. Select your Flex project in the Package Explorer view and go to the Data/Services view, which can be opened manually by going to **Window | Show View | Data/Services**.



2. Click the Connect to Data/Service link.
   The Select Service Type dialog opens.

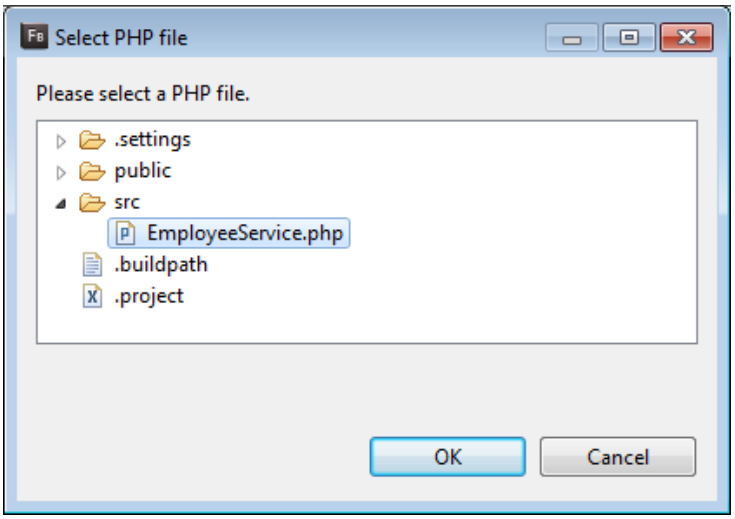


3. Select **PHP by Zend** and click **Next** to open the Configure Zend Studio PHP Service dialog.



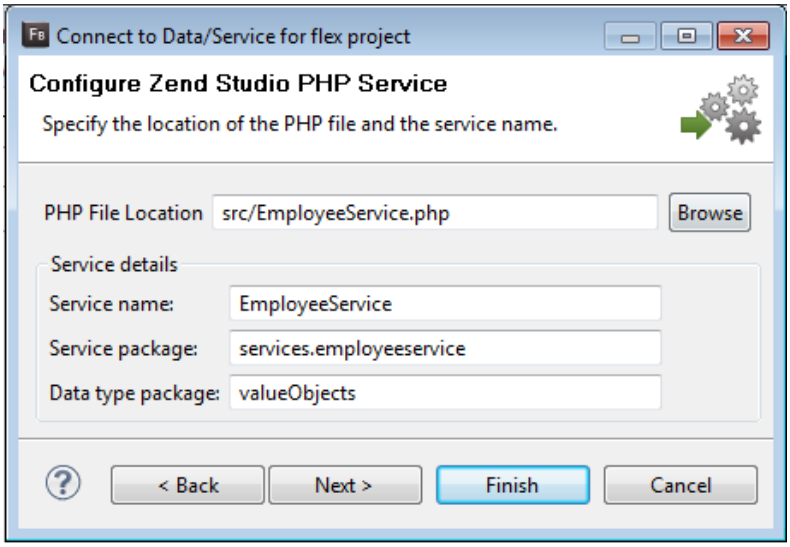
4. Click **Browse**.

   The Select PHP File dialog opens.

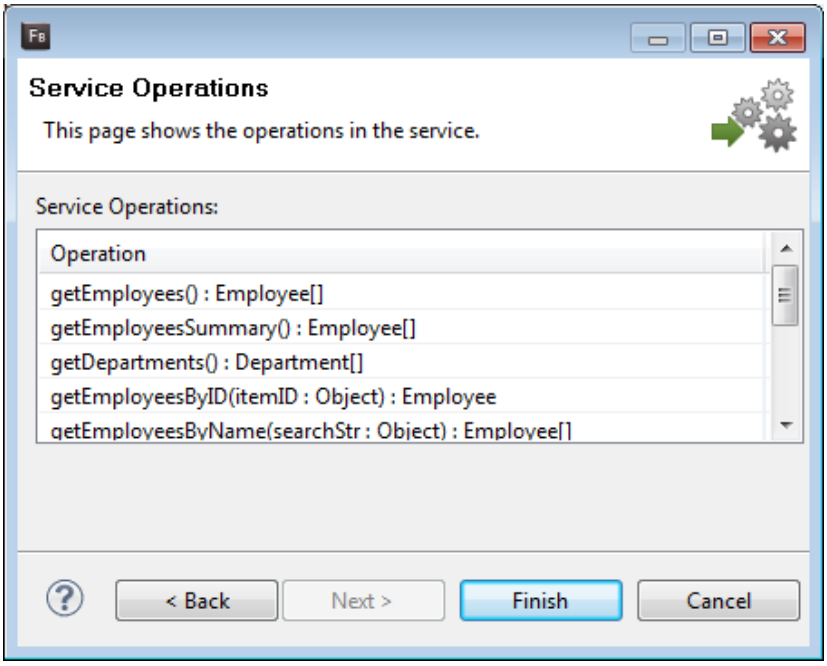


5. Select the PHP file you would like to use and click **OK** to go back to the Configure Zend Studio PHP Service dialog.

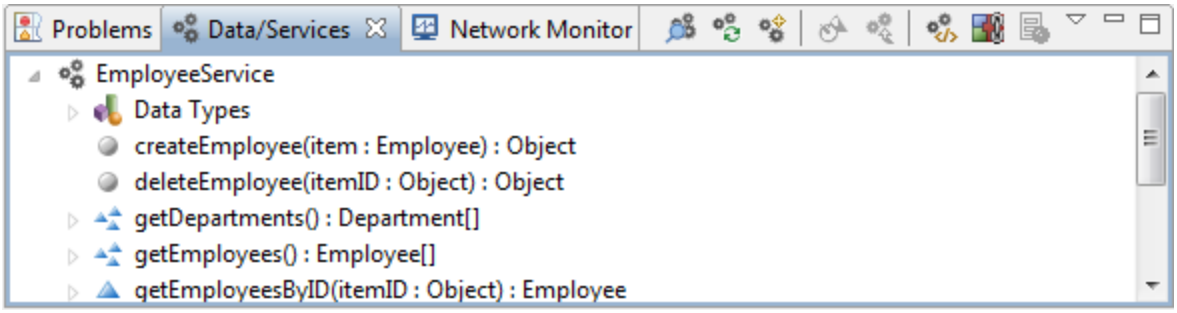
   All the Service details are automatically configured according to the PHP Class you selected.



7. Click **Next** to open the Service Operations dialog.



8. The Service Operations dialog allows you to review all of the methods that are included in your PHP class.
9. Click **Finish** to complete the PHP Introspection.
   Your PHP service is now connected to your Flex project.
10. Select your Flex project in the Package Explorer view, and open the Data/Services view to see all the public methods included in the PHP service.



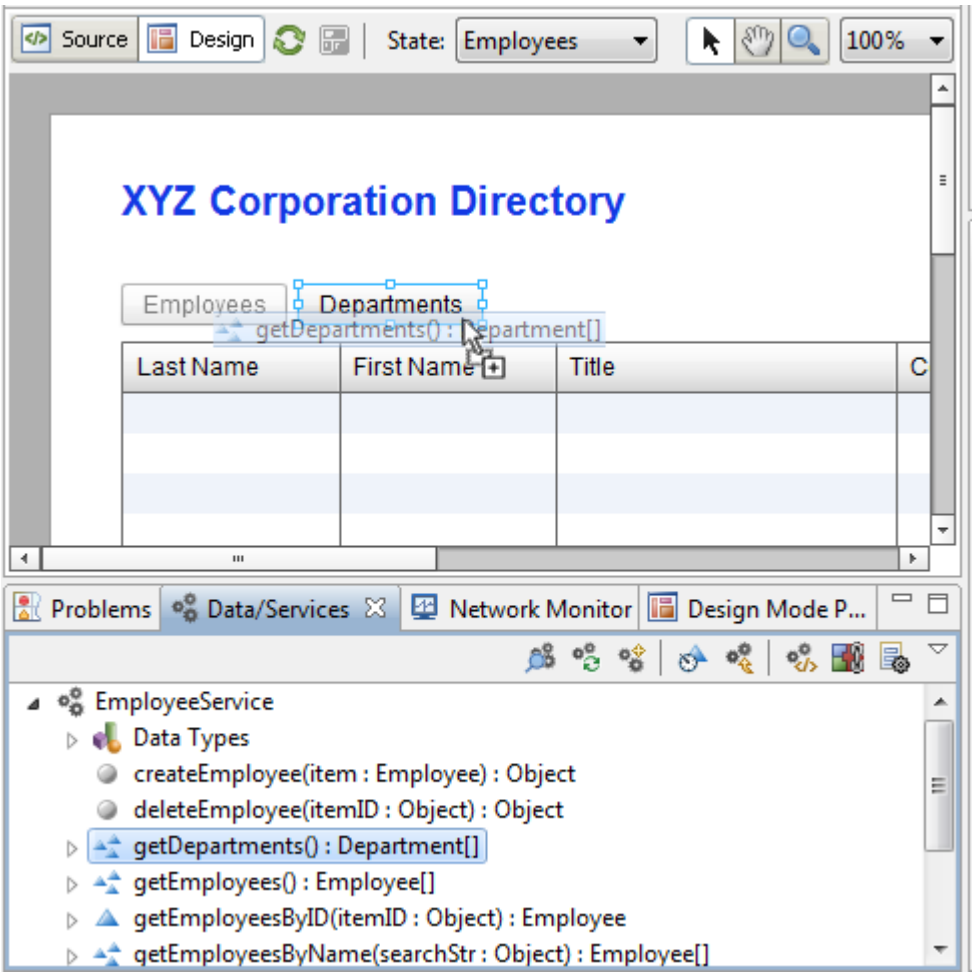
After performing PHP Introspection, you can bind the data. For more information see Binding.

Binding Data

After introspecting your PHP service, your Flex project is now aware of the PHP service and the methods (operations) contained within it. The next step is to bind the data together.

Binding is the process of consuming the PHP methods into your Flex project by binding the data. This is achieved by tying your existing Flex components to an operation (a PHP method). Flash Builder 4.5 for PHP allows you to bind your data in the following ways: using the drag and drop functionality (as shown below), by going to **Data | Bind to Data** after selecting code in the Source view or a component in the Design view, by selecting **Bind to Dat**a from the Right Click Menu of a Flex component in the Design view, or by inserting it directly in the code.

For more information see Building the client application or Data binding from the Using Adobe Flash Builder 4.5.



Once you have completed data binding and developing your Flex and PHP code, you can launch your application.

Launching Your Application

Flash Builder 4.5 for PHP allows you to launch your application in run mode or debug mode to run, test, diagnose, and fix problems in your code during development.
Running your application in debug mode allows you to find and fix bugs in your Flex code and your PHP code, all from within the same IDE.

Flash Builder 4.5 for PHP allows you to:

- Run your application - Running your application run mode allows you to run and test your application.
    - Run a Flex/PHP Application
    - Run a Flex Mobile/PHP Application
- Debug you application - Running your application in debug mode allows you to find and fix bugs in your Flex code and your PHP code, all from within the same IDE.
    - Debug a Flex/PHP Application
    - Debug a Flex Mobile/PHP Application

Running Your Application

Running a Flex/PHP Application

This procedure describes how to run your Flex/PHP application, which is already located on the server. This allows you to run and test your application during development.
Before running your Flex/PHP application, you must introspect your PHP service and develop your Flex and PHP projects. You must also have an existing database, with your application's content located on the server.

To run a Flex/PHP application:

1. To change the default web browser to work with while running, go to **Windows | Preferences | General | Web Browser**. For more information see Web Browser Preferences in the Workbench User Guide.
   The 'Use Internal Web Browser' option does not apply to running and debugging applications. Applications are always run and debugged in an external web browser.
2. From the Right Click Menu of your Flex Project select **Run As | Web (PHP) Application**.
   The debug configuration is automatically configured according to your project settings.

Note:
If you have more than one configuration for Web (PHP) Application, select the configuration you would like to use from the Launch Configuration Selection dialog and click **OK**.

3. The application opens in a browser.

See Managing Your Mobile (PHP) Run Configuration for information on editing options in the run configuration.

Managing Your Web (PHP) Run Configuration

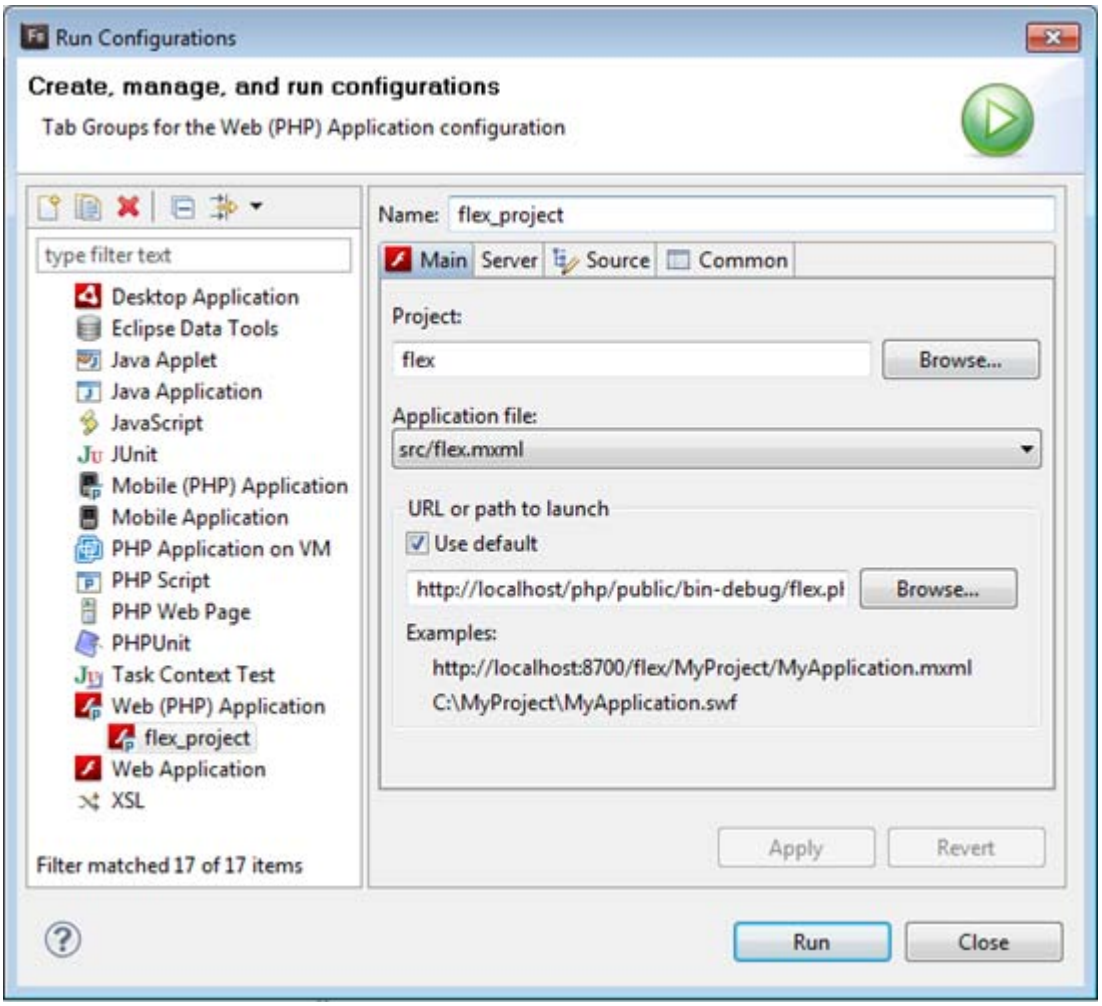
To manage your Web (PHP) run configuration:

1. Click the arrow next to the run button  on the toolbar and select **Run Configurations**

   -Or- go to **Run | Run Configurations**.

   A Run Configurations dialog will open.
2. Double-click the Web (PHP) option to create a new debug configuration.

   Open the Main tab.



3. The dialog is made up of the following:
   - Name - Enter a name for the new configuration.
   - Project - The name of your Flex project. Click **Browse** to select from a list of an available list of projects.
   - Application file - Select the application file you would like to use from the

dropdown list.

- URL or path to launch - The URL to be debugged will have been automatically created based on the file name and your server address. If the URL does not point to your debug target's location, unmark the 'Use default' checkbox and modify the URL.

4. Click **Apply** to save your changes. To run now click **Run**, or click **Close** to save your changes and run later.

See Running a Flex/PHP Application for information on running your application once the run configuration has been edited.

Running a Flex Mobile/PHP Application

This procedure describes how to run your Flex Mobile/PHP application. This allows you to run and test your application during development.
Before running your Flex Mobile/PHP application, you must introspect your PHP service and develop your Flex Mobile and PHP projects. You must also have an existing database with your application's content that is located on the server.

To run a Flex Mobile/PHP application:

1. To change the default web browser to work with while running, go to **Windows | Preferences | General | Web Browser**. For more information see Web Browser Preferences in the Workbench User Guide.
   The 'Use Internal Web Browser' option does not apply to running and debugging applications. Applications are always run and debugged in an external web browser.
2. From the Right Click Menu of your Flex Project select **Run As | Mobile (PHP) Application**.
   The debug configuration opens with automatically configured settings according to your project.

Note:
If you have more than one configuration for Mobile (PHP) Application, select the configuration you would like to use from the Launch Configuration Selection dialog and click **OK**.

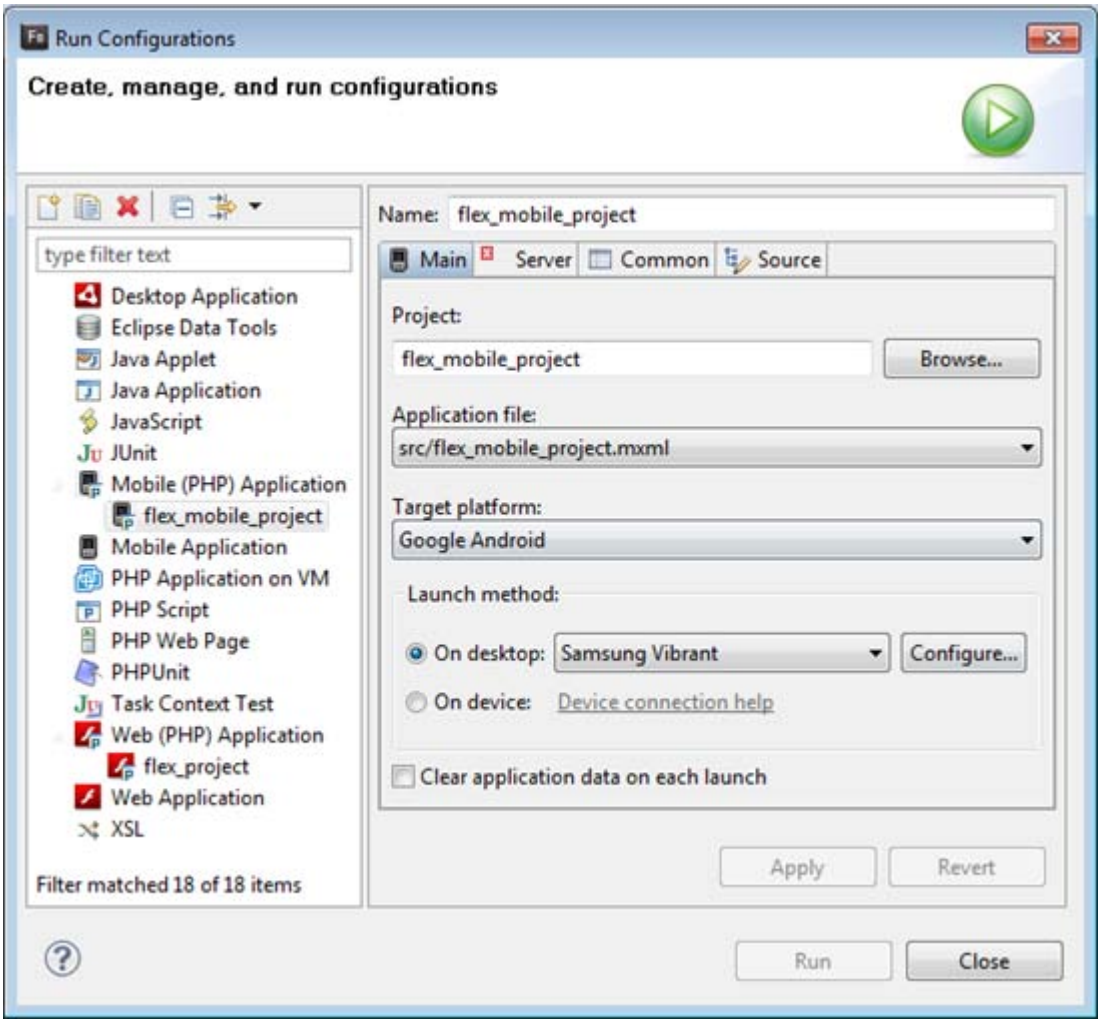
3. The application opens in a browser.

See Managing Your Mobile (PHP) Run Configuration for information on editing options in the runconfiguration.

Managing Your Mobile (PHP) Application Run Configuration

To manage your Mobile (PHP) run configuration:

1. Click the arrow next to the run button  on the toolbar and select **Run Configurations -OR-** go to **Run | Run Configurations**.
   A Run Configurations dialog will open.
2. Double-click the Mobile (PHP) option to create a new debug configuration and open the Main tab.



3. The dialog is made up of the following:
   - Name - Enter a name for the new configuration.
   - Project - The name of your Flex project. Click **Browse** to select from a list of an available list of projects.
   - Application file - Select the application file you would like to use from the

dropdown list.

- Target platform - The mobile platform on which you would like to debug your application. Select an available platform from the dropdown list.
- Launch method - The method you would like to use to launch your application. Choose from the following options:
    - On desktop - Choose an available device to simulate from the dropdown list. This option allows you to debug your application on a simulated mobile operating system, meaning you don't need a mobile device for the debug process.
    - On device - This option allows you to debug your application on a mobile device. When selecting this option, you must have your device connected via USB and have access to WiFi. The server side of your application will be downloaded via USB to the device, and debugged via WiFi.

      For the client side of your application, you must debug on a device that is attached to your machine via USB.
- 'Clear application data on each launch' - Mark this checkbox to clear the application's data each time you launch it.

4. Click **Apply** to save your changes. To run now click **Run**, or click **Close** to save your changes and run later.

See Running a Flex Mobile/PHP Application for information on running your application once the run configuration has been edited.

Debugging Your Application

Debugging a Flex/PHP Application

This procedure describes how to debug your Flex/PHP application, which is already located on the server. This allows you to test your files and applications and detect errors in your code. The debugger allows you to control the execution of your program using a variety of options including setting breakpoints, stepping through your code, and inspecting your variables and parameters.
Before debugging your Flex/PHP application, you must introspect your PHP service and develop your Flex and PHP projects.
You must also have an existing database, with your application's content, located on the server.

To run a Flex/PHP application in debug mode:

1. Set breakpoints at the desired locations of your Flex project (in the MXML and/or ActionScript code), and/or PHP project. For more information see Setting Breakpoints or Adding and removing breakpoints in Using Adobe Flash Builder 4.5.

Note:
Breakpoints can be placed in the MXML/ActionScript code only, the PHP code only, or both. To debug both the server and client side simultaneously, place breakpoints in both projects.

2. To change the default web browser to work with while debugging, go to **Windows | Preferences | General | Web Browser**. For more information see Web Browser Preferences in the Workbench User Guide.
   The 'Use Internal Web Browser' option does not apply to running and debugging applications. Applications are always run and debugged in an external web browser.
3. From the Right Click Menu of your Flex Project select **Debug As | Web (PHP) Application**.
   The debug configuration is automatically configured according to your project settings.

Note:
If you have more than one configuration for Web (PHP) Application, select the configuration you would like to use from the Launch Configuration Selection dialog and click **OK**.

4. The application opens in a browser and breakpoints are hit.

See Managing Your Web (PHP) Debug Configuration for information on editing options in the debug configuration.

See Running and Analyzing Debugger Results or Managing the debugging session in the Debug view in Using Adobe Flash Builder 4.5for more information on the outcome of a debugging session.

Managing Your Web (PHP) Debug Configuration

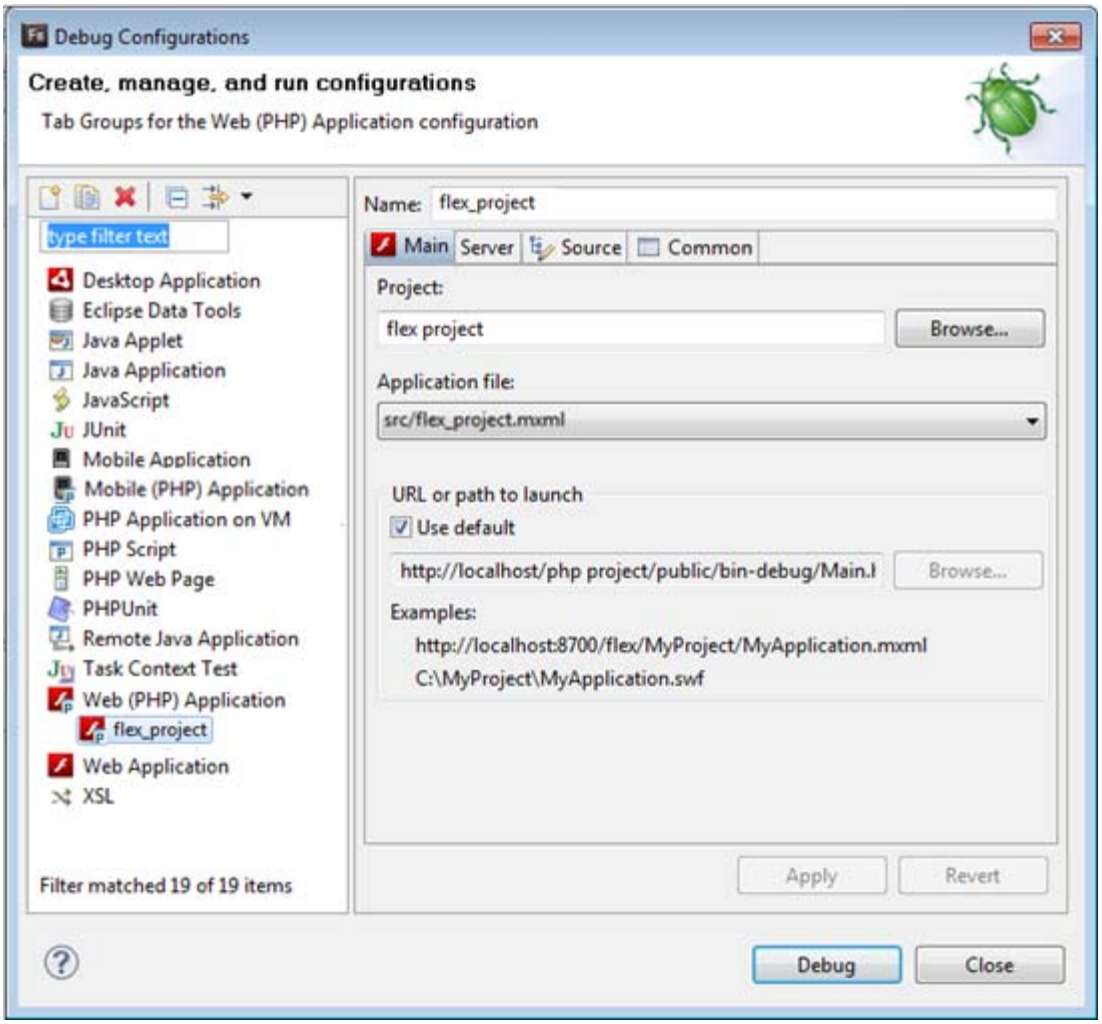
To manage your Web (PHP) debug configuration:

1. Click the arrow next to the debug button  on the toolbar and select **Debug Configurations**

   -Or- go to **Run | Debug Configurations**.

   A Debug Configurations dialog will open.
2. Double-click the Web (PHP) option to create a new debug configuration.

   Open the Main tab.

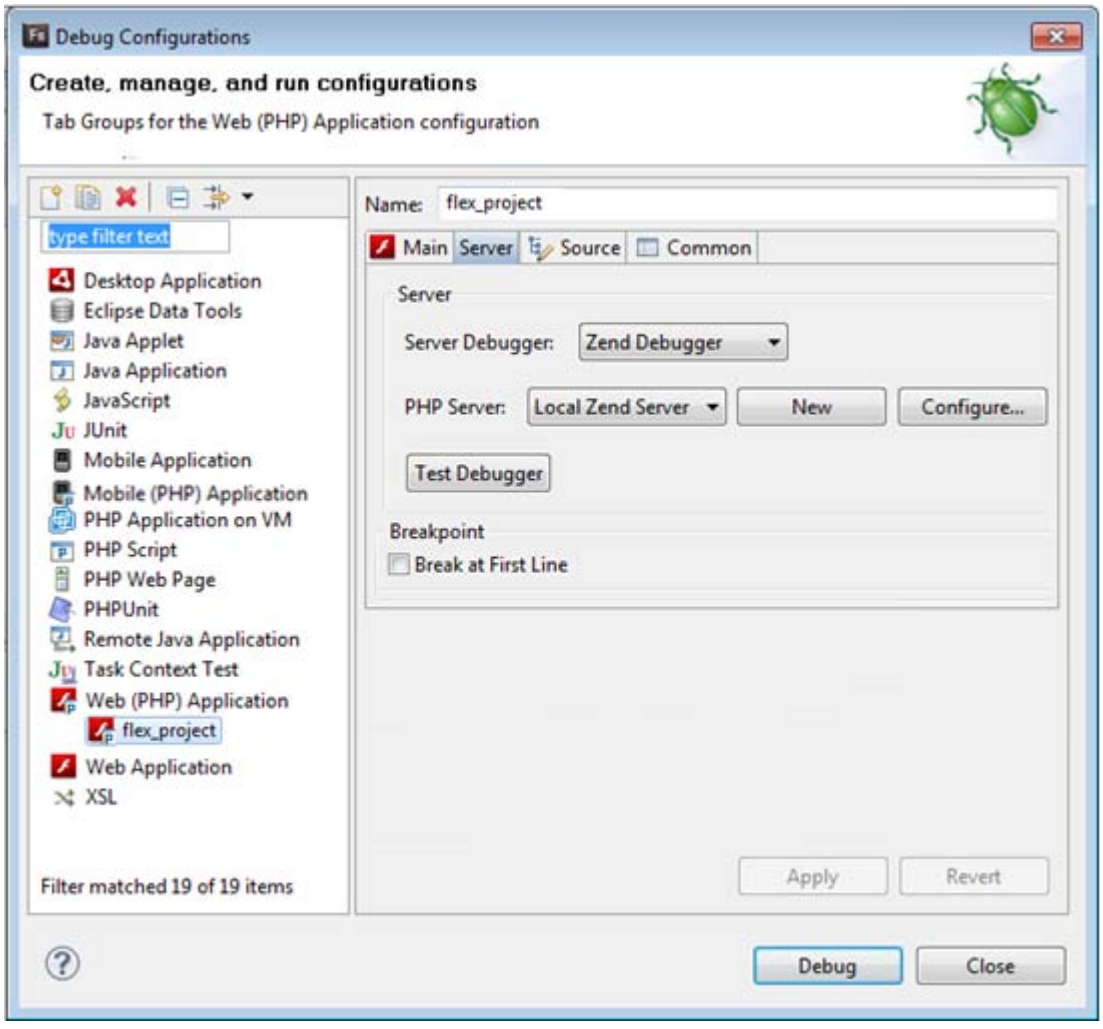


3. The dialog is made up of the following:
   - Name - Enter a name for the new configuration.
   - Project - The name of your Flex project. Click **Browse** to select from a list of an

available list of projects.

- Application file - Select the application file you would like to use from the dropdown list.
- URL or path to launch - The URL to be debugged will have been automatically created based on the file name and your server address. If the URL does not point to your debug target's location, unmark the 'Use default' checkbox and modify the URL.

4. Open the Server tab.



5. The dialog is made up of the following:

- Server Debugger - Select the Server Debugger to be used (by default this will be the Zend Debugger).
- Select your server from the PHP Server list - To edit your existing server click

Configure or click **New** to open the PHP Server Creation Wizard and configure a new server.

Configure or edit your server by following the instructions in Adding a New Server to the List or Editing an Existing Server Configuration under the PHP Servers Preferences page.

For more information on configuring the communication between Flash Builder 4.5 for PHP and your remote server, see Setting Up Remote Debugging.

- To check whether your server connection is correctly configured, and that Flash Builder 4.5 for PHP can communicate with your server debugger, click **Test Debugger**.

- Breakpoint - Select whether the Debugger should stop at the first line of code by marking/unmarking the 'Break at First Line' checkbox.

6. Click **Apply** to save your changes. To debug now click **Debug**, or click **Close** to save your changes and debug later.
7. Click **Yes** if asked whether to open the Debug Perspective.

See Running a Flex/PHP Application in Debug Mode for information on debugging your application once the debug configuration has been edited.

See Running and Analyzing Debugger Results or Managing the debugging session in the Debug view in the Using Adobe Flash Builder 4.5for more information on the outcome of a debugging process.

Debugging a Flex Mobile/PHP Application

This procedure describes how to debug your Flex Mobile/PHP application. This allows you to test your files and applications and detect errors in your code. The debugger allows you to control the execution of your program using a variety of options including setting breakpoints, stepping through your code, and inspecting your variables and parameters.

Before debugging your Flex Mobile/PHP application, you must introspect your PHP service and develop your Flex Mobile and PHP projects.

You must also have an existing database with your application's content that is located on the server.

To run a Flex Mobile/PHP application in debug mode:

1. Set breakpoints at the desired locations of your Flex Mobile project (in the MXML and/or ActionScript code) and/or PHP Project. For more information see Setting Breakpoints or Adding and removing breakpoints in the Using Adobe Flash Builder 4.5.

Note:

Breakpoints can be placed in the MXML code only, the PHP code only, or both. To debug both the server and client side simultaneously, place breakpoints in both projects.

2. To change the default web browser to work with while debugging, go to **Windows | Preferences | General | Web Browser**. For more information see Web Browser Preferences in the Workbench User Guide.
   The 'Use Internal Web Browser' option does not apply to running and debugging applications. Applications are always run and debugged in an external web browser.
3. From the Right Click Menu of your Flex Project select **Debug As | Mobile (PHP) Application**.
   The debug configuration opens with automatically configured settings according to your project.

Note:

If you have more than one configuration for Mobile (PHP) Application, select the configuration you would like to use from the Launch Configuration Selection dialog and click **OK**.

4. The application opens in a browser and breakpoints are hit.

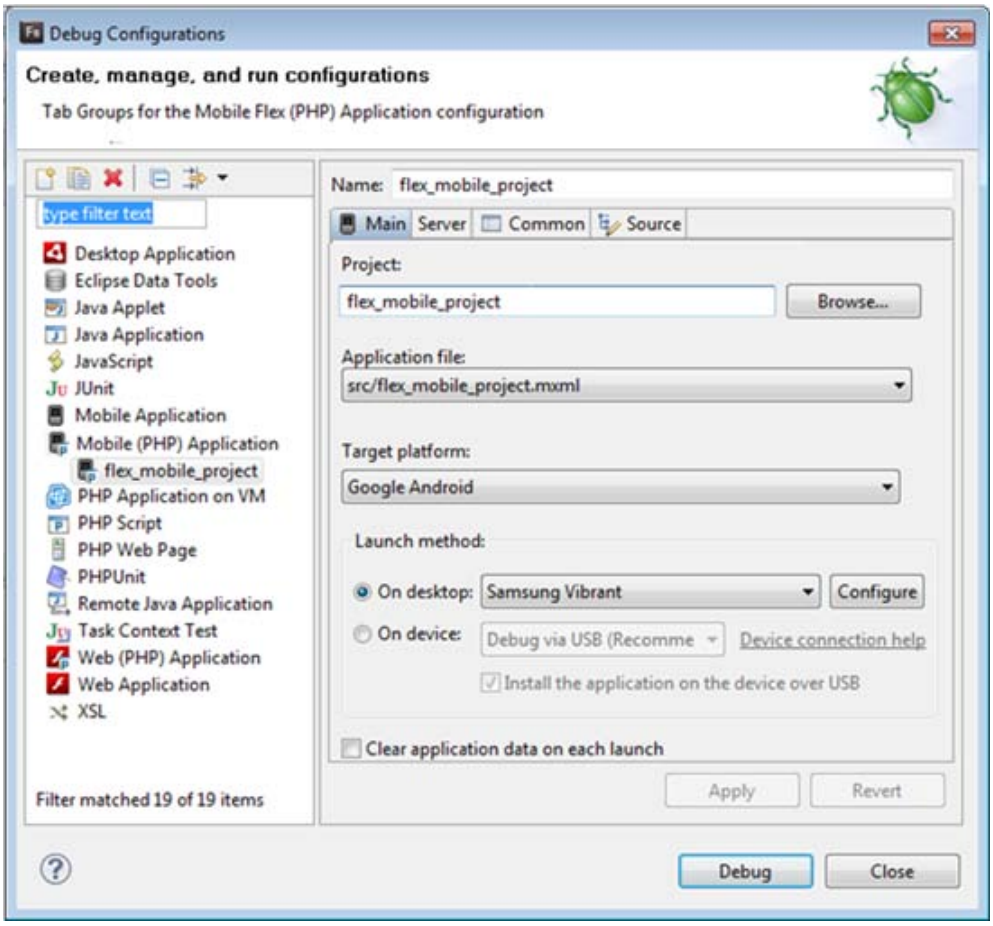
See Managing Your Web (PHP) Debug Configuration for information on editing options in the debug configuration.

See Running and Analyzing Debugger Results or Managing the debugging session in the Debug view in the Using Adobe Flash Builder 4.5for more information on the outcome of a debugging process.

Managing Your Mobile (PHP) Application Debug Configuration

To manage your Mobile (PHP) debug configuration:

1. Click the arrow next to the debug button  on the toolbar and select **Debug Configurations -OR-** go to **Run | Debug Configurations**.
   A Debug Configurations dialog will open.
2. Double-click the Mobile (PHP) option to create a new debug configuration and open the Main tab.



2. The dialog is made up of the following:
   - Name - Enter a name for the new configuration.
   - Project - The name of your Flex project. Click **Browse** to select from a list of an available list of projects.
   - Application file - Select the application file you would like to use from the dropdown list.
   - Target platform - The mobile platform on which you would like to debug your application. Select an available platform from the dropdown list.
   - Launch method - The method you would like to use to launch your application.

Choose from the following options:

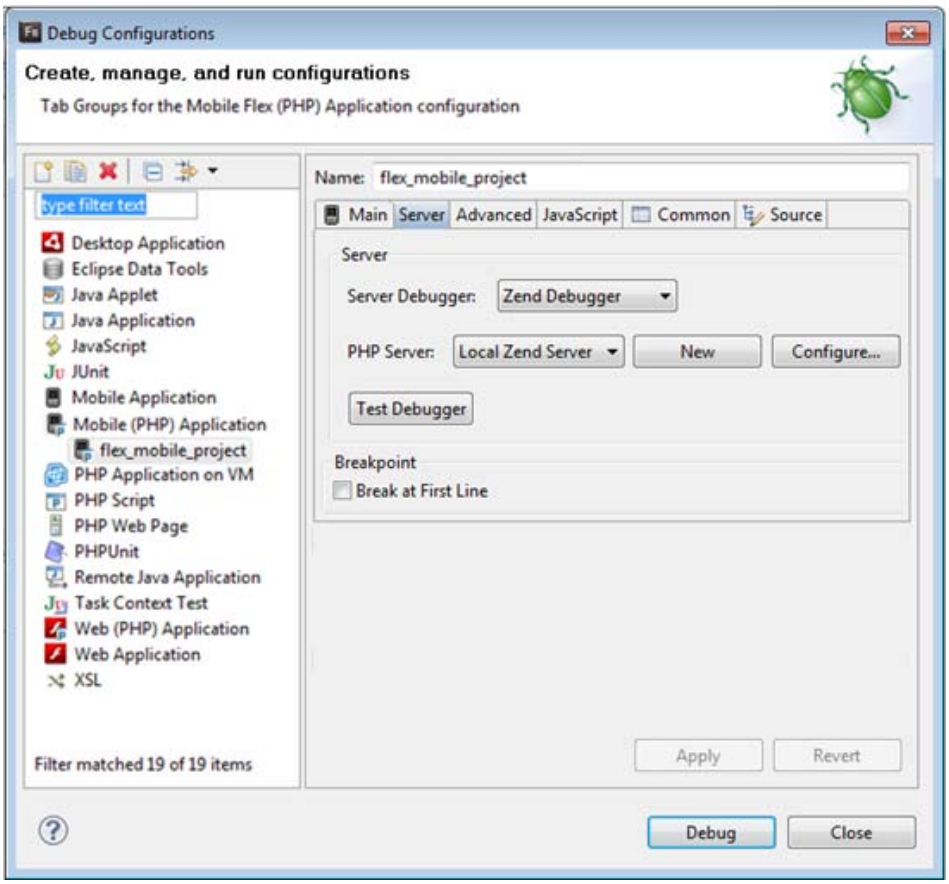
- On desktop - Choose an available device to simulate from the dropdown list. This option allows you to debug your application on an simulated mobile operating system, meaning you don't need a mobile device for the debug process.
- On device - This option allows you to debug your application on a mobile device. When selecting this option, you must have your device connected via USB and have access to WiFi. The server side of your application will be downloaded via USB to the device, and debugged via WiFi.

  For the client side of your application, select whether to debug on a device that is attached to your machine via USB, or via WiFi.

  - If you are using the Debug via WiFi option, you can mark/unmark the 'Install the application on the device over USB' option.

- 'Clear application data on each launch' - Mark this checkbox to clear the application's data each time you launch it.

3. Open the Server tab.



4. The dialog is made up of the following:
    - Server Debugger - Select the Server Debugger to be used (by default this will be the Zend Debugger).
    - PHP Server - Select your server from the PHP Server list. To edit your existing server click **Configure** or click **New** to open the PHP Server Creation Wizard and configure a new server.
      Configure or edit your server by following the instructions in Adding a New Server to the List or Editing an Existing Server Configuration under the PHP Servers Preferences page.
      For more information on configuring the communication between Flash Builder 4.5 for PHP and your remote server, see Setting Up Remote Debugging.
        - To check whether your server connection is correctly configured, and that Flash Builder 4.5 for PHP can communicate with your server debugger, click **Test Debugger**.
    - Breakpoint - Select whether the Debugger should stop at the first line of code by marking/unmarking the 'Break at First Line' checkbox.

5. Click **Apply** to save your changes. To debug now click **Debug**, or click **Close** to save your changes and debug later.
6. Click **Yes** if asked whether to open the Debug Perspective.

See Running a Flex Mobile/PHP Application in Debug Mode for information on debugging your application once the debug configuration has been edited.

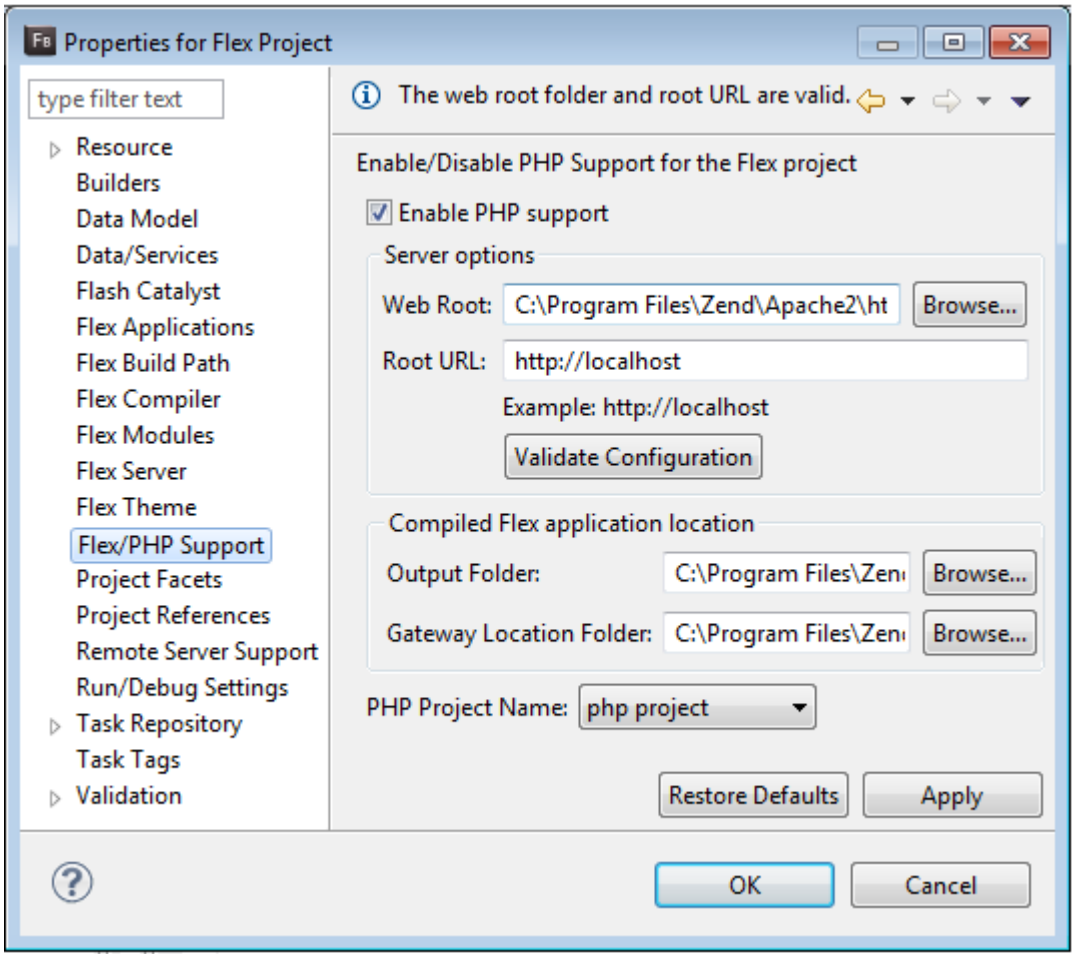
See Running and Analyzing Debugger Results or Managing the debugging session in the Debug view in the Using Adobe Flash Builder 4.5for more information on the outcome of a debugging process.

PHP Support Properties

About

Flex/PHP Support allows your Flex project to be aware of, and interact with, the PHP project you define. This will create the connection that combines your Flex or Flex Mobile and PHP projects to one another. PHP Support must be enabled before you can work with your Flex/PHP or Flex Mobile/PHP Application. If you create a Flex/PHP or Flex Mobile/PHP project using the corresponding new project wizard, PHP Support is enabled by default.

To access the PHP Support Properties page, right-click a Flex or Flex Mobile project in the Package Explorer view and select **Properties | Flex/PHP Support** -or- select the project and from the menu bar go to **Project | Properties | Flex/PHP Support**.



The Flex/PHP Support Properties page is made up of the following:

- Enable/Disable PHP Support checkbox - Mark this checkbox to enable PHP support. All other options in this page are available only when PHP Support is enabled.
- Server options:
  - Web Root - The web server's directory, for example “C:\Program Files\Zend\Apache2\htdocs”.
  - Root URL - The URL of your server. For example, your root URL can be “http://localhost”.
- Output Folder - The directory where compiled output files are stored. For a web application they are stored by default in the “public/bin-debug” folder of your PHP project, and for a mobile application the default is the "bin-debug" folder of your Flex project.
- Gateway Location Folder - The location of your gateway file. By default, the gateway file is located under the "public" folder of your PHP project. Although you can change the default location, the gateway location must always be within the attached PHP project directory . For more information see The Gateway Script.
- PHP Project Name - The PHP project associated with your Flex project.

From the Flex/PHP Support Properties page you can enable and disable PHP Support.

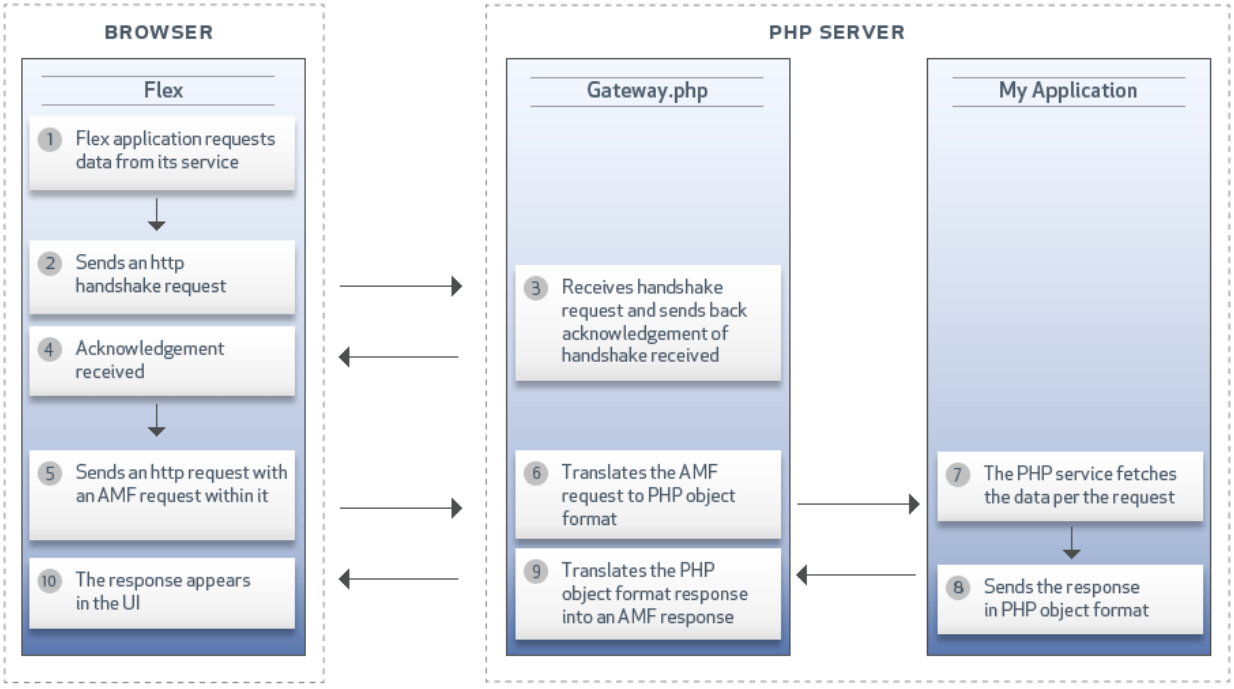
The Gateway Script

Flash Builder 4.5 for PHP allows you to create combined Flex and PHP applications. The gateway is responsible for converting objects and translating the results from PHP methods into native ActionScript objects used in the Flex User Interface.

The gateway script initializes the Zend AMF Server, which is able to translate between Flex/ActionScript and PHP, and the Zend Framework Autoloader which enables dynamic class loading.

The gateway.php script reads configuration variables from the amf_config.ini file, located under the "public" folder of your PHP project. By default it adds the "services" and "library" folders of your PHP project, as well as the Zend Framework location to the PHP Include Path. If PHP namespace prefixes are used properly, all classes stored in the "services" and "library" folders are dynamically loaded by the Autoloader. For more information regarding dynamic class loading and PHP namespaces see Zend Framework Autoloader.

The gateway.php file is located under the "public" folder of your PHP project. Changing the file's location is available in the PHP Support Properties page.



When data from a PHP service is required in your UI (1), Flex first sends a handshake http request to the gateway.php file on the PHP server (2). After receiving an acknowledgment (4), Flex sends second http request including an AMF request for data from the PHP service (5).

On the server side, the request passes through the gateway.php file where the Zend AMF Server is initialized. The AMF request is translated into PHP object format (6), and then passed to your service where the requested data is fetched (7).
The service's response is translated back by the Zend AMF Server into AMF data (9) before being sent back to the Flex, where the response appears in the UI (10).