# Setting up the BlackBerry 10 development environment

## Overview

**Prerequisite:** If you intend to use IBM MobileFirst Platform Studio or the command-line interface (CLI) to develop your application, first read the Setting up the MobileFirst development environment (../setting-up-the-mobilefirst-development-environment/) tutorial.

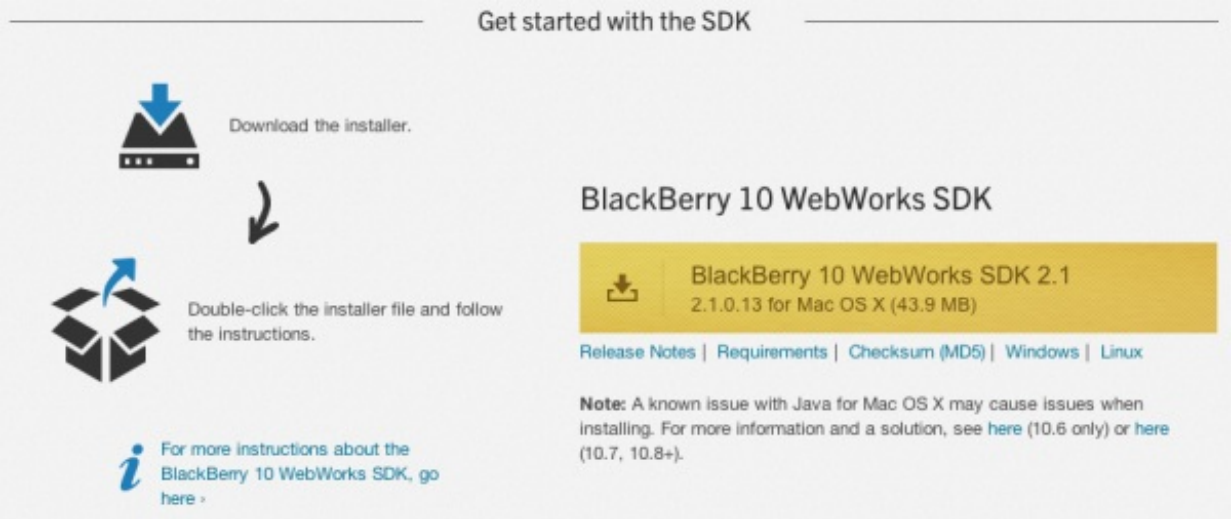
Before you start to develop, deploy, and test your BlackBerry applications, set up the BlackBerry development environment. This initial setup includes installing the BlackBerry SDK and BlackBerry Simulator.

BlackBerry WebWorks SDK requires a 32-bit Java™ Development Kit (JDK), version 1.6 or later to be installed on the development host.
To create a BlackBerry 10 application, first define the WEBWORKS_HOME environment variable. The value of this variable must be the path to your WebWorks SDK.

## BlackBerry 10 development tools

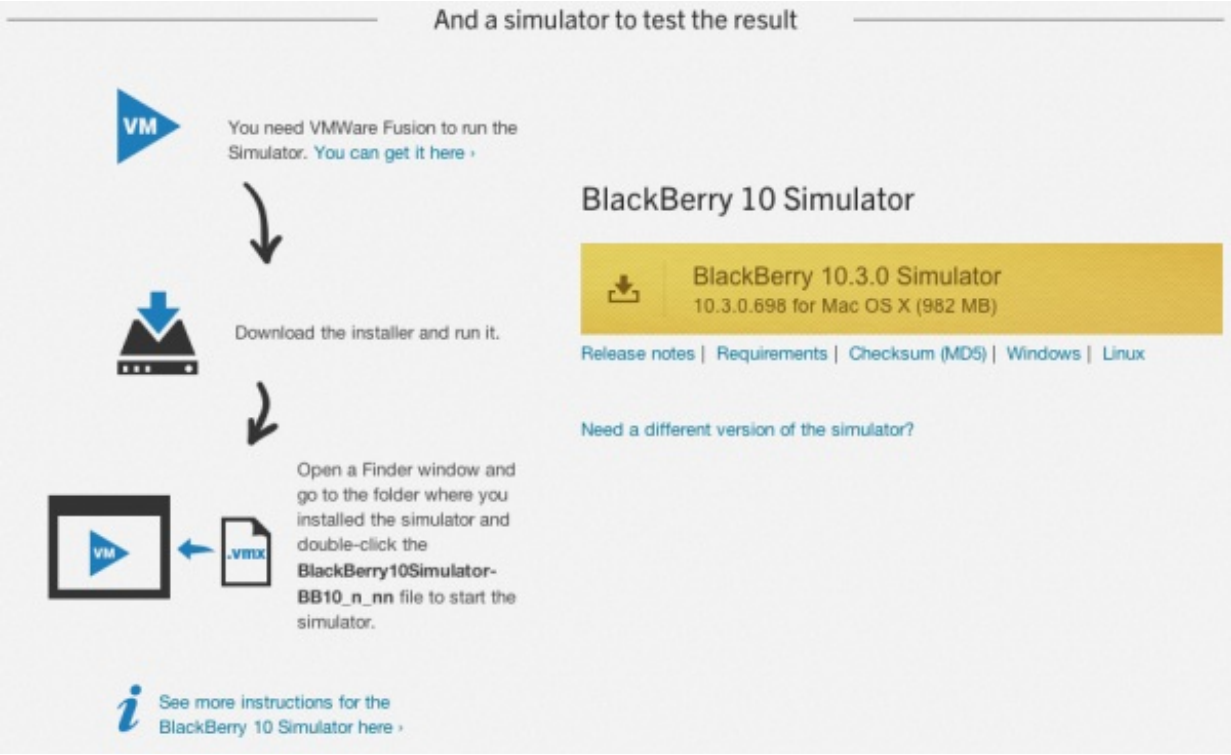
### BlackBerry SDK

The BlackBerry SDK is used to package applications.
To download and install this SDK, visit http://developer.blackberry.com/html5/downloads/ (http://developer.blackberry.com/html5/downloads/).




### BlackBerry Simulator

Use the BlackBerry Simulator to preview and debug your application in a simulated device environment.
Download the simulator that is relevant to your development environment.
For a list of simulators, visit http://us.blackberry.com/sites/developers/resources/simulators.html (http://us.blackberry.com/sites/developers/resources/simulators.html).




## WebWorks development

For more information about the BlackBerry WebWorks development process, see the Getting Started section of the BlackBerry documentation (https://developer.blackberry.com/html5/documentation/v2_1/getting_started.html).

**Important note:** With BlackBerry 6 and 7, the performance of hybrid mobile applications might not be on par with the latest BlackBerry 10 OS, because of older embedded browser technologies and hardware. You might want to use prototypes to validate that applications meet performance targets on BlackBerry 6 and 7. When advanced performance is needed, native development is preferred.

## Creating a new BlackBerry 10 project

When you create a new BlackBerry 10 project, the project structure is different depending on whether you use WebWorks SDK 1.x or WebWorks SDK 2.x. Make sure that your WEBWORKS_HOME environment variable is set to the WebWorks SDK that you use.

## Migrating a BlackBerry10 Webworks 1.x project to Webworks 2.x

To make a BlackBerry 10 WebWorks 1.x project work with WebWorks SDK 2.x, follow these instructions:

1. Set the WEBWORKS_HOME environment variable to the WebWorks SDK 2.x folder.
2. Create a new MobileFirst project and MobileFirst application. Add the Blackberry10 environment to it. This creates a Blackberry10 native folder with a WebWorks SDK 2.x project structure.
3. Replace the `{new project}/{new app}/blackberry10/native/www` folder with the `{old app}/blackberry10/native/www` folder of the old project (which has a Blackberry10 native folder with a WebWorks SDK 1.0 project structure).
4. Replace the `{new project}/{new app}/blackberry10/css`, `{new app}/blackberry10/images`, `{new app}/blackberry10/js`, and `{new_app}/common` folders with the corresponding folders from the old project.
5. Modify the `{new project}/{new`

`app}/blackberry10/native/www/webresources/default/index.html` file as follows:

1. Remove the `` tag pair which encloses the `webworks.js` file name.
2. Change `src="worklight/cordova.js"` to `src="../../cordova.js"`.
   This will point to
   `{new project}/{new app}/blackberry10/native/platforms/blackberry10/www/cordova.js`.

- Remove the unnecessary files and folders from `{new project}/{new app}/blackberry10`:
  - Delete chrome, ext-qnx and config.xml from the `native/www` folder.
  - Delete Plugins, cordova.js, cordova_plugin.js from the `native/www/webresources/default/worklight/` folder.
- Reapply the custom changes that you have made to the `config.xml` file.