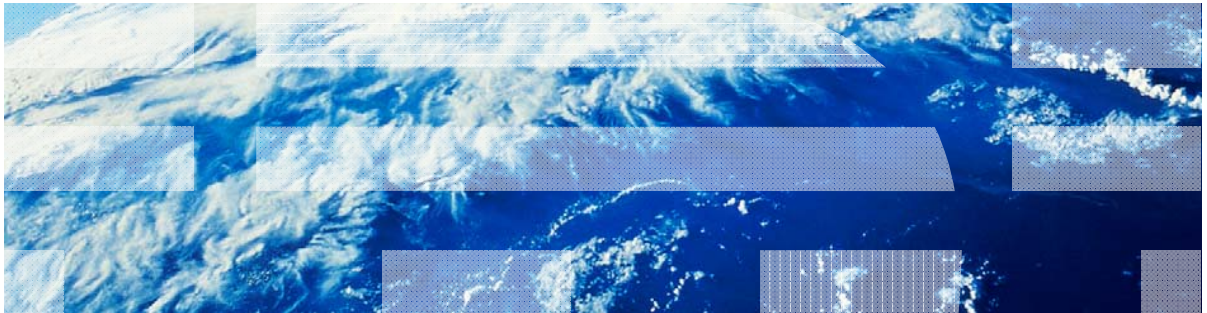


# ***IBM Worklight V5.0.6 Getting Started***

Optimizing your application for various environments



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- See <http://www.ibm.com/ibm/us/en/>

## Agenda

- What is an environment optimization?
- Currently supported environments
- How does optimization work?

## ***What is an environment optimization?***

- IBM Worklight® applications run in multiple mobile, tablet, and web environments.
- Runtime environments differ from each other in many aspects such as screen size, orientation, specific UI guidelines and components, physical user interface, and unique environment functionality.
- IBM Worklight increases development efficiency and productivity by providing an environment optimization framework.
- The core logic and design guidelines of the app are written by using web technologies (HTML, CSS, and JavaScript™) and are shared by all environments.
- Environment-specific optimization can be added when required.
- If you use a source control management system (such as Rational Team Concert™ (RTC), GIT or Subversion), see *Integrating with source control systems* in the IBM Worklight user documentation for instructions on how to commit your source code to such systems.

## Agenda

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## Currently Supported Environments



- iOS 4.3 and later
- Android 2.2 and later
- BlackBerry OS 5 and later
- Windows Phone 7 and later



- Modern browsers that support HTML4, CSS2.1 and JavaScript 1.5 at a minimum
- Browsers supporting HTML5 and CSS3



- iOS 4.x and later
- Android 2.1 and later



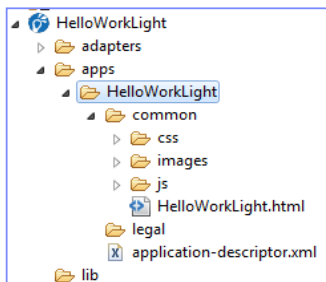
- Mobile Web
- Embedded browser page

## Agenda

- What is environment optimization?
- Currently supported environments
- How does optimization work?

## How does optimization work?

- The Worklight application structure is divided into environment folders (iPhone, Android, BlackBerry, and so on).
- Each environment folder contains the resources (CSS, JS, images, and so on) that are relevant for that specific environment.
- A newly created application contains the base environment in a common folder. The common resources serve as the basis for the optimized environments that might be added later.
- The common folder must hold only resources that are shared by all environments.





# Adding a new environment

The image shows two screenshots from the IBM Worklight IDE. The left screenshot is the 'New' wizard, titled 'Select a wizard', which prompts the user to 'Select a wizard' for a mobile operating system, desktop gadget engine, or web framework. The 'Wizards' list includes 'Tasks', 'User Assistance', 'Web', 'Web Services', 'Worklight', 'XML', and 'Examples'. The 'Worklight' folder is expanded, showing sub-wizards like 'Worklight Adapter', 'Worklight Application', 'Worklight Application Skin', 'Worklight Environment', and 'Worklight Project'. A blue arrow points from the 'Worklight Environment' wizard to the right screenshot.

The right screenshot is the 'New Worklight Environment' dialog. It is titled 'Worklight Environment' and asks to 'Create application folders for new environments.' The 'Project name' and 'Application/Component' are both set to 'TestApp'. Under 'Create folders for:', there are sections for 'Mobile' (iPhone, iPad, Android phones and tablets, BlackBerry, Windows Phone) and 'Desktop' (Windows 8 (Desktop & Tablet), Adobe AIR, Windows 7 and Vista (Deprecated\*), Mac OS X Dashboard (Deprecated\*)). There is also a 'Web' section with 'Mobile web app', 'Desktop Browser web page', and 'Facebook (Deprecated\* - Use Desktop Browser instead)'. A blue arrow points from the 'Worklight Environment' dialog to a third screenshot.

The third screenshot is a file explorer view of the 'apps' directory. It shows a folder structure with 'CommonControls' at the top, followed by subfolders for 'android', 'blackberry', 'common', 'iphone', 'legal', and 'windowsphone'. At the bottom of the list is the file 'application-descriptor.xml'.

## How does optimization work?

### HTML

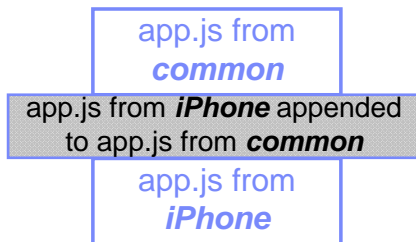
- The newly added environment (for example, iPhone) extends the resources of the common environment in the following way:
  - HTML: The common HTML file is overridden by the new environment HTML code
  - Note: by default a new environment does not include a new HTML file because the common HTML is shared by all environments



# How does optimization work?

## JavaScript

- The newly added environment (for example, iPhone) extends the resources of the common environment in the following way:
  - JavaScript: The JavaScript file from an environment folder has a `wlEnvInit()` function that invokes the `wlCommonInit()` JavaScript function from the common folder
  - Technically, the JavaScript from an environment folder is appended to the file from common
  - Using the same variable names as in common redefines their meaning



```
function wlCommonInit() {  
    // Put your initialization code here  
}
```

```
function wlEnvInit(){  
    wlCommonInit();  
}
```

## How does optimization work?

### CSS

- The newly added environment (for example, iPhone) extends the resources of the common environment in the following way:
  - CSS: The CSS file from an environment folder is appended to the CSS file from the common folder
  - Using the same property names as in common overrides their settings
  - Note: the environment CSS might contain some default CSS rules that match the environment needs

app.css from  
*common*

app.css from *iPhone* appended  
to app.css from *common*

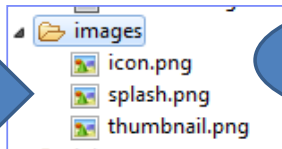
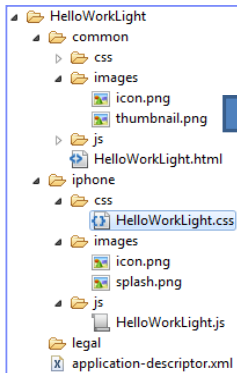
app.css from  
*iPhone*

```
/*  
NOTE: THIS CSS FILE EXTENDS THE BASE APP CSS FILE (UNDER COMMON)  
*/  
  
/*BODY SHOULD STRETCH IN AN IPHONE APPLICATION*/  
body {  
    height: auto;  
    overflow: auto;  
}  
  
/*WORKLIGHT CONTAINER DIV*/  
#content {  
    height: auto;  
    width: 100%;  
    border: none;  
}
```

# How does optimization work?

## Images

- The newly added environment (for example, iPhone) extends the resources of the common environment in the following way:
  - Images: A new environment images folder contains the required default images for the specific environment
  - Note: the new environment images override the common images if name collision occurs



Common icon  
overridden by the  
iPhone one

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